



NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

**THE DEPARTMENT OF HOMELAND SECURITY'S
ROLE IN PROTECTING THE NATIONAL ECONOMY**

by

Christa M. Brzozowski

September 2017

Thesis Advisor:
Second Reader:

John Rollins
Rodrigo Nieto-Gomez

Approved for public release. Distribution is unlimited.

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			<i>Form Approved OMB No. 0704-0188</i>	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE September 2017		3. REPORT TYPE AND DATES COVERED Master's thesis
4. TITLE AND SUBTITLE THE DEPARTMENT OF HOMELAND SECURITY'S ROLE IN PROTECTING THE NATIONAL ECONOMY			5. FUNDING NUMBERS	
6. AUTHOR(S) Christa M. Brzozowski				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB number ____N/A____.				
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release. Distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) The national economy and the vital commercial flows that feed it are the sine quibus non of national influence, power, and security. However, new characteristics of the modern trade environment have the potential to undermine U.S. economic prosperity. The Department of Homeland Security (DHS) claims that homeland security is inseparable from economic security and, as such, that the department has a role to play in supporting national economic security goals. However, DHS has yet to fully reconcile the tension between its trade enforcement and facilitation missions and clarify its role in supporting national economic competitiveness goals. After identifying and assessing several policy alternatives, this paper concludes that DHS should aggressively leverage its unique border authorities to influence a shift toward a more centralized model of government controls of imports, one informed by economy-wide strategic objectives and reliant upon standard performance measures, shared funding schemes, common information technology infrastructures, and delegated decision making on the admissibility of goods. Such an effort could provide commercially meaningful benefits to public and private stakeholders alike while maintaining security and safety requirements.				
14. SUBJECT TERMS trade enforcement, trade security, trade facilitation, Single Window, U.S. Customs and Border Protection, Department of Homeland Security			15. NUMBER OF PAGES 147	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UU	

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release. Distribution is unlimited.

**THE DEPARTMENT OF HOMELAND SECURITY'S ROLE IN PROTECTING
THE NATIONAL ECONOMY**

Christa M. Brzozowski
Deputy Assistant Secretary, Trade & Transport Policy, Department of Homeland Security
B.A., Georgetown University, 2006

Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
September 2017**

Approved by: John Rollins
Thesis Advisor

Rodrigo Nieto-Gomez
Second Reader

Erik Dahl
Associate Chair for Instruction
Department of National Security Affairs

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

The national economy and the vital commercial flows that feed it are the *sine quibus non* of national influence, power, and security. However, new characteristics of the modern trade environment have the potential to undermine U.S. economic prosperity. The Department of Homeland Security (DHS) claims that homeland security is inseparable from economic security and, as such, that the department has a role to play in supporting national economic security goals. However, DHS has yet to fully reconcile the tension between its trade enforcement and facilitation missions and clarify its role in supporting national economic competitiveness goals. After identifying and assessing several policy alternatives, this paper concludes that DHS should aggressively leverage its unique border authorities to influence a shift toward a more centralized model of government controls of imports, one informed by economy-wide strategic objectives and reliant upon standard performance measures, shared funding schemes, common information technology infrastructures, and delegated decision making on the admissibility of goods. Such an effort could provide commercially meaningful benefits to public and private stakeholders alike while maintaining security and safety requirements.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
A.	PROBLEM STATEMENT	1
B.	HYPOTHESIS.....	5
C.	METHODS AND SOURCES/RESEARCH DESIGN	6
1.	Objective of Study and Rationale.....	6
2.	Scope of Work	7
3.	Instrumentation (Data and Evidence).....	8
4.	Selection Criteria and Steps of Analysis	9
D.	LITERATURE REVIEW	10
1.	Relationship between National Security and Economic Priorities.....	10
2.	Trade Facilitation.....	13
II.	SAYING BUT NOT DOING: CONTRASTING OPERATIONAL REALITIES IN THE MODERN TRADE ENVIRONMENT AND DHS POLICY OBJECTIVES.....	17
A.	THE MODERN TRADE ENVIRONMENT	17
1.	The Evolving Trade Environment.....	17
2.	Post-9/11 Security Measures	21
B.	THE CONCEPT OF TRADE FACILITATION	24
1.	Impact of Current Government Policies and Regulatory Environment.....	30
2.	The Role of DHS in Trade Facilitation	37
III.	POLICY OPTIONS AND EVALUATION METHODOLOGY	43
A.	POLICY OPTIONS.....	44
B.	EVALUATION METHODOLOGY	44
1.	First Evaluation Criterion.....	45
2.	Second Evaluation Criterion.....	49
3.	Third Evaluation Criterion.....	51
IV.	EVALUATING THE POLICY OPTIONS	53
A.	POLICY OPTION 1: MAINTAIN THE STATS QUO.....	53
1.	Advantages.....	56
2.	Challenges.....	59
B.	POLICY OPTION 2: TAILORED MODERNIZATION	64
1.	Advantages.....	66

2.	Challenges.....	70
C.	POLICY OPTION 3: SHIFTING THE PARADIGM	73
1.	Introducing Policy Option 3.....	75
2.	An Overview of the Singapore Model	78
3.	Advantages.....	82
4.	Challenges.....	88
D.	RECOMMENDED PATH FORWARD	90
V.	CONCLUSION	95
A.	NEXT STEPS FOR IMPLEMENTING POLICY OPTION 3: SHIFTING THE PARADIGM	96
B.	ISSUES REQUIRING ADDITIONAL STUDY.....	99
	APPENDIX.....	105
	LIST OF REFERENCES.....	115
	INITIAL DISTRIBUTION LIST	125

LIST OF FIGURES

Figure 1.	Organizations Providing Trade Facilitation Indicators.....	31
Figure 2.	World Economic Forum Enabling Trade (ETI) Indicators: Average of U.S. Scores across all ETI Categories (2008–2014)	32
Figure 3.	World Economic Forum Enabling Trade Indicators: Comparison of U.S. Scores for ETI Indicator “Border Administration” to Global Best Practice (2008–2014).....	33
Figure 4.	World Bank Logistics Performance Indicators: U.S. Scores across all LPI Categories (2007–2014).....	34
Figure 5.	World Bank Logistics Performance Indicators: Comparison of U.S. Scores for LPI Indicator “Customs” to Global Best Practice (2007–2014)	35
Figure 6.	OECD Trade Facilitation Indicators: Average of Total U.S. Scores for all TFI Indicators (2015)	36
Figure 7.	OECD Trade Facilitation Indicators: Comparison of U.S. Scores for Key TFI Indicators to Global Best Practice (2015)	36
Figure 8.	COAC Recommendations.....	50
Figure 9.	Criterion 3: Feasibility of Implementation	51
Figure 10.	World Bank “Trading across Borders” Rankings, United States and Singapore (2006–2016).....	79
Figure 11.	Current U.S. Government Interagency Bodies Focused on Trade Facilitation (Imports)	83
Figure 12.	Policy Option 3 Proposed Modifications to U.S. Government Interagency Bodies Focused on Trade Facilitation (Imports).....	84
Figure 13.	Criterion 3: Feasibility of Implementation	113

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

Table 1.	World Trade Organization Classification of Non-tariff Measures	21
Table 2.	Comparison of Trade Facilitation Indicators from Leading Global Organizations	46
Table 3.	World Economic Forum’s Border Administration Indicators	48
Table 4.	COAC Trade Facilitation Recommendations	50
Table 5.	Policy Option 1 Evaluation	63
Table 6.	Policy Option 2 Evaluation	72
Table 7.	Policy Option 3 Evaluation	90
Table 8.	Comparison of Trade Facilitation Indicators	105
Table 9.	Comparison of Enabling Trade Index Coverage from 2008–2014.....	108
Table 10.	World Economic Forum Enabling Trade Index, Global Rankings for Border Administration Indicator Category (2008–2014)	109
Table 11.	World Bank Logistics Performance Indicators, Global Rankings for Customs Indicator Category (2007–2014).....	110
Table 12.	Criterion 1: The Effectiveness and Efficiency of Import Processes	111
Table 13.	Criterion 2: Benefit to U.S. Businesses	112

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

AAEI	American Association of Exporters and Importers
AEO	authorized economic operator
BIEC	Border Interagency Executive Council
CBP	Customs and Border Protection
COAC	Commercial Operations Advisory Committee
CTAC	Commercial Targeting and Analysis Center
DHS	Department of Homeland Security
DIS	Digital Imaging System
ETI	enabling trade index
GDP	gross domestic product
IMF	International Monetary Fund
IT	information technology
ITDS	International Trade Data System
LPI	logistic performance indicator
NEC	National Economic Council
OECD	Organization for Economic Co-operation and Development
PPP	purchasing-power parity
QHSR	Quadrennial Homeland Security Review
UN/CEFACT	United Nations Centre for Trade Facilitation and Electronic Business
USTR	United States Trade Representative

THIS PAGE INTENTIONALLY LEFT BLANK

EXECUTIVE SUMMARY

This thesis explores the role of the Department of Homeland Security (DHS) and its component U.S. Customs and Border Protection (CBP) in supporting national economic security and competitiveness goals in light of the department's assertion that homeland security is "inseparable from economic security," and CBP's claim that part of its mission is to "enhanc[e] the Nation's global economic competitiveness."¹

This thesis asserts that the national economy and the vital commercial flows that feed it are the *sine quibus non* of national influence, power, and security, but that new characteristics of the modern trade environment brought about by globalization and post-9/11 security requirements have the potential to endanger the United States' economic prosperity.² In asserting that homeland security is "inseparable from economic security," and affirming that part of its mission is to "enhanc[e] the Nation's global economic competitiveness," DHS bears responsibility for addressing these challenges and concerns. What this role entails and whether or not DHS is able to reconcile the apparent tension between its trade enforcement and facilitation missions could inform a recasting of current priorities, policies, and operational processes and allow the U.S. government as a whole to better accommodate itself to the dynamic requirements of global commerce and influence future trends.

This thesis focused primarily on DHS (specifically CBP) policies and activities associated with cross-border trade, with a particular emphasis on imported goods. CBP, and by extension DHS, contributes to the nation's economic security directly by collecting revenue and enforcing laws that keep citizens safe and protect American businesses from unfair trade practices. However, the recent narrative in CBP messaging

¹ Department of Homeland Security (DHS), *The 2014 Quadrennial Homeland Security Review* (Washington, DC: DHS, 2014), 31, <https://www.dhs.gov/sites/default/files/publications/2014-qhsr-final-508.pdf>; Customs and Border Protection, *Vision and Strategy 2020: U.S. Customs and Border Protection Strategic Plan* (Washington, DC: DHS), 3, 7, <https://www.cbp.gov/sites/default/files/documents/CBP-Vision-Strategy-2020.pdf>.

² The term *sine quibus non* means "something absolutely indispensable or essential." See *Merriam-Webster*, s.v., "sine qua non," accessed June 17, 2017, <https://www.merriam-webster.com/dictionary/sine%20qua%20non>.

suggests a deeper commitment to trade facilitation—a commitment to advancing the goals of the concept as an affirmative rather than an ancillary responsibility. In this regard, CBP has sought to emphasize much more than its traditional revenue functions when noting its contribution to economic security; the agency focuses as well on efforts to streamline and simplify an array of additional government controls on cross-border trade. These controls include not only a burgeoning number of post-9/11 security measures, but also health and safety, phytosanitary, sanitary, and environmental requirements.

The hypothesis of this thesis is that DHS (particularly CBP) is uniquely situated to expand its trade facilitation mission beyond revenue collection and minimize the impact of necessary security/compliance enforcement missions. By influencing or even leading a broader U.S. government-wide scheme of coordinated border management, the department could signal an affirmative commitment to the trade facilitation aspect of its mission. In short, this thesis suggests that DHS can and should aggressively leverage its unique border authorities to remedy some of the inefficiencies caused by the current decentralized manner in which the U.S. government as a whole manages the processing and ensures the security of imported goods.

After reviewing the characteristics and challenges posed by the modern trade environment, the thesis explores the evolving concept of trade facilitation and associated benefits to public and private stakeholders alike. In general, trade facilitation activities involve “expediting the movement, release, and clearance of goods,” such as the simplification, harmonization, and modernization of government rules, processes, and requirements.³ According to the World Economic Forum, worldwide improvement of trade facilitation measures “even halfway to the world’s best practices” could increase the

³ World Trade Organization, “Agreement on Trade Facilitation,” July 15, 2014, 1, http://tfig.unece.org/pdf_files/931.pdf; Edward Gresser, “Trade Facilitation as a Growth Tool,” *Progressive Economy*, July 17, 2013, <http://www.progressive-economy.org/wp-content/uploads/2013/07/trade.facilitation.pdf>.

global gross domestic product (GDP) six times more than removing all tariffs.⁴ This translates into an addition of 2.8% to the United States' GDP.⁵

The thesis then assesses DHS's current authorities and mission with regard to international commerce, a role shared with twenty-three entities across fifteen departments or independent agencies.⁶ While not directly responsible for establishing national trade policy, laws, or strategic objectives, DHS is responsible for enforcing these policies and laws and advancing these objectives.⁷ However, DHS's efforts are complicated by the speed and complexity of the trade environment and the Sisyphean task of driving action among the dozens of different U.S. agencies with hundreds of border-related requirements while maintaining the stated commitment to both trade facilitation and enforcement.

Relying on trade facilitation indexes and national rankings provided by the World Economic Forum, the World Bank, and the Organization for Economic Co-operation and Development, this thesis then identifies potential improvements that DHS might support (i.e., activities that DHS can influence or undertake within its authorities and mission) to enhance the cross-border flows of imported goods. The data suggest that the United States remains behind global leaders in the "border administration" indicator category as assessed by the World Economic Forum, the "customs" category as assessed by the World Bank, and three out of the four trade facilitation indicators (automation, documentation, and procedures) as assessed by the Organization for Economic Co-operation and Development.⁸

⁴ World Economic Forum, *Enabling Trade: Valuing Growth Opportunities* (Geneva: World Economic Forum, 2013), 4, http://www3.weforum.org/docs/WEF_SCT_EnablingTrade_Report_2013.pdf.

⁵ Gresser, "Trade Facilitation."

⁶ "Mission of the USTR," United States Trade Representative, accessed March 19, 2017, <https://ustr.gov/about-us/about-ustr>.

⁷ DHS and other departments and agencies are therefore answerable to both the United States Trade Representative and the National Economic Council, who themselves are responsible for developing trade policies and ensuring that the goals of the national trade agenda "are being effectively pursued." See William J. Clinton, *Executive Order 12835—Establishment of the National Economic Council* (Washington, DC: Government Publishing Office, January 25, 1993), Section 4.

⁸ The "border administration" category measures the effectiveness of the clearance process at the border, the time and cost required to import goods into a specific nation, the number of documents required for import, and the efficiency of relevant customs administrations.

Based on these findings, the thesis offers three strategic-level policy options by which DHS could improve U.S. scores in these areas, thereby potentially improving the facilitation of cross-border commerce and supporting broader national competitiveness goals. These three policy options are:

1. *Maintaining the Status Quo:* DHS can stay the course, leading other agencies by its own example of modernization and commitment to the dual goals of trade enforcement and facilitation.
2. *Tailored Modernization:* DHS can lead a program of collective action among a select group of agencies to improve trade facilitation in key areas most likely to exceed the “tipping point” necessary to result in meaningful benefits.
3. *Shifting the Paradigm:* DHS can advocate for a shift toward a more centralized model of government controls of imports, one reliant upon standard performance measures, shared funding schemes, common IT infrastructures, and/or delegated or joint decision-making on the admissibility of goods.

After introducing each of the policy options in greater detail, this thesis analytically assesses them according to three criteria: 1) the impact on the effectiveness and efficiency of overall import procedures; 2) the impacts on American businesses; and 3) the feasibility of implementing the policy.

This thesis concludes with a recommendation for policy option 3 as the best means for DHS to achieve its stated goal of pursuing both security and trade efficiency as mutual, rather than mutually exclusive, goals; policy option 3 also allows DHS to contribute most to ensuring the nation’s economic security. Under this approach, DHS would lead a paradigm shift away from the current de-centralized model of government control, in which agencies understandably prioritize efforts to advance their individual missions and make admissibility decisions on cargo based on varying risk-management cultures and resource levels. Instead, DHS would position itself to overcome these challenges by drawing authority from trade policy-makers (specifically, the United States Trade Representative and the National Economic Council) to institute common principles, policies, and practices at the border among relevant agencies toward the ultimate goal of implementing an economy-wide vision of desired performance outcomes.

To implement such an approach, DHS would work to divest itself of the responsibilities to maintain and operate the national Single Window through new partnerships with private-sector experts. DHS also would obtain expanded authorities to strengthen its role as the chair of the Border Interagency Executive Council while situating that interagency body within the National Trade Facilitation Committee process, an established framework for strategic U.S. policy-making. With this new imprimatur, DHS could drive a new program of collective action among a group of U.S. government agencies that have specific responsibilities to ensure the security of goods at the border and their compliance with national laws. This thesis concludes that such an effort could improve trade facilitation and provide commercially meaningful benefits to public and private stakeholders alike.

References

- Customs and Border Protection. *Vision and Strategy 2020: U.S. Customs and Border Protection Strategic Plan*. Washington, DC: DHS. <https://www.cbp.gov/sites/default/files/documents/CBP-Vision-Strategy-2020.pdf>.
- Department of Homeland Security. *The 2014 Quadrennial Homeland Security Review*. Washington, DC: DHS, 2014. <https://www.dhs.gov/sites/default/files/publications/2014-qhsr-final-508.pdf>.
- Gresser, Edward. “Trade Facilitation as a Growth Tool.” *Progressive Economy*, July 17, 2013. <http://www.progressive-economy.org/wp-content/uploads/2013/07/trade.facilitation.pdf>.
- United States Trade Representative. “Mission of the USTR.” Accessed March 19, 2017. <https://ustr.gov/about-us/about-ustr>.
- World Economic Forum. *Enabling Trade: Valuing Growth Opportunities*. Geneva: World Economic Forum, 2013). http://www3.weforum.org/docs/WEF_SCT_EnablingTrade_Report_2013.pdf.
- World Trade Organization. “Agreement on Trade Facilitation.” July 15, 2014. http://tfig.unece.org/pdf_files/931.pdf.

THIS PAGE INTENTIONALLY LEFT BLANK

I. INTRODUCTION

Globalization ... enables us to reach into the world as never before, and it enables the world to reach into each of us as never before.

—Thomas L. Friedman¹

This thesis seeks to answer the following question: What is the role of the Department of Homeland Security (DHS) in supporting national economic security and competitiveness goals, and can that role be enhanced?

A. PROBLEM STATEMENT

As one of the world's top trading nations, the United States depends upon the importation and exportation of trillions of dollars' worth of goods each year to support its defense capabilities and way of life, provide jobs for citizens, and fuel economic prosperity at home and competitiveness abroad.² In addition, the nation's strong economy not only provides a foundation for military might, but has increasingly become an effective instrument on its own when pursuing broader national and foreign policy objectives. As Michael Froman, the former United States Trade Representative explains,

Trade bolsters the most fundamental source of our power, the U.S. economy. But what has changed is that economic clout, in many respects, is now the principal yardstick by which power itself is measured ... if the

¹ Thomas L. Friedman, *The Lexus and the Olive Tree: Understanding Globalization* (New York: Farrar, Straus, and Giroux, 1999), 19.

² "World Economic Outlook Report: Groups and Aggregates Database," International Monetary Fund, accessed March 25, 2015, <http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx>. According to the International Monetary Fund (IMF), the United States held the top position as the world's largest economy for 142 years before being overtaken in 2014 by China. The IMF calculations are based on the purchasing-power parity (or PPP), one of several established economic measures to assess a country's economic growth rates and contribution to the global economy relative to other nations. PPP calculations offer a means of comparison between what money can buy in different countries when accounting for things like the cost of living, otherwise known as an output measure. PPP calculations differ from market-based measures, which compare economies according to the rate of their currency in the foreign exchange market. While China has surpassed the United States under PPP adjustments, market-based calculations for the same 2014 timeframe offer a different perspective and show the U.S. economy (\$16.27 trillion) as almost twice as large as the Chinese economy (\$8.06). However, the fact that the United States holds either the first- or second-place position among world economies (depending on the calculation measures used) does not affect this paper's underlying assumptions or impact its findings.

U.S. leads on trade, its influence will expand. And if we don't, others will fill the gap. And I can assure you, their vision will be at variance with American values and American interests.³

Simply put, the national economy and the vital commercial flows that feed it are the *sine quibus non* of national influence, power, and security.⁴

However, new characteristics of the modern trade environment have the potential to undermine U.S. economic prosperity. Globalization, while enabling exponential growth in international trade, also has created a complex web of interconnected supply chains that amplify nations' collective vulnerability to shocks resulting from even localized threats or disruptions. In addition, companies seeking to take advantage of cheap transportation costs, an abundance of new technological advances, and attractive labor markets increasingly rely upon geographically diverse and fragile business models in which phases of production are no longer tied by proximity to the end consumer and lean inventories depend upon "just in time" delivery schedules. These commercial practices have occasioned the rise of new and more flexible business models and alternative means of production, but have also created a global supply chain more susceptible to market volatility and other system shocks. A final characteristic of the new trading system, and the most relevant to this thesis, is the spate of government controls established in the wake of the September 11th terrorist attacks. These new laws, requirements, and programs gave rise to a host of regulatory and operational complexities at the border and, regardless of their arguable security value, increased costs for both government regulators and those seeking to do business with and in the United States. As one commenter noted less than six months after the attacks, "the post 9-11 economy faces a subtle new reality: Call it friction. It's as if fine sand has been sprinkled into the gears of American business."⁵

³ Michael Froman, "U.S. Trade Negotiations Aim to Raise Labor and Environmental Standards," Council on Foreign Relations, June 16, 2014, <https://www.cfr.org/event/us-trade-negotiations-aim-raise-labor-and-environmental-standards>.

⁴ The term *sine quibus non* means "something absolutely indispensable or essential." See Merriam-Webster, s.v., "sine qua non," accessed June 17, 2017, <https://www.merriam-webster.com/dictionary/sine%20qua%20non>.

⁵ Anna Bernasek, "The Friction Economy," *Fortune* 145, no. 4 (February 2002): 104–110.

Problematically, the new trade environment is still supported and enabled by policies, processes, and information communication technologies constructed in and for a previous century. The evolving characteristics of the modern trading environment challenge federal stakeholders to bring all tools to bear to maintain and promote national economic prosperity and, by extension, national economic security.

DHS has an important role in this space—one with a tradition dating back to 1789 with the establishment of the U.S. Customs Service by the First Congress. Placed under the Department of Treasury at the time, the Customs Service was to focus exclusively on revenue collection activities, specifically to “regulate the Collection of the Duties imposed by law on the tonnage of ships or vessels, and on goods, wares and merchandise imported into the United States.”⁶ The revenues constituted the primary source of income for the fledgling nation, up to approximately 95 percent by the turn of the century.⁷ By 2003, when the Customs Service became the U.S. Customs and Border Protection (CBP) under the newly established Department of Homeland Security, import duties had dwindled to between 2–4 percent of the federal revenue and collection functions had come to pale in comparison to the agency’s enforcement of literally hundreds of security, environment, health and safety, and sanitary and phytosanitary requirements for imported goods.⁸ The “new CBP” inherited a long list of legislative authorities, many of which were based on or introduced as amendments to foundational provisions in the Tariff Act

⁶ Acts of the Fifth Congress, 1 Stat 24 (July 4, 1789) (tariffs); 1 Stat 27 (July 20, 1789) (tonnage); 1 Stat 29 (July 31, 1789) (customs); and 1 Stat 65 (September 2, 1789) (Treasury); see <https://www.loc.gov/law/help/statutes-at-large/5th-congress/c5.pdf>.

⁷ Carl E. Prince and Mollie Keller, *The U.S. Customs Service: A Bicentennial History* (Washington, DC: Department of the Treasury, U.S. Customs Service, 1989), vi.

⁸ Executive Order 13228 of October 8, 2001, established the Office of Homeland Security and the Homeland Security Council, followed by congressional passage of the Homeland Security Act of 2002 (P.L. 107-296), which consolidated parts of twenty-two different departments and agencies into the new DHS.

of 1930, which prescribed customs powers to search and seize illicitly imported goods and assess penalties when necessary.⁹

CBP more recently has introduced and is working to develop a narrative that ties its mission to enforce compliance of U.S. trade laws and ensure the security of imports and exports to a broader trade facilitation agenda and, by extension, to establish itself as a defender of the nation's *economic* security. The CBP message has been that trade enforcement and trade facilitation are mutually reinforcing, rather than mutually exclusive goals; by this CBP means that by focusing limited resources on identifying prohibited imports or illicit contraband, the cross-border flow of legitimate imports moves faster. In this way, CBP offers a means by which they can work to overcome the tension between enforcing U.S. trade laws and securing trans-border flows of goods, and improving the speed and efficiency of the import process. The message has been adopted at the department level, and amplified in important strategy documents that establish DHS's long-term policy objectives. The *2014 Quadrennial Homeland Security Review* (QHSR) report provides the most recent and intriguingly ambiguous policy articulation of the relationship between DHS's law enforcement and border security mission and the nation's economic security. The strategy documents states, for the first time in the department's history, that homeland security is "inseparable from economic security."¹⁰ This statement indicates that DHS, as the organization responsible for homeland security, has a role to play in supporting national economic security goals. What this role entails, and whether or not DHS is able to reconcile the apparent tension between its economic and border security missions, is not yet clear and offers an interesting topic of analysis.

⁹ Other key legislation establishing and authorizing the customs revenue-specific functions of the U.S. Customs Service, and later trade-related functions of the CBP under DHS, include: P.L. 103-465, the Customs Simplification Act of 1953 (P.L. 243), the Reorganization Plan of 1965 (as amended P.L. 90-83), the North American Free Trade Agreement Implementation Act (P.L. 103-182), the Trade Act of 2002 (P.L. 107-210), The Security and Accountability for Every Port Act of 2006 (P.L. 109-347), the Implementing Recommendations of the 9/11 Commission Act of 2007 (P.L. 110-53), and most recently the Trade Facilitation and Trade Enforcement Act of 2015 (P.L. 114-125).

¹⁰ Department of Homeland Security (DHS), *The 2014 Quadrennial Homeland Security Review* (Washington, DC: DHS, 2014), 31, <https://www.dhs.gov/sites/default/files/publications/2014-qhsr-final-508.pdf>.

B. HYPOTHESIS

The still-evolving nature of DHS's mission space provides a good opportunity for a strategic re-evaluation of how DHS could better leverage, or even expand, specific aspects of its unique border authorities to more *affirmatively contribute to or even promote* U.S. government economic competitiveness goals. This thesis takes, as its starting point, the assumptions that:

- national economy and the vital commercial flows that feed it are the *sine quibus non* of national influence, power, and security;
- DHS is a fundamental part of, and plays a leadership role in the homeland security enterprise through the establishment of strategic policies and objectives that inform and/or support activities across the broader homeland security enterprise; and
- while a single, definitive definition of trade facilitation has not yet crystalized, the World Trade Organization's definition can be used—in this definition, trade facilitation means “expediting the movement, release, and clearance of goods.”¹¹

Based on these three assumptions, the thesis explores the premise that, if homeland security supports and “is inseparable from economic security,” as asserted in the 2014 QHSR, DHS as an organization should affirmatively support and be inseparable from economic security.¹² Specifically, it evaluates the hypothesis: *DHS can and should aggressively leverage its unique border authorities to address the current decentralized, antiquated, and inefficient manner in which the U.S. government as a whole manages the processing and ensures the security of imported and exported goods.*

An enhanced understanding of the circumstances in which integration of the two concepts (homeland and economic security) might be beneficial, dangerous, or even inconsequential could inform DHS's efforts to deliver on its stated principles.¹³

¹¹ World Trade Organization, “Agreement on Trade Facilitation,” July 15, 2014, 1, http://tfig.unece.org/pdf_files/931.pdf.

¹² DHS, 2014 QHSR, 31.

¹³ The statements that homeland security “supports” and “is inseparable from economic security” were in DHS's 2014 QHSR. DHS develops the QHSR pursuant to Section 707 of the Homeland Security Act of 2002 (P.L. 107-296), as amended by the Implementing the Recommendations of the 9/11 Commission Act of 2007 (P.L. 110-53).

Additionally, such an understanding could inform a recasting of current priorities, policies, and operational processes that may be better suited to the trade agenda of the Trump administration. Regardless of the political party in power, an evaluation of how DHS can better align its priorities and support (or even influence) the action of other federal agencies to allow the U.S. government to better accommodate itself to the modern trade environment could uncover new opportunities for enhancing national and economic security.

C. METHODS AND SOURCES/RESEARCH DESIGN

1. Objective of Study and Rationale

This thesis provides a problem-based, multi-goal policy analysis that considers options to improve DHS's implementation of its stated principle that homeland security supports economic security. The paper identifies and assesses the advantages and challenges of three policy options by which DHS could better achieve its stated goal of supporting economic security through improved trade facilitation measures. Each option is outlined in more detail in a later chapter; in brief, the three policy approaches are:

1. *Maintaining the Status Quo:* DHS can stay the course, leading other agencies by its own example of modernization and commitment to the dual goals of trade enforcement and facilitation.
2. *Tailored Modernization:* DHS can lead a program of collective action among a select group of agencies to improve trade facilitation in key areas most likely to exceed the "tipping point" necessary to result in meaningful benefits.
3. *Shifting the Paradigm:* DHS can advocate for a shift toward a more centralized model of government controls of imports, one reliant upon standard performance measures, shared funding schemes, common IT infrastructures, and/or delegated or joint decision-making on the admissibility of goods.

As implementation of the preferred policy could impact DHS's future mission, activities across the broader homeland security enterprise, and the nation's economic prosperity, an assessment of the possibilities and recommendations on best approaches is warranted. This thesis may inform the longer-term development of a national policy agenda better able to address current ambiguities associated with the role of homeland

security relative to other national priorities such as economic prosperity and competitiveness.

2. Scope of Work

This paper focuses primarily on DHS policies and activities associated with cross-border trade, with a particular emphasis on imported goods, 99 percent of which are transported via maritime commerce. This considerable volume of maritime cargo, its economic impact (such cargo contributes approximately \$649 billion annually to the gross domestic product), and its geographic scope (including approximately 3,700 marine terminals in the United States) make it a meaningful area of assessment.¹⁴ While recognizing the range of other stakeholders with equities, such as other U.S. government departments and agencies, the private sector, and foreign governments, this assessment seeks to identify beneficial and viable policy options available specifically to DHS. It does not focus on the movement of people or services across borders and instead concentrates on the policies and processes associated with tangible goods. Travel, tourism, and e-commerce are related and important components of any discussion of the security–economy dynamic; however, the distinct challenges in that environment require specialized treatment beyond the scope of this effort. In addition, this review does not reiterate but rather builds upon the large body of literature detailing the exponential growth in trade over the last several decades as a result of globalization, advances in information communication technology, and improved efficiencies in logistics and transportation networks.¹⁵ It acknowledges but does not review in detail the array of sources that explain how this exchange of commodities enables the American way of life and fuels our nation’s economy.

¹⁴ “CMTS Portal,” Maritime Administration, accessed June 17, 2017, www.marad.dot.gov/ports_landing_page/marine_transportation_system/MTS.htm.

¹⁵ For general works on the impacts of globalization on trade, see David Hummels, see “Transportation Costs and International Trade in the Second Era of Globalization,” *Journal of Economic Perspectives* 21, no. 3 (2007): 131–154; Christopher Chase-Dunn, Yukio Kawano, and Benjamin D. Brewer, “Trade Globalization since 1795: Waves of Integration in the World-System,” *American Sociological Review* (2000): 77–95.

When discussing security in the context of cross-border trade, this paper does not prioritize or distinguish any among the array of threats that DHS and other agencies work to detect and combat. This review takes as a foundational premise the fact that criminal organizations, terrorists, or other bad actors seek to exploit this efficient commercial network to transport contraband across borders or even attack the system itself to disrupt its smooth functioning and undermine our economic health and sense of security.¹⁶ In addition, commerce arriving in the United States may carry invasive species or diseases harmful to domestic plants and animals or even to citizens. And, of course, natural disasters such as extreme weather events or man-made accidents like oil spills have the potential to disrupt supply chains and threaten the security of commerce. As the primary law enforcement agency at the border, DHS is responsible for working in coordination with other agencies to ensure that goods crossing national borders are secured against each of these distinct threats.

3. Instrumentation (Data and Evidence)

This thesis relies on data provided by four major international organizations, to include the World Trade Organization, the World Bank, the Organization for Economic Co-operation and Development (OECD), and the World Economic Forum, to identify opportunities for improved facilitation of imported goods at the U.S. border and explore the potential economic benefits of such improvements.¹⁷ As is discussed in more detail in forthcoming sections, these organizations have developed an array of qualitative and quantitative indicators that enable the assessment of trade facilitation levels by nation, and even regionally or globally. While the specific indicators vary and/or overlap among the reports, they each reflect a common set of broader non-tariff measures that businesses encounter when importing. The resulting data indicate that some of the legitimate controls imposed by the United States government to protect domestic consumers,

¹⁶ For additional references on potential terrorist or criminal exploitation of supply chain vulnerabilities, see Andrew Grainger, "Supply Chain Security: Adding to a Complex Operational and Institutional Environment," *World Customs Journal* 1, no. 2 (2007): 17–29; Steven Flynn, "America the Vulnerable," *Foreign Affairs* 81, no. 1 (2002): 60–74; National Commission on Terrorist Attacks upon the United States of America, *9/11 Commission Report* (New York: W.W Norton, 2004), 390.

¹⁷ The Appendix details the trade facilitation indicators used by the World Economic Forum, the World Bank, and OECD.

markets, businesses, and the environment may have the unintended consequence of increasing the cost of importing and eroding the competitiveness of American businesses.

4. Selection Criteria and Steps of Analysis

This thesis analytically assesses each of the suggested policy options according to three criteria: 1) the impact on the effectiveness and efficiency of overall import procedures; 2) the impacts on American businesses; and 3) the feasibility of implementing the policy.

The paper utilizes the World Economic Forum Border Administration indicators to assess impacts on the overall efficiency and effectiveness of U.S. import procedures (the first evaluation criterion). These trade facilitation indicators are not only the most inclusive (covering most of the indicators used by the other organizations) but focus specifically on the import-related activities at the border where the United States ranks below global leaders, suggesting that there is ample opportunity for improvements. Additionally, the Border Administration indicators measure the effectiveness of activities where DHS influence could effect change, to include the clearance process at the border, the time and cost required to import goods into a specific nation, the number of documents required for import, and the efficiency of relevant customs administrations.

To assess the impact of each policy option on U.S. businesses (the second evaluation criterion), this paper reviews recent recommendations from the Commercial Operations Advisory Committee (COAC), CBP's primary private-sector advisory group. The formal, publicly available recommendations offered by the COAC provide helpful insight into the challenges encountered by large and small American businesses across a variety of industry sectors. The author uses key words to identify and categorize the subset of COAC recommendations focused on trade facilitation activities and then employs a simple binary scoring system of "yes" or "no" to assess if the proposed policy options would address the recommendation.

Finally, this paper assesses the feasibility of implementing each of the policy options (the third evaluation criterion). For this purpose, the author utilizes a scatter chart to distinguish between possible "quick-wins" that can be accomplished within the

existing DHS mission and/or authorities and budget and “longer-term solutions” that would require mission expansion, and additional authorities and funding.¹⁸

D. LITERATURE REVIEW

The goal of this research is two-fold: first, to assess the impact that closer integration of the United States’ security and economic security priorities may have on the homeland security enterprise, and second, to consider potential roles DHS should play in this space. An initial review suggested two categories of relevant literature, to include:

- Sources that contextualize the *relationship between security and economics* over time and, in theory, that provide insight into opportunities to advance the contemporary strategic security and economic agendas of the United States.
- Sources devoted to the specific topic of trade facilitation, including discussions of the concept, qualitative assessments of various implementation approaches, and globally recognized performance measurements and indicators that can guide DHS activities.

1. Relationship between National Security and Economic Priorities

The large and diverse body of literature focused on the relationship between security and economics suggests an enduring interest in the topic, ranging back to the two World Wars and the Cold War through the advent of globalization. These sources, mainly historical reviews or assessments of different perspectives on the security–economy dynamic, provide a helpful contextual backdrop for the central research question. The only consistency among the sources reviewed was their agreement that security and economic factors share some degree of interdependence, and that a clear division exists between what may be termed the “realist” and “liberal” schools of thought. In their article “Paying for Security: The Security Prosperity Dilemma in the United States,” Uk Heo and Robert Eger characterize the key differences between these schools of thought—those who insist upon clear lines of demarcation between national security and economic

¹⁸ See Appendix Figure 13, “Criterion 3: Feasibility of Implementation.”

agendas and factors (the realists) and those who take the opposite view by suggesting a necessary inter-relationship between the two (the liberalist perspective).¹⁹

Heo and Eger, representing a realist perspective, argue that military force remains the most effective means of advancing foreign policy goals despite the fact that the costs associated with such power hinder economic growth. Their argument echoes the case made earlier by R. Cohen and P.A. Wilson that superpower nations would experience ever-increasing difficulty in developing expensive next-generation technologies and processes to secure their homeland over the longer term without sacrificing near-term economy prosperity.²⁰ Others associated with the “realist” school of international relations (and economic thought) agree that power is the dominant factor in world politics as self-interested, rational state actors work to achieve security through the accumulation of wealth and force. Because this power must be derived at the expense of others, however, violent conflict will inevitably arise. Some of the classic works in this school of thought include Thucydide’s *The Peloponnesian War* and Thomas Hobbes’ *Leviathan*.²¹ More recently, the realist perspectives have been more thoroughly developed by Hans Morgenthau, who, in *Politics Among Nations: The Struggle for Power and Peace*, defined international politics “as an autonomous sphere of action and understanding apart from other spheres, such as economics, ethics, aesthetics, or religion”; neo-realist Kenneth Waltz; George Kennan, father of the containment strategy against the former Soviet Union; and Edward Hallett Carr, who, echoing Hobbes, argued in *The Twenty Years’ Crisis* that not only economic issues but even morality itself existed only as a

¹⁹ Uk Heo and Robert Eger, “Paying for Security: The Security-Prosperity Dilemma in the United States,” *Journal of Conflict Resolution* 49, no. 5 (2005): 792–817; another helpful overview of the different camps on this issue is Robert Tollison and Thomas Willett, “Power, Politics, and Prosperity: Alternative Views of Economic Interdependence,” *Annals of the American Academy of Political and Social Science* 460 (March 1982): 21–28.

²⁰ R. Cohen and P. A. Wilson, “Superpowers in Decline? Economic Performance and National Security,” *Comparative Strategy* 7, no. 2 (1988): 99–132.

²¹ Thucydides, *The Peloponnesian War*, translated by Steven Lattimore (Indianapolis, IL: Hackett, 1998); Thomas Hobbes, *Leviathan: Or the Matter, Forme, and Power of a Common-Wealth Ecclesiasticall and Civill*, ed. Ian Shapiro (New Haven, CT: Yale University Press, 2010).

product of the dominant social order and “the search for an ethical norm outside of politics is doomed to frustration.”²²

In contrast, Giacomo Luciani provides insight into the alternative liberal perspective in its discussion of the means by which economic factors can and should be used to advance a nation’s security agenda. In “The Economic Content of Security,” Luciani brings modern United Nations policies to bear in support of his case that national, regional, and even global security priorities have the potential to drive economic prosperity at each of these levels.²³ Experts in this school of thought, ranging back to the founders of classical liberalism such as Immanuel Kant, John Locke, and Jean-Jacques Rousseau, argue that individuals and states are motivated by a multiplicity of factors and interests (to include historical, cultural, emotional, and social) and are, therefore, too complex to allow linear predictions of behavior or outcomes. According to this view, security is not obtained through the application of power but through cooperation and development of mutually advantageous associations. Joseph Nye and Robert Keohane, in their seminal work initially published in 1977, advanced the theory that the web of “complex interdependencies” binds a nation’s security and economic agendas together, along with economies among sovereign states, in today’s connected world.²⁴ This fused association resulted in a blurring of lines between domestic and foreign policy considerations, rendered violent conflict a less viable policy tool, and elevated the status of economic policies as effective instruments of advancing national objectives.²⁵

²² Hans Morgenthau, *Politics Among Nations: The Struggle for Power and Peace*, 6th edition (New York: McGraw-Hill, 1985); Kenneth Waltz, *Theory of International Politics* (Long Grove, IL: Waveland Press, 1979); George Kennan, “The Sources of Soviet Conduct,” *Foreign Affairs*, July 1947; Edward Carr, *The Twenty Years’ Crisis, 1919–1939: An Introduction to Study International Relations* (New York: Palgrave, 2001), 19.

²³ Giacomo Luciani, “The Economic Content of Security,” *Journal of Public Policy* 8, no. 2 (April 1988): 151–173.

²⁴ Robert O. Keohane and Joseph S. Nye, *Power & Interdependence*, 2nd edition (Glenview, IL: Harper Collins, 1990).

²⁵ Other important works that provide additional insight into the liberal perspective include Micheal Doyle, “Liberalism and World Politics,” *American Political Science Review* 80, no. 4 (December 1986): 1151–1169; Michael Barnett and Martha Finnemore, *Rules for the World: International Consequences of Economic Growth* (New York: Knopf, 2005); and a number of works by economist John K. Galbraith. Stephen Pressman provides a helpful overview of the scores of Galbraith’s articles and books in “The Economic Contributions of John Kenneth Galbraith,” *Review of Political Economy* 17, no. 2: 161–209.

2. Trade Facilitation

A third category of relevant sources includes theoretical works geared toward policy-makers that explore the concept of trade facilitation, practical “how-to” guides for economies interested in implementing specific trade facilitation improvements, and reports promulgated by recognized global organizations that rely on economic analysis and survey data to rank national performance according to established indicators.

In his policy piece entitled “Trade Facilitation as a Growth Tool,” Edward Gresser conveys a perspective common among these sources: namely, that a program of simplification, harmonization, and modernization of government rules, processes, and requirements has the potential to dramatically improve a nation’s security and economic competitiveness.²⁶ Andrew Grainger, an expert on supply chain management and logistics, shares this perspective and offers further analysis of trade facilitation frameworks. In a series of 2011 articles, “Trade Facilitation: A Conceptual Review,” and “Developing the Case for Trade Facilitation in Practice,” Grainger outlines the characteristics of typical trade facilitation theories and offers a strategic-level assessment of the fiscal, legal, and institutional factors that can speed, or hinder, implementation.²⁷ Evdokia Moise’s seminal paper entitled “The Cost of Introducing and Implementing Trade Facilitation Measures” exemplifies a wide array of sources that not only explore the concept of trade facilitation but offer quantitative assessments of potential benefits to both private and public-sector stakeholders.²⁸ These works, which typically use data modeling techniques to conduct macroeconomic assessments of the impact of trade

²⁶ Edward Gresser, “Trade Facilitation as a Growth Tool,” *Progressive Economy*, July 17, 2013, <http://www.progressive-economy.org/wp-content/uploads/2013/07/trade.facilitation.pdf>.

²⁷ Andrew Grainger, “Trade Facilitation: A Conceptual Review,” *Journal of World Trade*, 45 no. 1 (February 2011) 39–62; Andrew Grainger, “Developing the Case for Trade Facilitation in Practice,” *World Customs Journal* 5, no. 2 (September 2011) 65–76.

²⁸ Evdokia Moise, “The Costs of Introducing and Implementing Trade Facilitation Measures,” in *Overcoming Border Bottlenecks: The Costs and Benefits of Trade Facilitation*, 173–217 (Paris: OECD, 2009), doi: 10.1787/9789264056954-en. Other influential works of this type include: John Wilson, Catherine Mann, and Tsunehiro Otsuki, “Trade Facilitation and Economic Development: A New Approach to Quantifying the Impact,” *World Bank Economic Review* 17, no. 3 (2003): 367–389; Gerard McLinden et al., *Border Management Modernization* (Washington, DC: International Bank for Reconstruction and Development, 2011); Evdokia Moise and Silvia Sorescu, *Contribution of Trade Facilitation Measures to the Operation of Supply Chains* (OECD Trade Policy Papers no. 181) (Paris: OECD, 2015).

facilitation policies on global and regional economies, are valuable decision-making tools for reform-minded policy-makers.

Another set of trade facilitation sources provide practical guidance on how to build or develop discrete components of a trade facilitation program. Rather than explaining concepts and quantifying benefits for policy-makers, these works offer technical, task-oriented information geared toward more operational audiences. Examples of these works, typically promulgated by recognized global institutions, include the World Bank's *Trade and Transport Facilitation: A Practical Toolkit for Implementation*, a step-by-step "how-to" guide called *Trade Facilitation and the Single Window* issued by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), and similar compendiums published by the World Customs Organization such as *How to Build a Single Window Environment*, *Guide to Measuring the Time Required for the Release of Goods*, and dozens of non-binding "recommendations" related to trade facilitation and coordinated border management.²⁹

The final group of sources in the trade facilitation category include those particularly relevant to this paper's evaluation of different trade policy options that may inform DHS's efforts to better define its role in supporting national economic competitiveness. These sources include a series of annual reports promulgated by recognized organizations such as the World Economic Forum, World Bank, and the Organization for Economic Co-operation and Development (OECD) within the United Nations Centre for Trade Facilitation and Electronic Business. The reports issued by these organizations contain helpful quantitative data and economic indicators drawn from publically available commercial sources, survey information, and modeling analysis of regional and global trade flows. The data and economic indicators serve as helpful benchmarks against which to understand the United States' ranking as compared to other

²⁹ The World Bank, *Trade and Transport Facilitation Assessment: A Practical Toolkit for Country Implementation* (Washington, DC: The World Bank, 2010), <https://openknowledge.worldbank.org/handle/10986/2490>; United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), *Trade Facilitation and the Single Window* (Geneva: United Nations, 2011); World Customs Organization, *How to Build a Single Window Environment* (Brussels: World Customs Organization, 2011); World Customs Organization, *Guide to Measure the Time Required for the Release of Goods*, Version 2 (Brussels: World Customs Organization, 2011); UN/CEFACT, *Recommendation No. 33: Recommendation and Guidelines on Establishing a Single Window* (Geneva: United Nations, 2005).

nations and highlight areas for improvement. Because these reports are issued annually or biannually, the data and indicators are most helpful for raising awareness and helping policy-makers assess the impact of completed, ongoing, and future trade modernization activities. The specific works from these organizations that most significantly inform this paper include:

- The *Global Enabling Trade Report*, issued every other year by the World Economic Forum since 2008, uses an enabling trade index (ETI) of fifty-six total indicators subdivided across seven “pillars” to assess the trade facilitation scores of 138 economies. The data to assess a nation’s performance for each of the indicators are drawn from the proprietary databases of participating organizations as well as from results of an annual survey involving approximately 13,000 respondents from 148 economies.³⁰
- The “Trade Facilitation Indicators” interactive online tool, developed and updated annually by OECD, assesses the progress made by 163 countries in implementing ninety specific indicators grouped into eleven major categories.³¹ The data are derived from quantitative measures of border processes valued on a scale of 0 to 2, with 2 indicating best performance.

The World Bank’s *Connecting to Compete: Trade Logistics in the Global Economy* report, published every other year since 2014, relies on comprehensive survey results to assess the supply chain efficiency of 160 countries according to sixty-five “logistics performance indicators.”³² The data are both qualitative and quantitative, being derived from surveys of logistics operators around the world and analysis of publicly available commercial information.

³⁰ Margareta Drzeniek Hanouz, Thierry Geiger, and Sean Doherty, *The Global Enabling Trade Report 2014* (Geneva: World Economic Forum, 2014), 6. Other participating organizations include International Trade Centre, the Global Express Association, the World Bank, the World Trade Organization, and the United Nations Conference on Trade and Development.

³¹ “About the OECD trade facilitation indicators,” accessed December 23, 2015, <http://www.oecd.org/trade/facilitation/indicators.htm#About-TFI>. Note that the number of countries covered by the OECD Trade Facilitation Indicators has grown from twenty-six countries in 2011 to 163 in 2015. The number of indicators has remained more static, shifting from twelve to eleven during that same timeframe.

³² The World Bank, *Connecting to Compete: Trade Logistics in the Global Economy* (Washington, DC: The World Bank, 2016).

THIS PAGE INTENTIONALLY LEFT BLANK

II. SAYING BUT NOT DOING: CONTRASTING OPERATIONAL REALITIES IN THE MODERN TRADE ENVIRONMENT AND DHS POLICY OBJECTIVES

A. THE MODERN TRADE ENVIRONMENT

The United States and nations around the world have experienced an exponential growth in trade over the last several decades as a result of globalization, advances in information manufacturing and communication technology, and improved efficiencies in logistics and transportation networks.³³ As mentioned previously, the United States is the world's second-largest trading nation, importing approximately \$2.7 trillion and exporting \$2.2 trillion worth of goods and services in 2016.³⁴ In addition to providing Americans with a seemingly endless array of commodities (affordable garments, agricultural products from every corner of the world, pharmaceuticals, and electronics, for example), energy imports and other raw materials keep our electric grids powered and our businesses running. The tens of billions of dollars collected annually in duties, tariffs, and other fees levied on these imports and exports also represent an important source of revenue for the U.S. government.

1. The Evolving Trade Environment

In addition to increasing the speed and volume of international commerce, advances arising from globalization have enabled a decentralization of the production of goods that has transformed the trading environment and raised some tough questions about the continued relevance of U.S. government trade and border security policies and processes. Although the impacts of globalization and the United States' future relationship with it currently are the topic of much political debate, its characteristics over the last several decades are clear. These characteristics, which include the availability of

³³ For general works on the impacts of globalization on trade, see David Hummels, "Transportation Costs and International Trade in the Second Era of Globalization," *Journal of Economic Perspectives* 21, no. 3 (2007): 131–154; Chase-Dunn, Christopher, Yukio Kawano, and Benjamin D. Brewer, "Trade Globalization since 1795: Waves of Integration in the World-System," *American Sociological Review* (2000): 77–95.

³⁴ "Annual Trade Highlights: 2016 Press Highlights," Department of Commerce, last modified November 17, 2016, <https://www.census.gov/foreign-trade/statistics/highlights/annual.html>.

faster transportation options, cheaper labor markets, improved access to information, and reduced national tariffs through a general trend toward trade liberalization policies, have allowed businesses to find competitive advantages in diverse locations. While some goods are still manufactured and consumed in the same country or are finished in one country and shipped to another for consumption, today the dominant trade model for large businesses is one in which the phases of production are spread around the world and no longer tied by proximity to the end consumer. Rather, an array of intermediate goods and components move quickly and cheaply across national jurisdictions and utilize preferred routes during different phases of the production process. The rise of “value chains” (so called because of the value added to a particular good as it is constructed during its movement through the supply chain) complicates traditional import and export reporting mechanisms; an overall increase in trade volumes no longer correlates to trade production or output.³⁵ This is because an intermediate part or component may cross international borders and be registered by customs authorities as an import or export many times before it becomes a final product. A recent report from the World Economic Forum found that intermediate commodities now constitute more than 50 percent of goods imported by the thirty-four OECD economies, an appreciable increase over previous years.³⁶ The OECD statistic aligns with the United States’ importation of intermediate products, which in 2015 accounted for approximately 52 percent of total imports.³⁷

³⁵ For more general discussion on the growing trend of global trade in intermediate products, see Richard Baldwin, “Global Manufacturing Value Chains and Trade Rules,” in *The Shifting Geography of Global Value Chains: Implications for Developing Countries and Trade Policy* (Geneva: World Economic Forum, 2012), 16; Gary Gereffi, John Humphrey, and Timothy Sturgeon. “The Governance of Global Value Chains,” *Review of International Political Economy* 12, no. 1 (2005): 78–104.

³⁶ Peter Draper et al., *The Shifting Geography of Global Value Chains: Implications for Developing Countries and Trade Policy* (Geneva: World Economic Forum, 2012), 4; OECD is the Organization for Economic Co-operation and Development, and includes thirty-four member countries representing developed as well as emerging economies.

³⁷ United States Census Bureau, “Exhibit 10: Real U.S. Trade in Goods by Principal End-Use Category Chained (2009) Dollars,” in *U.S. International Trade in Goods and Services* (FT900), last modified November 17, 2016, https://www.census.gov/foreign-trade/Press-Release/current_press_release/index.html. The 52 percent figure represents the addition of the capital goods (30 percent) such as machinery, equipment, parts, and industrial supplies (22 percent) such as lumber, plastics, fuel, and steel in CY 2015.

Some economists argue that the traditional definition of intermediate goods should actually be expanded to include automotive parts and even food, as these products “are inputs into the production of the producers in America.”³⁸ For example, economist Don Boudreaux points out that products imported by large companies (like Wal-Mart) and then sold on to end consumers could very well be categorized as intermediate components as “they are inputs into Wal-Mart’s production process.”³⁹

So when Wal-Mart imports packaged bed linen, it does not buy these goods as consumer goods; it buys them as *intermediate goods*—goods that are used by Wal-Mart as inputs into producing the final consumer service that we might call “shopping convenience.” Only by supplying this latter service—shopping convenience—does Wal-Mart earn profits. From Wal-Mart’s perspective, imports from China of packaged bed linen are inputs used to produce its own output no less so than are Wal-Mart’s delivery trucks, warehouses, cash registers, advertising, and corporate stationery.⁴⁰

Under such a broader definition, the United States’ importation of intermediate products in 2015 would increase considerably, to nearly 95 percent.. Regardless, the demonstrated rise in value chains and associated intermediate commodity phenomenon that characterize today’s trade environment both indicate that increased trade costs could increase the costs of domestic production and consumption and undermine the nation’s economic health. A trade cost, as defined by a 2004 study and accepted in relevant literature, is “all costs incurred in getting a good to a final user other than the marginal costs of producing the good itself.”⁴¹ Activities encompassed by this general term include transportation, distribution, and information costs, as well as legal and policy requirements, including tariffs.⁴²

Most relevant to this discussion are the subset of legal and policy requirements, *exclusive of tariffs*, that government regulators take at the border and which can impact

³⁸ Don Boudreaux, “Almost All Imports Are Inputs,” Café Hayek, August 1, 2016, <http://caféhayek.com/2016/08/almost-all-imports-are-inputs.html>.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ James E. Anderson and Eric van Wincoop, “Trade Costs,” *Journal of Economic Literature* 42, no. 3 (September 2004): 691.

⁴² Ibid., 692.

trade flows. As global *ad valorem* tariffs (rates established “according to the value” of the good) have plummeted since the establishment of the General Agreement on Trade and Tariffs in 1947 (from approximately 40 to 4 percent), policy-makers increasingly look to non-tariff measures for opportunities to reduce costs.⁴³ Whereas tariffs are “obvious, directly observable, and unambiguously intended to affect trade,” defining and understanding the impact of non-tariff measures on trade is, as one observer put it, “still very much a fuzzy science.”⁴⁴ At the most general level, non-tariff measures are legitimate government controls imposed to protect domestic consumers, markets, businesses, and the environment, but that may have the unintended consequence of increasing the cost of exporting and importing.⁴⁵ Relevant international organizations (such as the World Trade Organization, the United Nations Conference on Trade Development, the International Trade Commission, and others), offer varying classifications of non-tariff barriers. For consistency, this paper relies on the general classifications provided by the World Trade Organization’s online Integrated Trade Intelligence Portal (Table 1) and focuses later discussion most heavily on the measures impacting imports, as these are the activities in which DHS contributes to policy development and/or enforcement of laws or regulations at the border.⁴⁶

⁴³ The General Agreement on Tariffs and Trade was the early multilateral trade agreement that governed global trade liberalization efforts until its replacement with the World Trade Organization in 1994. For more information on international trade governance bodies and rules, see Meredith A. Crowley, “An Introduction to the WTO and GATT,” *Economic Perspectives* 4 (2003): 42–57.

Robert W. Staiger, “The Economics of GATT,” National Bureau of Economic Research, accessed February 1, 2017, <http://www.nber.org/reporter/spring99/staiger.html>.

⁴⁴ Olivier Cadot, Maryla Maliszewska, and Sebastian Saez, “Non-tariff Measures: Impact, Regulation, and Trade Facilitation,” *Border Management Modernization* (November 2010): 215.

⁴⁵ The term *nontariff measures* is often synonymous with *nontariff barriers*, although the latter can have a more negative connotation as it traditionally refers to overtly protectionist policies. This is a distinction between *nontariff measures*, which tend to be policies that protect or promote American businesses and markets and may as a result impact foreign traders, but were not specifically designed with that end in mind. One economist helpfully categorizes the variety of non-tariff measures/barriers as protectionist policies, assistance policies, and non-protectionist policies. Alan Deardorff, “Easing the Burden of Non-tariff Barriers,” International Trade Center, October 1, 2012, <http://www.tradeforum.org/article/Easing-the-burden-of-non-tariff-barriers/>.

⁴⁶ The World Trade Organization, *World Trade Report 2012: A Closer Look at Non-tariff Measures in the 21st century* (Geneva: The World Trade Organization, 2012), 94, https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report12_e.pdf.

Table 1. World Trade Organization Classification of Non-tariff Measures⁴⁷

<u>Measures Impacting Imports</u>	<u>Measures Impacting Exports</u>	<u>Measures Affecting Production & Trade</u>
Customs procedures (delays/corruption)	Government Procedures	Regulatory framework
Charges and taxes on imports	Charges and taxes on exports	Technical barriers to trade
Customs valuation	Export restrictions	Sanitary and phytosanitary measures
Pre-shipment inspection	Export subsidies	Intellectual property rights
Rules of origin	Export promotion	
Import prohibitions (quotas, licensing)	Special economic zones	
Anti-dumping, countervailing duties, safeguard regimes		
Government procurement		
State trading enterprises		

While the Trump administration’s skepticism of the advantages of globalization for certain domestic industries could occasion a renewed consideration of tariffs, trade facilitation efforts will nonetheless remain a priority for businesses large and small whose bottom lines are impacted negatively by inefficiencies and other frictions at the border.

2. Post-9/11 Security Measures

Another hallmark feature of the new commercial environment is what supply chain management expert Andrew Grainger has accurately described as “the avalanche” of supply chain and transportation security requirements developed after the terrorist attacks of September 11, 2001.⁴⁸ With commerce arriving daily at the Nation’s 329 official ports of entry, concern after 9/11 rose among experts and legislators alike that the supply chain system that transported critical trade was equally as capable of transporting weapons of mass destruction or other dangerous and illicit goods that could harm the

⁴⁷ Adapted from “Integrated Trade Intelligence Portal,” World Trade Organization, accessed June 17, 2017, <http://i-tip.wto.org/goods/Forms/GraphView.aspx?period=y&scale=lg>.

⁴⁸ Andrew Grainger, “Supply Chain Security: Adding to a Complex Operational and Institutional Environment,” *World Customs Journal* 1, no. 2 (2007): 17–29.

nation or disrupt the smooth functioning of the system. The concern among security experts and legislators alike was that, prior to 9/11, “America’s terrestrial and maritime front doors were wide open.”⁴⁹ Recommendations in the *9/11 Commission Report* and growing political pressures for increased security of open supply chain systems and transportation networks contributed to a spate of new laws, regulations, and programs geared toward mitigating real and perceived vulnerabilities throughout the nation’s domestic transportation system and other critical infrastructure sectors, as well as the global supply chains that fed them.⁵⁰

In addition to the specter of terrorist threats to the global supply chain, the system is also vulnerable to other manmade threats (such as organized criminal groups) and natural disasters. In one recent survey, 97 percent of American retailers indicated that they had experienced inventory loss through cargo theft and other criminal activities, with over half of the respondents reporting “a significant increase” in such activity in recent years.⁵¹ The financial impact of such organized criminal supply chain theft is consequential, estimated to be approximately \$10 billion a year in the United States alone.⁵² More recently, system-wide supply chain disruptions triggered by relatively localized events (such the loss of key electronic and automotive manufacturing facilities in Japan during the 2011 earthquake and tsunami, disruptions to air cargo during the 2012 volcanic eruption in Iceland, and energy shortages stemming from a number of domestic

⁴⁹ Steven Flynn, “America the Vulnerable,” *Foreign Affairs* 81, no. 1 (2002): 60–74.

⁵⁰ National Commission on Terrorist Attacks upon the United States of America, *9/11 Commission Report*, 390. Key legislation that established scores of new import, export, supply chain, and transportation security-related requirements include: the Homeland Security Act of 2002 (P.L. 107-296), the Trade Act of 2002 (P.L. 107-210), the Maritime Transportation Security Act of 2002 (P.L. 107-295), the Coast Guard and Maritime Transportation Act of 2004 (P.L. 108-293), the Security and Accountability for Every (SAFE) Port Act of 2006 (P.L. 109-347), and the Implementing Recommendations of the 9/11 Commission Act of 2007 (P.L. 110-53). The literature of specific border and supply chain security programs that have been developed in the aftermath of 9/11 is well established, with dozens of congressional hearings on the topic with testimony from both private- and public-sector witnesses, numerous reports from the Government Accountability Office, and scholarly articles such as Andrew Grainger, “Customs and Trade Facilitation: From Concepts to Implementation,” *World Customs Journal* 2, no. 1 (2008): 17–30; and Grainger, “Trade Facilitation.”

⁵¹ National Retail Federation, *Organized Retail Crime Survey: 2015* (Washington, DC: National Retail Federation, 2015), 6.

⁵² Daniel Ekwall, “Supply Chain Security: Threats and Solutions,” in *Risk Management: Current Issues and Challenges*, ed. Nerija Banaitiene (Rijeka, Croatia: InTech, 2012).

weather events to include Hurricanes Katrina and Sandy) initiated an ongoing global conversation focused on how best to build a trade system capable of absorbing shocks and recovering rapidly from disturbance events.⁵³

These new requirements and considerations have contributed to an increased vigilance at the nation's borders and closer scrutiny of the goods transiting our border each day. However, these measures also have increased the cost of doing business with the United States and, if unchecked, could impede economic prosperity in the years to come. The literature on the fiscal impact of the 9/11 attacks is extensive. One report from the International Monetary Fund estimated higher security costs for industries engaged in global trade at "\$1.6 billion per year and, because of slower processing times at the border and reduced consistency, additional costs of carrying 10 percent higher inventories at \$7.5 billion per year."⁵⁴ Another assessment conducted by a consortium of economists estimated \$65 billion in costs incurred by industry stakeholders as a result of necessary changes to logistics supply chains in the immediate aftermath of 9/11.⁵⁵

Although industry stakeholders largely acknowledged the need for a strengthened security posture after 9/11, their concern grew in proportion to the increase in federal programs and requirements. Data compiled by the American Association of Exporters and Importers (AAEI) helps to illustrate this point. Posted initially on their website in 2010, AAEI's "Post 9/11 Homeland Security Programs" chart identified thirty-five new security programs established in the aftermath of the September 11th terrorist attacks. Of these new programs, twenty-two were mandatory, twelve were assessed as causing supply chain delays of less than twenty-four hours, five as causing "major" delays of

⁵³ Some of the most recent or relevant work on supply chain resilience includes: Xiao-Feng Shao, "Demand-side Reactive Strategies for Supply Disruptions in a Multiple-product System," *International Journal of Production Economics* 136, no. 1 (2012): 241–252; Walid Klibi and Alain Martel, "Modeling Approaches for the Design of Resilient Supply Networks under Disruptions," *International Journal of Production Economics* 135, no. 2 (2012): 882–898; Yossi Sheffi, *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage* (Cambridge, MA: MIT Press, 2005); Philip Palin, "Supply Chain Resilience: Diversity+ Self-organization= Adaptation," *Homeland Security Affairs* XIII (August 2013).

⁵⁴ "World Economic Outlook: The Global Economy After September 11," International Monetary Fund, accessed June 17, 2017, <http://www.imf.org/external/pubs/ft/weo/2001/03/>.

⁵⁵ Bernasek, "Friction Economy." The changes addressed increased transportation costs, the need to maintain additional inventory because of longer clearance times at the border, and costs needed to comply with new security requirements associated with importing goods.

twenty-four to forty-eight hours, fifteen as requiring additional resources from businesses to implement, and nine as increasing the times associated with the transport of goods throughout the supply chain system.⁵⁶ The underlying point AAEI sought to convey with the chart is that the United States' economic competitiveness can be impacted negatively by bureaucratic control regimes that had been established to address security concerns but that, left unchecked, can become complex and byzantine processes that place a heavy burden of compliance on companies looking to do business with or in the United States. Data provided by the World Economic Forum suggests that the concerns expressed by AAEI and other private-sector stakeholders are not unfounded. The Forum reported in the 2010 version of their biannual *Enabling Trade Report* that "the threat of terrorism to business [in the United States] remains among the costliest in the world."⁵⁷ The nation's ranking has only fallen since then, from 114th in 2010 to 118th in 2014.⁵⁸

B. THE CONCEPT OF TRADE FACILITATION

Government regulators, businesses, and trade and supply chain experts alike are coming to understand that decentralized and uncoordinated government controls and a legal and regulatory environment constructed hodgepodge over decades has resulted in layers of importing requirements that are costly and time consuming for businesses to implement. Gary Hufbauer and Jeffrey Schott, two economists from the Peterson Institute for International Economics, explain this phenomenon in their influential 2013 report quantifying potential global payoffs of a restructured global trade agenda and requirements regime. "It's not that opportunities are lacking," they note, as "credible econometric research shows that global trade densities are less than a third of their potential; moreover, when measured in tariff-equivalent terms, the 'border effect' of tariff and non-tariff barriers approaches 100 percent. The problem is that responsible policy

⁵⁶ "The American Trader's Guide to Post 9/11 Homeland Security Programs," American Association of Exporters and Importers, accessed September 19, 2013, <http://www.aaei.org/LinkClick.aspx?fileticket=voD5U22%2bcqQ%3d&tabid=79>.

⁵⁷ Robert Z. Lawrence et al., *The Global Enabling Trade Report 2010* (Geneva: World Economic Forum, 2010), 24, http://www3.weforum.org/docs/WEF_GlobalEnablingTrade_Report_2010.pdf.

⁵⁸ *Ibid.*, 313.

officials are not rising to the challenge by energetically dismantling barriers that impede trade and investment flows.”⁵⁹

Other experts agree that policies and procedures better suited to the modern commercial environment are needed to ensure efficient and cost-effective cross-border trade. For example, as the contributors to the World Economic Forum’s compendium on *The Shifting Geography of Global Value Chains* explained in the recommendations section:

These dynamics [increases in value chains and new models of trade] will drive unilateral trade policy responses centered on promoting competitiveness, efficiency, and attractiveness to value chain investments. Related to this, the international rules governing value chain operations need to be revisited with a view to updating them so that the new emerging context can evolve optimally.⁶⁰

The growing apprehension about the inadequacy of current policies and institutions relative to the needs of modern trade has encouraged exploration of new frameworks and organizational models related to the governance of global commerce. The concept of trade facilitation is one salient example. Concrete definitions of trade facilitation have not yet crystalized, but general themes are arising as multiple international organizations focus on the issue.⁶¹ The OECD defines trade facilitation as “efforts to simplify and streamline international trade procedures to allow for the easier flow of legitimate goods across international boundaries and thereby to reduce the costs of trade.”⁶² According to UN/CEFACT, trade facilitation is the “simplification, harmonization and standardization of the procedures and associated information flows required to move goods and provide related services from seller to buyer and to make

⁵⁹ Gary Hufbauer and Jeffrey Schott, *Payoff from the World Trade Agenda 2013* (Washington, DC: Peterson Institute for International Economics, 2013), 66, Table 2.3.

⁶⁰ Draper et al., *The Shifting Geography of Global Value Chains*, 4.

⁶¹ John Wilson, Catherine Mann, and Tsunehiro Otsuki note that “there is no standard definition of trade facilitation in public policy discourse” in their article, “Assessing the Benefits of Trade Facilitation: A Global Perspective,” *The World Economy* 28, no. 6 (2005): 842.

⁶² Vivian C. Jones and Lisa Seghetti, *U.S. Customs and Border Protection: Trade Facilitation, Enforcement, and Security* (CRS Report No. R43014) (Washington, DC: Congressional Research Service, 2015), 2, <https://fas.org/sgp/crs/homesec/R43014.pdf>.

payments.”⁶³ Recent U.S. legislation on the topic defined the term through the lens of the role played by CBP in coordinating related activities at the border, noting that trade facilitation “refers to policies and activities of U.S. Customs and Border Protection with respect to facilitating the movement of merchandise into and out of the United States in a manner that complies with the customs and trade laws of the United States.”⁶⁴ This paper relies on the definition provided by the World Trade Organization, an acknowledged authority on the issue. In its recent trade facilitation agreement, the World Trade Organization defines the term simply as “expediting the movement, release, and clearance of goods.”⁶⁵

Analysis by the World Trade Organization, the World Bank, the OECD, the World Economic Forum and other relevant institutions has established the economic benefits of improved trade facilitation. According to the World Economic Forum, worldwide improvement of trade facilitation measures “even halfway to the world’s best practices” could increase the global gross domestic product (GDP) six times more than removing all tariffs.⁶⁶ Put another way, the reduction of these barriers could “increase global GDP by nearly 5% and trade by 15% whereas complete elimination of all tariffs would increase global GDP by only (0.7%).”⁶⁷

This translates into an addition of 2.8 percent to the United States’ GDP and \$200 billion to U.S. exports.⁶⁸ Other quantitative studies have assessed the impact of all the measures included in the World Trade Organization’s trade facilitation agreement,

⁶³ UN/CEFACT, *Recommendation No. 4: National Trade Facilitation Bodies* (Geneva: United Nations, 2015), 5.

⁶⁴ Trade Facilitation and Trade Enforcement Act, P.L. 114-125 Section. 2 (February 24, 2016).

⁶⁵ World Trade Organization, “Agreement on Trade Facilitation,” 1.

⁶⁶ World Economic Forum, *Enabling Trade: Valuing Growth Opportunities* (Geneva: World Economic Forum, 2013), 4, http://www3.weforum.org/docs/WEF_SCT_EnablingTrade_Report_2013.pdf.

⁶⁷ Ibid.

⁶⁸ Gresser, “Trade Facilitation as a Growth Tool.”

estimating that they “have the potential to reduce overall trade costs by almost 10%.”⁶⁹ As World Trade Organization Director General Roberto Azevêdo explained in a December 2015 speech, improved trade facilitation is simply good for business:

The private sector is well aware of the problems caused by high costs and long delays at the border—and the barriers to trade that they represent. These barriers can often mean the difference between being able to compete internationally—or not. The Trade Facilitation Agreement aims to lower, or remove, these barriers. The Agreement is essentially about streamlining and simplifying customs procedures to cut the cost of doing business across borders.⁷⁰

Recognizing the opportunities associated with enhanced trade facilitation, private-sector stakeholders consistently raise the issue in engagements with the U.S. government. Most relevant to this paper include the efforts of the chartered industry advisory groups that provide formal feedback and recommendations to DHS and other government agencies and international organizations with similar trade-related responsibilities. Key examples of these private-sector bodies include the Commercial Operations Advisory Committee, the Advisory Committee on Supply Chain Competitiveness, and the World Custom Organization’s Private Sector Consultative Group.⁷¹ As each of these industry groups includes a diverse array of businesses (including importers, brokers, carriers, retailers, and others involved in the supply chain processes) and associations representing a wide range of interests; their feedback reflects a variety of priorities and interests. In

⁶⁹ WTO members concluded negotiations on the Trade Facilitation Agreement text in December 2013 and the agreement subsequently went into force on February 22, 2017. The agreement includes provisions for improving cooperation among customs agencies, removing procedural, regulatory, or technical barriers to trade, and enhancing global trade facilitation and trade enforcement capacity. Evdokia Moise, Peter Minor, and Thomas Orliac, *Trade Facilitation Indicators: The Impact on Trade Costs* (Paris: OECD, 2011).

⁷⁰ Roberto Azevêdo, “WTO Trade Facilitation in Action—Launch of Global Alliance for Trade Facilitation: Speech by Director-General Roberto Azevêdo,” World Trade Organization, December 17, 2015, https://www.wto.org/english/news_e/spra_e/spra106_e.htm.

⁷¹ The Commercial Operations Advisory Committee was established in 1987 by the Omnibus Budget Reconciliation Act (Pub. L. No. 100-203). The members, appointed by the Departments of Treasury and Homeland Security, advise those departments on a range of customs compliance and trade facilitation issues. The Advisory Committee on Supply Chain Competitiveness is another formal advisory body established more recently, in October 2012. This group also operates under the Federal Advisory Committee Act (as amended by 5 U.S.C.) and provides advice to the Department of Commerce on transportation, infrastructure, and supply chain issues. Finally, the Private Sector Consultative Group, established in 2006, includes representatives from thirty businesses and advises the World Customs Organization on a variety of global trade and customs issues.

fact, the very diversity of these groups serves as a check against biased recommendations that might give one entity an advantage over another. The publicly available recommendations coming out of these industry advisory groups highlight their priority concerns and provide helpful insight into those areas where U.S. government activities, particularly those of DHS, can best be targeted to improve U.S. economic competitiveness.

Feedback from these private-sector groups contributes to the growing realization among policy-makers that current federal policy frameworks and institutions require a recalibration to realize fully the benefits of international commerce in the new trade environment. For example, out of the 281 formal recommendations offered to DHS by the Commercial Operations Advisory Committee between 2013 and 2015, nearly half (47 percent) proposed methods by which DHS could remove impediments to the importing process at the border through increased automation, partnerships, and transparency and improved integration of processes with other government agencies.⁷²

Another formal industry group, the Advisory Committee on Supply Chain Competitiveness, also emphasized its concerns over increased border frictions in the feedback it has provided to-date to the Department of Commerce. Although this group focuses primarily on export and domestic freight policy, as well as domestic infrastructure investments (which are outside the scope of this paper), it is notable that six of the thirty recommendations developed since late 2012 related to the policy, technology, and program integration and modernization necessary to “ensure efficient trade flows between the United States and its international trade partners.”⁷³

Private-sector stakeholders worldwide echo these concerns. In their annual reports to the World Customs Organization Policy Commission, the Private Sector Consultative

⁷² “FY 2013–2015 COAC Recommendations,” CBP, accessed June 17, 2017, <http://www.cbp.gov/sites/default/files/documents/COAC%20Recommendations%2013th%20Term.pdf>; “2016 COAC Recommendations,” CBP, accessed June 17, 2017, <https://www.cbp.gov/trade/stakeholder-engagement/coac>.

⁷³ A complete listing of recommendations from the Advisory Committee on Supply Chain Competitiveness can be found on the Department of Commerce website at <https://www.cbp.gov/trade/stakeholder-engagement/coachttp://trade.gov/td/services/oscpb/supplychain/acsc/mmeetings.html>. The six recommendations noted as relevant can be found in the *Committee Approved Document: Proposed Recommendations for SW Portals*.

Group has offered a host of recommendations about how governments can maintain high security standards at their borders without unduly hindering the flow of trade. Of particular relevance to this discussion is the Private Sector Consultative Group's 2013 *WCO Orientation Package for Decision Makers*, which "provides a response to the question of what business wants from Customs."⁷⁴ The group's priorities, what they "want" from government controllers, includes transparency (through regular communication and clear guidance), predictability (through consistent policy and activity among all government stakeholders), and efficiency (through integration, modernization, and simplification of policy, regulation, programs, and technology).

Importantly, the benefits of effectively implemented trade facilitation activities can extend well beyond the private sector. Public-sector entities, such as government regulators, also can realize reduced administrative costs and improved performance of their enforcement and compliance missions from cutting red tape and streamlining requirements associated with processing imports and exports. Trade facilitation activities tend to focus on speeding the movement of commerce and, therefore, could reduce the time available to government regulators to perform their enforcement functions. However, these negative consequences can be diminished by the application of new processes and capabilities better suited to today's fast-paced supply chains. For example, customs modernization efforts within the United States for more than a decade have resulted in the reduction of paper documentation and manual processes needed to process imports and exports.⁷⁵ The transition to electronic data submission and payment processing has not only reduced the time and cost of processing transactions, but has allowed CBP to develop smarter risk-targeting capabilities and better ensure compliance with U.S. trade, safety, and security laws. The United States is not alone in this regard, with assessments indicating that government authorities typically request up to "200 data elements ... in a trade transaction, of which 60–70% are re-keyed at least once, while

⁷⁴ Private Sector Consultative Group, "Orientation Package for Decision Makers," World Customs Organization, June 2013, 1, http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/capacity-building/instruments-and-tools/orientation-package-decision-makers/or_package_decision_makers_v2en.pdf?db=web.

⁷⁵ The legal basis for the CBP modernization effort is found in United States Customs Modernization Act, P.L. 103-182 (December 8, 1993).

15% are re-typed up to thirty times.”⁷⁶ This is time consuming for both the trade community and the government authorities; and, for governments and businesses alike, time is money.

1. Impact of Current Government Policies and Regulatory Environment

Over the last several decades, tariff reductions worldwide have opened global markets and yielded some positive economic benefits. In their assessment of the impacts of this expansion of trade on the United States, the Peterson Institute for International Economics estimated that real incomes are “9% higher than they would otherwise have been as a result of trade liberalizing efforts since the Second World War,” representing \$1.5 trillion in additional American income.⁷⁷ However, more recent research by the World Economic Forum indicates that a slow rise of “protectionist measures, *especially non-tariff barriers*” (emphasis added), has slowed liberalization efforts since 2007.⁷⁸ A growing body of research demonstrates that the United States is not immune to these challenges. Specifically, findings from the World Economic Forum, the World Bank, and the OECD indicate that current U.S. government security requirements and other regulations constructed in and for a previous century have begun to impact the growth and benefits of global trade to the United States. These organizations provide benchmarking tools for public and private-sector decision-makers across the world to assess the progress of domestic reforms as well as their competitiveness compared to others in the global economy. The graphic in Figure 1, from the World Economic Forum’s 2016 *Enabling Trade Report*, provides a helpful overview of the organizations that use extensive surveys and actual trade data to develop regular reports on various trade facilitation indicators.

⁷⁶ Grainger, “Trade Facilitation,” 52, citing OECD, *Business Benefits of Trade Facilitation* (Paris: OECD, 2001), 21.

⁷⁷ “Resource Center: Economy and Trade,” United States Trade Representative, accessed August 4, 2015, <https://ustr.gov/issue-areas/economy-trade>; data provided by Hufbauer and Schott, *Payoff*, 66, Table 2.3.

⁷⁸ Klaus Schwab, *The Global Competitiveness Report 2016–2017* (Geneva: World Economic Forum, 2016), 10.



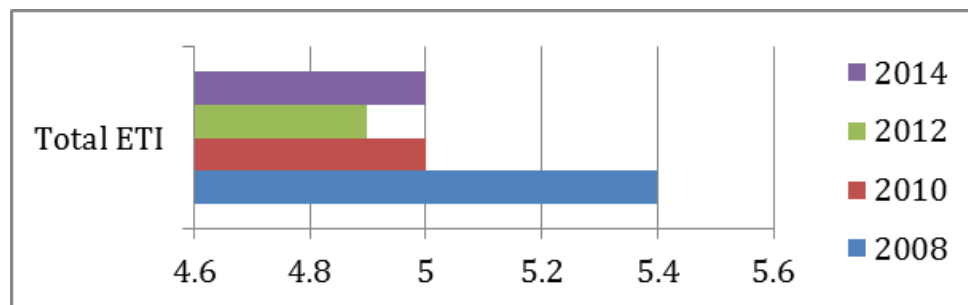
Figure 1. Organizations Providing Trade Facilitation Indicators⁷⁹

This paper relies on a subset of the trade facilitation indicators provided in these reports to assess the various policy options presented later.⁸⁰ However, at this point it is sufficient to note that the specific indicators vary among the reports but tend to mirror the non-tariff measures that businesses encounter when importing and exporting. For example, the indicators provide qualitative or quantitative assessments of a nation's trade-enabling infrastructure (such as ports and highways, or enabling services such as brokers or logistics providers); border administration capabilities (to include the transparency, efficiency, and level of modernization of customs administration and import/export processes); regulatory and legal environment; and overall operating environment for businesses (to include factors such as Internet availability, physical security, political stability, and market access).

⁷⁹ Source: World Economic Forum and Global Alliance for Trade Facilitation, *The Global Enabling Trade Report: 2016* (Geneva: World Economic Forum, 2016), 7.

⁸⁰ Appendix Table 8 details the trade facilitation indicators used by the World Economic Forum, the World Bank, and the OECD.

While the data provided by these reports may not be appropriate for close statistical analysis, the findings provide helpful insights into trends over time and could perhaps motivate decision-makers to identify areas of concern and re-think associated policies. For example, data from the World Economic Forum’s biannual enabling trade reports indicate a decline in the United States overall score on the “Enabling Trade Index” from 5.4 to 5.0 (on a scale of 1–7, with 7 being the best performance; see Figure 2).⁸¹



Scale of 1–7, with 7 representing best performance

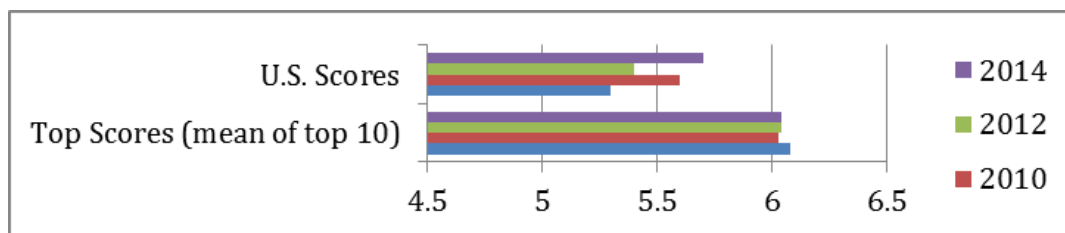
Figure 2. World Economic Forum Enabling Trade (ETI) Indicators: Average of U.S. Scores across all ETI Categories (2008–2014)⁸²

⁸¹ See Appendix Table 9, “Comparison of Enabling Trade Index Coverage from 2008–2014.” Figure 2 explains that the addition of new nations to the reports between 2008 and 2014 have a nominal effect on the United States’ ranking and no effect on the United States’ scores (which are independent of rankings).

⁸² Adapted from Robert Z. Lawrence et al., *The Global Enabling Trade Report 2008* (Geneva: World Economic Forum, 2008), xx–xxi, http://www3.weforum.org/docs/WEF_GlobalEnablingTrade_Report_2008.pdf; Lawrence et al., *The Global Enabling Trade Report 2010*; Robert Z. Lawrence, Margareta Drzeniek Hanouz, and Sean Doherty, *The Global Enabling Trade Report 2012* (Geneva: World Economic Forum, 2012), http://www3.weforum.org/docs/GETR/2012/GlobalEnablingTrade_Report.pdf; Hanouz, Geiger, and Doherty, *The Global Enabling Trade Report 2014*.

The World Economic Forum’s biannual enabling trade reports assess progress made by nations worldwide based on their ETIs. The ETI is composed of four major indicator categories: border administration, market access, infrastructure, and business environment. These categories are discussed in more detail in Chapter III.

While a variety of factors influences the scores and rankings, and is discussed later in this paper, it is insightful that the results of the organization’s respected Executive Opinion Survey in both 2012 and 2014 identified “burdensome import procedures” as the “most problematic factor for importing.”⁸³ This concern with the inadequacy of import processes and policies is supported further by a comparison of the United States’ scores for the specific “border administration” category against global best practices in the same category. The border administration category measures the effectiveness of the clearance process at the border, the time and cost required to import goods into a specific nation, the number of documents required for import, and the efficiency of relevant customs administrations. As can be seen in Figure 3, the United States’ scores have improved from 5.3 (on a scale of 1–7) in 2008 to 5.7 in 2014. However, the improvement has not brought the United States on par with global leaders in this important category, most notably the trade hubs of Singapore, Hong Kong, and Japan.



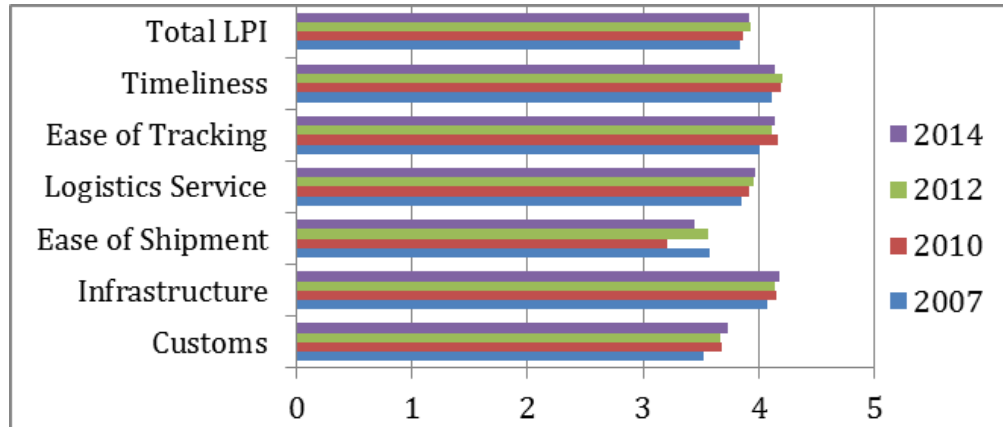
Scale of 1–7, with 7 representing best performance

Figure 3. World Economic Forum Enabling Trade Indicators: Comparison of U.S. Scores for ETI Indicator “Border Administration” to Global Best Practice (2008–2014)⁸⁴

⁸³ Lawrence, Hanouz, and Doherty, *The Global Enabling Trade Report 2012*, 352; Hanouz et al., *The Global Enabling Trade Report 2014*, 312.

⁸⁴ Adapted from Robert Z. Lawrence et al., *The Global Enabling Trade Report 2008*, xx–xxi; Lawrence et al., *Enabling Trade Report 2010*, 10; Lawrence, Hanouz, and Doherty, *Enabling Trade Report 2012*, 11; Hanouz, Geiger, and Doherty, *Enabling Trade Report 2014*, 12. For more information on the other global leaders in the border administration category, see Appendix Table 10, “World Economic Forum Enabling Trade Index, Global Rankings for Border Administration Indicator Category (2008–2014).”

Reports from the World Bank also indicate that the United States has room for improvement in areas associated with managing the cross-border flows of trade, specifically imports. As Figure 4 indicates, the United States’ overall logistic performance indicator scores (“Total LPI”) have improved modestly from 2007 to 2014 (from 3.84 to 3.92 on a scale of 1–5, with 5 being the best performance).

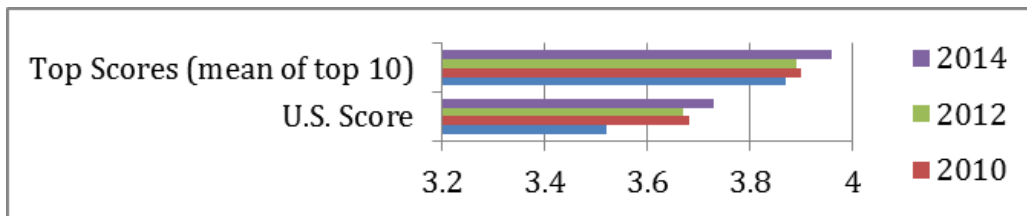


Scale of 1–5, with 5 representing best performance

Figure 4. World Bank Logistics Performance Indicators: U.S. Scores across all LPI Categories (2007–2014)⁸⁵

⁸⁵ Adapted from “Country Score Card: United States 2007,” The World Bank, accessed June 17, 2017, <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2007/>; “Country Score Card: United States 2010,” The World Bank, accessed June 17, 2017, <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2010/>; “Country Score Card: United States 2012,” The World Bank, accessed June 17, 2017, <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2012/>; “Country Score Card: United States 2014,” The World Bank, accessed June 17, 2017, <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2014/>.

However, the scores have remained relatively low in the specific “customs” category and declined slightly in the “ease of shipment” category during that timeframe. The contrast between U.S. and global leaders’ scores in the specific “customs” indicator is particularly striking. As seen in Figure 5, the United States’ scores here remain well below the top scores despite steady improvement over the last several years (up from 3.52 in 2007 to 3.73 in 2014).

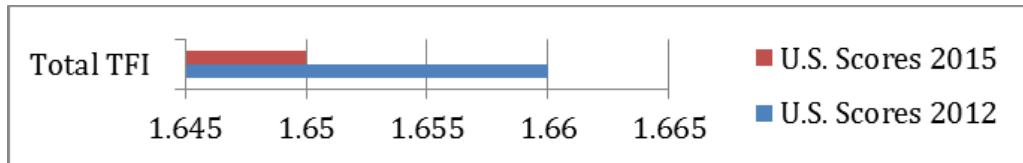


Scale of 1–5, with 5 representing best performance

Figure 5. World Bank Logistics Performance Indicators: Comparison of U.S. Scores for LPI Indicator “Customs” to Global Best Practice (2007–2014)⁸⁶

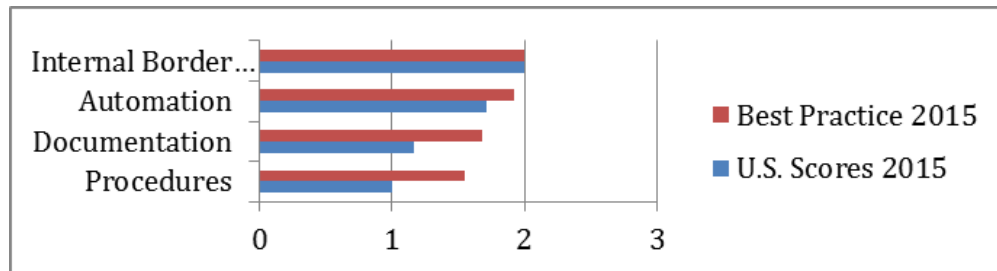
The OECD is the third major organization that uses established indicators to assess national and global performances in the trade environment. This organization’s assessments align with those of the World Economic Forum and the World Bank, showing declines in United States’ scores over the last several years as well as scores remaining below the global best practices. Per Figures 6 and 7, the OECD reports that U.S. scores have fallen slightly from 1.66 in 2012 to 1.65 in 2015 (on a scale of 0–2) and remain behind the top scores of global leaders in three of four key indicator measurements.

⁸⁶ Adapted from World Bank, “Country Score Card: United States 2007”; “Country Score Card: United States 2010”; “Country Score Card: United States 2012”; “Country Score Card: United States 2014.” Raw data available at <http://lpi.worldbank.org/international/global/2007?sort=asc&order=Customs#datatable>. For more information on the other global leaders in the “customs” category, see Appendix Table 11, “World Bank Logistics Performance Indicators, Global Rankings for Customs Indicator Category (2008–2014).”



Scale of 0–2 with 2 representing best performance

Figure 6. OECD Trade Facilitation Indicators: Average of Total U.S. Scores for all TFI Indicators (2015)⁸⁷



Scale of 0–2 with 2 representing best performance. Key TFI Indicators include procedures, documentation, automation, and internal border agency cooperation)

Figure 7. OECD Trade Facilitation Indicators: Comparison of U.S. Scores for Key TFI Indicators to Global Best Practice (2015)⁸⁸

⁸⁷ Adapted from “Trade Facilitation Indicators: United States Country Note,” OECD, accessed October 23, 2015, <http://compareyourcountry.org/trade-facilitation>.

⁸⁸ Adapted from “Trade Facilitation Indicators: United States,” OECD, “compare with best practice” button. In this assessment, “best practices” represent an average of the top quartile of nations included in the review. This information is available via an automated web-based tool provided by the organization. While the specific countries under the “best practices” categories were readily available for the World Economic Forum and World Bank data, they are not immediately accessible in this case and are not included, as they have nominal to no impact on assumptions and findings.

2. The Role of DHS in Trade Facilitation

In the United States, an array of agencies and entities have a shared role in establishing the nation's trade policy, laws, and strategic objectives. In fact, according to the United States Trade Representative (USTR), twenty-three entities across fifteen departments or independent agencies (including DHS) administer and enforce hundreds of U.S. and international trade laws. From a national-level and strategic perspective, the USTR is responsible “for developing and coordinating U.S. international trade, commodity, and direct investment policy, and overseeing negotiations with other countries,” and has the “primary responsibility, with the advice of the interagency trade policy organization, for developing *and coordinating the implementation of* U.S. trade policy” (emphasis added).⁸⁹ The National Economic Council, established by executive order in 1993, shares similar responsibilities under its mandate to:

Co coordinate economic policy advice to the President; to ensure that economic policy decisions and programs are consistent with the President's stated goals, *and to ensure that those goals are being effectively pursued*; and to monitor implementation of the President's economic policy agenda [emphasis added].⁹⁰

While not directly responsible for the establishing national trade policy, laws, or strategic objectives, DHS is responsible for enforcing these policies and laws and advancing these objectives in its role of ensuring the security, compliance, and facilitation of the cross-border flow of goods. In fact, since its creation, DHS has focused one of its five mission areas on ensuring that the goods being imported and exported across U.S. borders do not threaten citizens or endanger American interests. In a distinction that is important for later parts of this paper, DHS and other departments and agencies are therefore answerable to both the USTR and National Economic Council (NEC), who themselves are responsible for developing trade policies and ensuring that the goals of the national trade agenda “are being effectively pursued.”⁹¹

⁸⁹ “Mission of the USTR,” United States Trade Representative, accessed March 19, 2017, <https://ustr.gov/about-us/about-ustr>.

⁹⁰ William J. Clinton, *Executive Order 12835—Establishment of the National Economic Council* (Washington, DC: Government Publishing Office, January 25, 1993), Section 4.

⁹¹ Clinton, *Executive Order 12835*, Section 4.

However, DHS's efforts to fulfil its mandates to implement trade policies and enforce trade laws without unduly hindering the flow of legitimate commerce have been slowed by the complexity and sheer scope of the task and the difficulties of stepping down from the state of heightened security generated by the 9/11 terrorist attacks. The Congressional Research Service gave voice to this incongruity between trade facilitation and trade enforcement activities that plagued early efforts to advance both goals in a recent report.

Trade facilitation is in tension with trade enforcement and import security because trade facilitation involves promoting faster and more efficient trade flows, while trade enforcement and import security involve identifying and preventing illegal flows—tasks that often involve slower cargo flows and reduced efficiency. These competing pressures make the implementation of import policy a complex and difficult task.⁹²

Former President Obama's release of the *National Strategy for Global Supply Chain Security* in early 2012 also highlighted this growing awareness of necessary and imminent change. That document explains that America rejects "the false choice between security and efficiency and firmly believe[s] that we can promote economic growth while protecting our core values as a nation and as a people."⁹³ The mantra, while not entirely new to DHS, was emphasized with increasing clarity in the QHSR reports for both 2010 and 2014. The Department's first QHSR report, released in 2010, advanced this perspective, insisting that, "we must and can achieve both greater security and greater interchange with the world."⁹⁴ The 2014 QHSR report provides the most recent and perhaps the most prescient account of this necessary relationship when asserting, for the first time, that homeland security not only supports but is "inseparable from economic security."⁹⁵ While DHS focused its homeland security activities throughout the first seven years on preventing, protecting, responding to, and recovering from terrorism, the

⁹² Vivian Jones and Marc R. Rosenblum, *U.S. Customs and Border Protection: Trade Facilitation, Enforcement, and Security* (CRS Report No. R43014) (Washington, DC: Congressional Research Service, 2013).

⁹³ The White House, *National Strategy for Global Supply Chain Security* (Washington, DC: The White House, 2012), abstract, <https://www.hsdl.org/?abstract&did=698202>.

⁹⁴ DHS, *2014 QHSR*, 24.

⁹⁵ *Ibid.*, 31.

2010 and 2014 QHSR reports represent a growing appreciation that “this emphasis on terrorism does not capture the full range of interconnected threats and challenges that characterize today’s world.”⁹⁶ Instead, “a robust notion of homeland security must take account of our essential need to safely, securely, and intensively engage the rest of the world—through trade, travel, and other exchanges.”⁹⁷

At the agency level, CBP also has emphasized its commitment to trade facilitation as an affirmative rather than an ancillary responsibility. The CBP’s most recent strategic plan, called *Vision and Strategy 2020*, “firmly establishes CBP’s role as the national leader in safeguarding our borders and promoting economic prosperity.”⁹⁸ This document and other statements by CBP leadership emphasize the agency’s dual-pronged mission, namely, “to safeguard America’s borders thereby protecting the public from dangerous people and materials while enhancing the Nation’s global economic competitiveness by enabling legitimate trade and travel.”⁹⁹ CBP typically highlights its enforcement of trade laws aimed at ensuring a level playing field for American businesses (for example, enforcement of intellectual property rights laws, monitoring of quotas imposed on certain goods, and restrictions against illegal dumping of goods in the U.S. market that have been illegally subsidized by foreign governments). CBP also has sought to draw a correlation between its efforts to streamline and simplify cross-border security and compliance requirements for imported and exported goods when noting its contribution to economic security. Again, as noted in their *Vision and Strategy 2020* document,

CBP recognizes that it has a direct responsibility for enhancing America’s economic competitiveness. This requires reducing barriers to the efficient flow of trade and travel, streamlining and unifying processes and procedures, and managing the volume of cargo and passengers by separating goods and travelers according to the risks they pose.¹⁰⁰

⁹⁶ Ibid., 14.

⁹⁷ Ibid.

⁹⁸ CBP, *Vision and Strategy 2020: U.S. Customs and Border Protection Strategic Plan* (Washington, DC: DHS), 3, <https://www.cbp.gov/sites/default/files/documents/CBP-Vision-Strategy-2020.pdf>.

⁹⁹ Ibid., 7.

¹⁰⁰ Ibid., 30.

The theme that homeland security is “inseparable from economic security” also pervades the *Trade Facilitation and Trade Enforcement Act of 2015*, CBP’s first authorizing legislation since 2003. The law emphasizes CBP’s trade facilitation mission by distinguishing it from traditional revenue collection and import safety responsibilities and requiring the agency to “coordinat[e], on behalf of the Department of Homeland Security, efforts among Federal agencies to facilitate legitimate trade and to enforce the customs and trade laws of the United States.”¹⁰¹

These policy articulations represent an evolving appreciation for the integration between domestic and global transportation, communications, and infrastructure, and the resulting integrations of national economies. They also align with the theory that a strong economy not only financially supports national and homeland defense capabilities, but can augment, or at times supplant, military hegemony as an effective instrument when pursuing broader national and foreign policy objectives. According to this view, the global stage “is no longer a Hobbesian ‘war of all against all’ in which state actors seek to maintain security” purely through the accumulation and use of power.¹⁰² While a prosperous national economy does enable military hegemony, it also provides valuable leverage that strengthens diplomatic gravitas abroad and provides an effective means of influence, or even coercion, on the world stage. Political scientists Joseph Nye and Robert Keohane introduced the term “complex interdependence” to describe the new paradigm created by the rise of globalization and the increased interconnectedness among nations.¹⁰³ The close ties among nations reduced the viability of military force as the primary instrument of achieving national objectives and, instead, necessitated the development of new trade policy tools and increased levels of economic cooperation and collaboration among world actors.

Given the importance of national economic security to American welfare and interests, relevant U.S. government departments and agencies would be well advised to

¹⁰¹ Pub. L. No. 114-125, Section 2(2)(d).

¹⁰² William R. Nester, *Globalization, Wealth, and Power in the Twenty-first Century* (New York: St. Martin’s, 2010), 11.

¹⁰³ Joseph S. Nye and Robert O. Keohane, *Power and Interdependence: World Politics in Transition*, 2nd edition (Glenview, IL: Person Education, 1989), 3–25.

consider how best to contribute their unique authorities and expertise. This thesis suggests that DHS can and should more aggressively leverage its uniquely comprehensive and robust border authorities to improve the current decentralized, antiquated, and inefficient manner in which the U.S. government as a whole manages the processing and ensures the security of imported goods. The assessment is timely in light of the intensified global interest in removing impediments to trade through improved trade facilitation measures at the border. CBP, along with customs administrations around the world, is increasingly at the center of broader government programs to reduce frictions at the border, modernize communications technologies, and streamline regulatory frameworks. The focus is unlikely to diminish, particularly in light of the World Trade Organization's conclusion in 2014 of the long-awaited Trade Facilitation Agreement (TFA). Article 8 of the TFA places a heavy emphasis on the ability of agencies with control authorities or requirements at the border to "cooperate with one another and coordinate their activities in order to facilitate trade."¹⁰⁴ With the largest presence and the broadest law enforcement authorities at the border, CBP is well positioned to contribute, if not affirmatively lead, a program of trade reform and modernization that could dramatically improve the facilitation of cross-border commerce and support broader national competitiveness goals.

¹⁰⁴ World Trade Organization, "Agreement on Trade Facilitation," Article 8.

THIS PAGE INTENTIONALLY LEFT BLANK

III. POLICY OPTIONS AND EVALUATION METHODOLOGY

This chapter very briefly introduces three strategic-level policy options for addressing the gaps and augmenting the strengths of DHS’s policy trade facilitation efforts. It then discusses the methodology and criteria by which each of the policy options are evaluated in the subsequent chapter.

This thesis asserts that the national economy and the vital commercial flows that feed it are the *sine quibus non* of national influence, power, and security. However, new characteristics of the modern trade environment have the potential to weaken the United States’ economic security. In asserting that homeland security is “inseparable from economic security,” and affirming that part of its mission is to “enhanc[e] the Nation’s global economic competitiveness,” DHS bears responsibility for addressing these challenges and concerns.¹⁰⁵

As discussed previously, these activities have fallen in large part to CBP, who links its border enforcement mission to a complementary agenda of trade facilitation. CBP, and by extension DHS, contributes to the nation’s economic security directly by collecting revenue and enforcing laws that protect American businesses from unfair trade practices. However, the recent narrative in CBP messaging suggests a deeper commitment to trade facilitation—a commitment to advancing the goals of the concept as an affirmative rather than an ancillary responsibility. In this regard, CBP has sought to emphasize much more than its traditional revenue functions and focuses on efforts to streamline and simplify an array of additional government controls on cross-border trade when noting its contribution to economic security. These controls include not only the burgeoning number of post-9/11 security measures discussed previously, but health and safety, phytosanitary, sanitary, and environmental requirements as well.

¹⁰⁵ DHS, 2014 QHSR, 31; CBP, *Vision and Strategy 2020*, 7.

A. POLICY OPTIONS

This chapter identifies and assesses the advantages and challenges of three policy options by which DHS could better achieve its stated goal of pursuing both security and trade efficiency as mutual, rather than mutually exclusive, goals and contribute most to ensuring the nation's economic security. Such an effort could improve trade facilitation and provide commercially meaningful benefits to public and private stakeholders alike. Each option builds upon the role that DHS, specifically CBP, can play to promote economic growth. While each option differs in the degree and intensity of reform needed, each could be pursued as part of a broader national trade facilitation policy agenda that places a premium on streamlining government processes and requirements associated with importing and exporting goods across our borders. Each option is outlined in more detail in subsequent sections; in brief, the three policy approaches are:

1. *Maintaining the Status Quo:* DHS can stay the course, leading other agencies by its own example of modernization and commitment to the dual goals of trade enforcement and facilitation.
2. *Tailored Modernization:* DHS can lead a program of collective action among a select group of agencies to improve trade facilitation in key areas most likely to exceed the "tipping point" necessary to result in meaningful benefits.
3. *Shifting the Paradigm:* DHS can advocate for a shift toward a more centralized model of government controls of imports, one reliant upon standard performance measures, shared funding schemes, common IT infrastructures, and/or delegated or joint decision-making on the admissibility of goods.

B. EVALUATION METHODOLOGY

After introducing each of the policy options in greater detail, this thesis analytically assesses them according to three criteria: 1) the impact on the effectiveness and efficiency of overall import procedures, 2) the impacts on American businesses, and 3) the feasibility of implementing the policy.

1. First Evaluation Criterion

This evaluation utilizes the World Economic Forum’s “border administration” indicators to assess impacts on the overall efficiency and effectiveness of U.S. import procedures (the first evaluation criterion). While other organizations provide similar qualitative and quantitative indicators, the World Economic Forum’s border administration indicators are the most appropriate for several reasons. First, the indicators in this category cover topics that fall within DHS authorities or are subject to DHS or CBP influence. Additionally, as discussed previously, U.S. scores in the border administration category remain well behind global best practices, suggesting that there is room for improvement (see Figure 3 in Chapter II, Section B). Both the World Economic Forum and the World Bank highlight the “untapped potential” for improvements in this category, even for developed nations like the United States. The 2016 *Global Enabling Trade Report* notes that “the combination of political feasibility, affordability, promises of additional revenues, momentum and resource availability suggests that border administration is the low-hanging fruit of trade facilitation.”¹⁰⁶ Finally, the World Economic Forum’s border administration indicators are the most helpful and relevant because they either incorporate fully or align with those provided by the World Bank and the OECD.

Table 2 compares trade facilitation indicators provided by the World Economic Forum, the World Bank, and the OECD. As can be seen in the blue section, the World Economic Forum’s border administration indicator set includes or aligns with the indicators from the other organizations most relevant to this research. Other indicators, such as “infrastructure” or “market access” are not only beyond DHS’s responsibilities, but touch on topics outside the scope of this paper.

¹⁰⁶ World Economic Forum and Global Alliance for Trade Facilitation, *Global Enabling Trade Report 2016*, 21.

Table 2. Comparison of Trade Facilitation Indicators from Leading Global Organizations¹⁰⁷

World Economic Forum	World Bank	OECD
Border Administration	Customs	• Documentation • Border Procedures • Automation • Advance Rulings • Appeal Procedures • Internal Agency Cooperation • Fees and Charges • Governance and Impartiality • Information Availability • Involvement of the Trade Community
Infrastructure	• Infrastructure • Timeliness • Ease of Shipping • Track and Trace • Quality of Logistics Service	
Operating Environment		External Cooperation
Market Access		

¹⁰⁷ Representative of various World Economic Forum, World Bank, and OECD documentation.

Table 3, developed by the author, lists the twenty-three indicators within the World Economic Forum's border administration indicator set. To evaluate the impact of each policy option on the effectiveness and efficiency of import processes, the author assigned a numeric value to each of the sub-indicators within the border administration indicator set and compares the relative scores (0–23) of options. According to this scoring methodology, higher scores would reflect that the option has a greater potential of improving U.S. ratings in this important indicator category.

Table 3. World Economic Forum's Border Administration Indicators¹⁰⁸

Criterion 1: The Effectiveness and Efficiency of Import Processes <i>Would the policy improve U.S. ratings in the World Economic Forum's Border Administration category?</i>			
World Economic Forum's Border Administration Indicators	Policy Option 1	Policy Option 2	Policy Option 3
<u>Customs Service Index (0–12 points)</u> • clearance of shipments via electronic data interchange • separation of physical release of goods from fiscal control • full-time automated processing • customs working hours adapted to commercial needs • fee for services conducted during normal service hours • inspection / release of goods arriving by air by the operator's facility • automated risk assessment as basis for physical exam of shipments • # and promptness of inspections by agencies other than customs • exemptions from full customs for shipments of minimal value • exemptions from duties and taxes for shipments of minimal value • clearance of shipments by a third party • appeal of customs decisions to a higher-level / independent tribunal			
<u>Effectiveness / Efficiency of Clearance Process (0–4 points)</u> • advanced information • post-clearance audits • authorized economic operators • transparency / information availability			
<u>Time for Import (0–2 points)</u> • less days to import • publication of average release times			
<u>Documents for Import (0–2 points)</u> • less documents / information required • harmonization in accordance with international standards; acceptance of copies			
<u>Cost to Import (0–3 points)</u> • improved predictability • IT requirements • broker requirements			
<u>TOTAL SCORE</u>			

¹⁰⁸ Adapted from World Economic Forum and Global Alliance for Trade Facilitation, *Global Enabling Trade Report 2016*, 14. See Appendix Table 12, "Criterion 1: The Effectiveness and Efficiency of Import Processes" for the scores of each policy option according to the border administration indicators and associated sub-indicators.

2. Second Evaluation Criterion

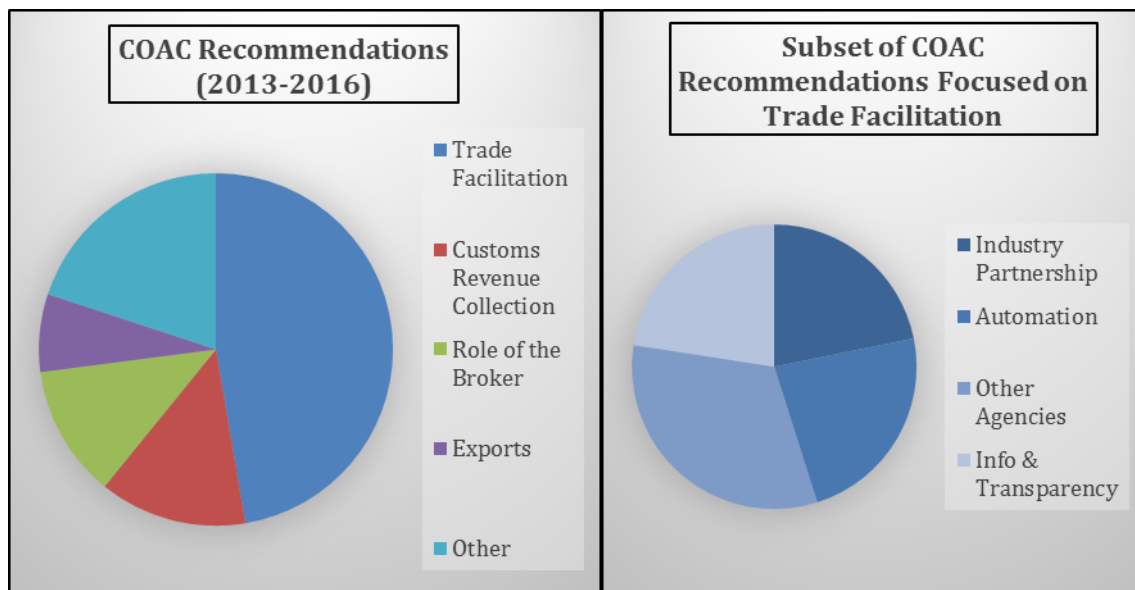
To assess the impact of each policy option on U.S. businesses (the second evaluation criterion), this paper utilizes 2013–2016 recommendations from the Commercial Operations Advisory Committee (COAC). As discussed previously, the COAC was established by law in 1987 and has since been charged with advising CBP (and by extension DHS) on a range of customs compliance and trade facilitation issues.¹⁰⁹ Approximately half of the 281 recommendations provided by the Committee to DHS between 2013 and 2016 touched on trade facilitation. To evaluate the impact of each policy option on U.S. businesses, the author considered if the option could create improvements in any of the COAC recommendations focused on trade facilitation priorities or topics. The author reviewed the 281 COAC recommendations and identified the subset related to trade facilitation activities (as defined by the World Economic forum’s border administration index). After identifying the subset of recommendations that dealt with issues related to trade facilitation, the author assigned them to one of four major trade facilitation categories (shown in Table 4): industry partnerships (such as authorized economic operator programs), automation (such as Single Window portals or electronic messaging capabilities), other government agencies (topics focused on needed improvements by agencies other than CBP, or enhanced integration of processes, policies, or procedures across the U.S. government), and information/transparency (such as advance information requirements, targeting regimes, and performance measurements). The author then employed a simple binary scoring system of “yes” or “no” to assess if each of the policy options could create improvements or even fully address the COAC recommendations in any of the four trade facilitation categories.

The graphic in Figure 8 illustrates the types of recommendations provided by COAC overall, as well as the specific categories of trade facilitation–related recommendations that are most relevant to this assessment. As can be seen, nearly half (47 percent) of the recommendations touched on trade facilitation issues, and of that subset, 32 percent sought reforms that involved agencies other than CBP.

¹⁰⁹ Note that COAC was established to advise U.S. Customs in 1987, and continued in that role after U.S. Customs became U.S. Customs and Border Protection under DHS.

Table 4. COAC Trade Facilitation Recommendations¹¹⁰

Criterion 2: Benefit to U.S. Businesses <i>Would the policy provide improvements that could address COAC recommendations focused on trade facilitation? (Y/N)</i>					
Policy Option #	COAC Trade Facilitation Recommendations				
	Industry Partnerships	Automation	Other Government Agencies	Info/Transparency	TOTAL
1					
2					
3					



Topics of total recommendations from 2013–2016 compared with topics of the subset of recommendations focused on trade facilitation issues.

Figure 8. COAC Recommendations¹¹¹

¹¹⁰ Adapted from “FY 2013–2015 COAC Recommendations,” CBP. See Appendix Table 13, “Criterion 2: Benefit to U.S. Businesses,” for the scores of each policy option according to Trade Facilitation recommendations from the COAC.

¹¹¹ Ibid.

3. Third Evaluation Criterion

To assess the feasibility of implementing each of the policy options (the third evaluation criterion), this paper utilizes a scatter chart, shown in Figure 9, to distinguish between possible “quick-wins” that can be accomplished within the existing DHS mission and/or authorities and budget, and “longer-term solutions” that would require mission expansion, and additional authorities and funding.¹¹² The author reviews the DHS mission as defined by the 2014 QHSR, recent legislation, and budget documents to assess if the proposed activities fall within or outside the scope of the current DHS mission, authorities, and funding streams.

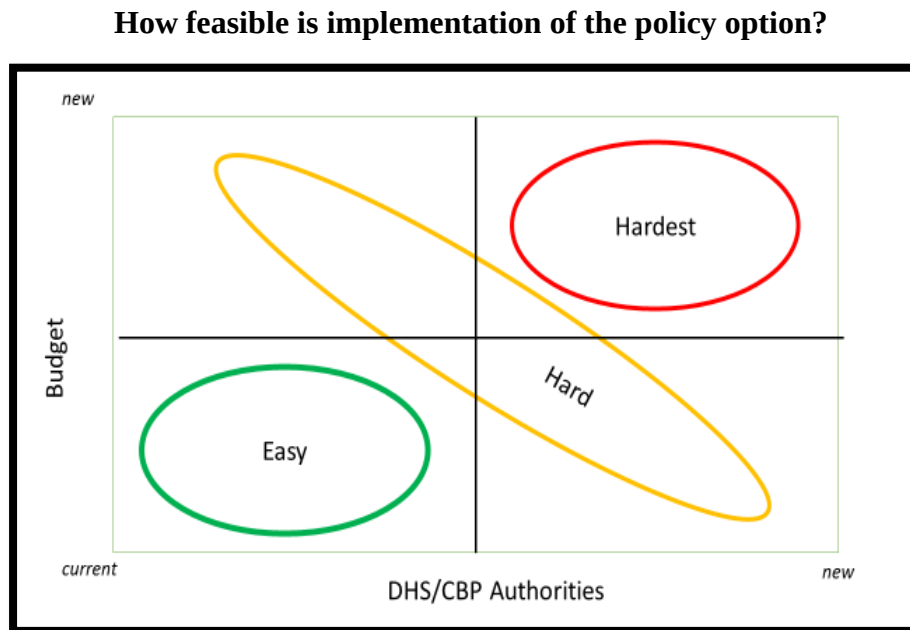


Figure 9. Criterion 3: Feasibility of Implementation¹¹³

¹¹² See Appendix Figure 13, “Criterion 3: Feasibility of Implementation.”

¹¹³ “Feasibility” is defined as the degree to which the policy option requires new authorities and/or new funding.

THIS PAGE INTENTIONALLY LEFT BLANK

IV. EVALUATING THE POLICY OPTIONS

This chapter assesses the opportunities and challenges of each option according to the established evaluation criteria. The three policy options are:

- Policy Option 1: Maintain the Status Quo
- Policy Option 2: Tailored Modernization
- Policy Option 3: Shifting the Paradigm

A. POLICY OPTION 1: MAINTAIN THE STATUS QUO

Since its establishment in 2003, DHS (through CBP) has worked to perform its revenue collection and trade law enforcement missions without hindering the flow of legitimate trade. The scope, complexity, and dynamic pace of this mission are vast, involving sustained operations at 328 domestic ports of entry; engagement with 365,000 importers of record, 13,500 customs brokers, and forty-seven federal agencies; processing of an estimated 150 million trade transactions a year; enforcement of fourteen free trade agreements with twenty countries; and, of course, the collection of \$40 billion in duties, taxes, and fees.¹¹⁴

To accomplish this, CBP has continued a significant modernization effort initiated in 1993 under the legacy U.S. Customs with the passage of what is known as the Customs Modernization and Informed Compliance Act, or “Mod Act.”¹¹⁵ This seminal piece of legislation redefined the relationship between Customs and the trade community, shifting some administrative responsibilities from the government to businesses with the new

¹¹⁴ “Oversight of the U.S. Customs and Border Protection Agency,” Testimony of Commissioner Gil Kerlikowske before the Senate Finance Committee, April 21, 2016, 1, https://www.finance.senate.gov/imo/media/doc/CBP%20Kerlikowske%20Oversight%20Testimony_SFC_051116.pdf.

¹¹⁵ Pub. L. 103-182, 107 Stat. 2057.

concepts of “reasonable care” and “informed compliance.”¹¹⁶ In short, the new requirements sought to “address the tension between trade facilitation and trade enforcement by replacing the historical ‘agency-centric’ model of trade enforcement with a ‘shared responsibility’ approach.”¹¹⁷ Businesses generally accepted these new duties in light of the legislation’s requirements on Customs to improve the automation, consistency, and transparency of its own processes and thereby speed the importation process.

The Mod Act requirements spurred a period of major reform within CBP and continue to inform the organization’s approach to enforcing trade laws and securing imports without unduly hindering the flow of legitimate commerce. The law provided a foundation for CBP’s current approach to border security, which places a premium on risk-informed decision making, layers of defense, and improved automation. As explained by CBP leadership, “By utilizing a risk-based strategy and multilayered security approach, CBP can focus time and resources on those suspect shipments that are high-risk which, in turn, allows CBP to expedite legitimate trade.”¹¹⁸ At the most strategic level, the salient features of CBP’s approach include:

- *Advance Information:* Receiving information from carriers and importers about shipments prior to those goods arriving in the United States. These data include a description of the goods; the names and addresses of entities; the importer, exporter, consignee, and others involved in the transaction; the origin of the goods; and locations through which the shipment moved prior to transport to the United States.
- *Targeting:* Analyzing the advance information, along with data from other law enforcement and intelligence holdings, to identify shipments that pose a higher risk.

¹¹⁶ These concepts are further detailed in CBP, *What Every Member of the Trade Community Should Know about Reasonable Care* (Washington, DC: DHS, 2004), 26. In this document, the term “informed compliance” is defined as a “shared responsibility between CBP and the import community wherein CBP effectively communicates its requirements to the trade, and the people and business subject to those requirements conduct their regulated activities in accordance with U.S. laws and regulations.” The term “reasonable care” is defined with less precision as an “explicit responsibility on the part of the importer.”

¹¹⁷ Jones and Seghetti, *U.S. Customs and Border Protection*, 9.

¹¹⁸ “Prevention of Smuggling at U.S. Ports,” testimony of CBP Office of Field Operations Executive Assistant Commissioner Todd Owen for a joint House Committee on Transportation and Infrastructure, Subcommittee on Coast Guard and Maritime Transportation and House Committee on Homeland Security, Subcommittee on Border and Maritime Security, July 7, 2016, 1.

- *Partnerships:* Leveraging public–private partnerships, where shippers voluntarily add security measures to their existing processes, where imports can engage with CBP to facilitate post-entry processing for targeted industries, and where foreign governments can work to “mutually recognize” the equivalency of their cargo security regimes with the United States.¹¹⁹
- *Automation:* Prioritizing electronic data collection, analysis, and messaging capabilities and other digital enhancements to reduce the historic reliance on time-consuming and costly manual processing of paper-based information. The most significant example of CBP’s drive toward automation is its development, on behalf of the U.S. government, of a secure web portal (called the International Trade Data System or, more commonly, the Single Window) to enable businesses to electronically submit the import declarations and other data required for entry into the United States.

Under the first policy option, CBP would continue to leverage existing authorities and current budget allocations to maintain the current risk-based, multi-layered approach to ensure the security of goods crossing the U.S. border. The agency would provide a model to other government authorities with border-related responsibilities, in effect “leading by example” by demonstrating the efficiencies to be gained through a commitment to trade facilitation opportunities such as risk management, public–private partnerships, transparency, streamlined import requirements, and automated border processes. As discussed in Chapter II, these trade facilitation efforts are the means by which DHS can contribute to the reduction of non-tariff measures, which, if reduced, could increase global GDP by nearly 5 percent and trade by 15 percent.¹²⁰

¹¹⁹ DHS’s program is called the Customs-Trade Partnership Against Terrorism (C-TPAT) program. Under C-TPAT, the private-sector partner integrates security measures into its business operations (e.g., employee background checks, facility access controls, in-transit chain of custody measures, and container examinations prior to loading). Internationally, these programs are often referred to as authorized economic operator (AEO) programs; AEO programs are now widely used.

CBP established ten virtual Centers of Excellence and Expertise to “increase uniformity of practices across ports of entry, facilitate the timely resolution of trade compliance issues nationwide, and further strengthen critical agency knowledge on key industry practices.” “Centers of Excellence and Expertise,” CBP, October 25, 2016, <https://www.cbp.gov/trade/centers-excellence-and-expertise-information>.

Under Mutual Recognition Arrangements (MRA), trading partners mutually recognize each other’s cargo security AEO regimes, and extend the program benefits to each other’s AEO program members. According to written testimony in 2016, CBP has ten such arrangements. “Oversight of the U.S. Customs and Border Protection Agency,” Testimony of Commissioner Gil Kerlikowske, 3.

¹²⁰ World Economic Forum, *Enabling Trade: Valuing Growth Opportunities*, 4.

1. Advantages

This first policy option presents several distinct advantages by which CBP/DHS could improve trade facilitation and thereby contribute to the nation's economic security by providing commercially meaningful benefits to public and private stakeholders alike. First, CBP has worked successfully over the last several decades to implement an aggressive modernization campaign focused on the strategic elements noted in the previous section. The cornerstone of this modernization campaign is CBP and DHS's leadership role in the development and operation of the International Trade Data System (to be referenced hereafter as the Single Window). As described in *Homeland Security*, as a part of this effort,

CBP worked hand-in-hand with dozens of other U.S. Government Departments and independent agencies to build an information communication technology platform that will allow businesses to provide a single, simplified set of electronic data to fulfill regulatory and administrative requirements of multiple government agencies. This will replace the current heavy reliance on paper forms and manual processes and has the potential to transform border management for the United States.¹²¹

According to the World Bank's "Doing Business" project, businesses can expect to pay the equivalent of \$1,050 per container to export goods from the United States, \$230 of which, on average, is for preparation of the forty documents required. Often, data is provided on paper and coordination between agencies is largely manual.¹²² This is costly and time consuming for both the trade community and the government authorities, complicates coordinated border management efforts, and slows commerce. By eliminating manual processes, paper forms, and duplicative reporting requirements, the Single Window allows regulators to conduct coordinated and rapid assessments of goods presented for import or export in minutes rather than days.¹²³ Business users, on the other

¹²¹ Christa Brzozowski, "E Pluribus Unum...SINGLE WINDOW!?!," *Homeland Security* blog, December 17, 2014, <https://medium.com/homeland-security/e.pluribus-unum-9251abd4324c>.

¹²² World Bank, "Cost to Export (US\$ per Container)," accessed June 18, 2017, <http://data.worldbank.org/indicator/IC.EXP.COST.CD>.

¹²³ For example, the UN/CEFACT assessed that over 90 percent of the data collected by various U.S. agencies through over 300 different forms is redundant. UN/CEFACT, UN/CEFACT, *Recommendation No. 33*, 20.

hand, see reductions in costly data submission processes and border wait times as well as improved transparency and increased predictability.

Required by law to develop, operate, and maintain this new digital platform, CBP is well positioned to enable meaningful trade facilitation improvements for customs-specific services and thereby improve the United States' scores in that subset of the World Economic Forum's border administration category.¹²⁴ Through the Single Window and associated modernization efforts, CBP has been able to provide eleven of the twelve services identified in the customs service index, resulting in a score of eleven for the first evaluative criterion.¹²⁵ CBP is able to model the benefits of its own reform and modernization agenda to the dozens of agencies with border-related missions and requirements (such as consumer health and safety, phytosanitary and sanitary, security, and environmental agencies).¹²⁶ However, as discussed in the next section, more work is necessary to improve scores in the eleven remaining border administration indicators that require action from other government agencies and private-sector collaboration.

In addition, the current approach—in which CBP “stays the course” and remains committed to advancing its own modernization campaign to improve trade enforcement and facilitation—is highly feasible. Being the status quo, the first policy option has the distinct advantage of obviously being highly feasible to implement within existing DHS funding allocations and authorities. Over the last five years, the total DHS budget authority has remained between \$59.9 billion and \$64.9 billion, with net discretionary funding ranging from \$40 billion to \$46.3 billion.¹²⁷ These resources support DHS mission areas that have evolved over time but always included a focus on border security

¹²⁴ The Security and Accountability for Every Port Act, P.L. 109-347, Title IV, §405 (2006).

¹²⁵ The customs service index includes twelve of twenty-three indicators within the border administration category. See Appendix Table 12, “Criterion 1: The Effectiveness and Efficiency of Import Processes.”

¹²⁶ According to annual reports from the International Trade Data System Board of Directors, testimony and public speeches made by CBP and DHS leadership, and White House press releases, the total number of U.S. agencies involved in the Single Window effort generally is indicated to be forty-seven.

¹²⁷ “Budget-in-Brief: Fiscal Year 2013,” DHS, accessed June 18, 2017, www.dhs.gov/sites/default/files/publications/dhs-budget-in-brief-fy2013.pdf; “Budget-in-Brief: Fiscal Year 2015,” DHS, accessed June 18, 2017, www.dhs.gov/sites/default/files/publications/FY15BIB.pdf; “Budget-in-Brief: Fiscal Year 2017,” DHS, accessed June 18, 2017, www.dhs.gov/sites/default/files/publications/FY2017BIB.pdf.

and trade facilitation.¹²⁸ Calculating exact expenditures on the array of trade security, enforcement/compliance, and facilitation efforts is a difficult task in light of the integration of these missions at the border and the involvement of multiple DHS components. However, as even a rough calculation serves to provide some context, it is helpful to appreciate that CBP is among the largest of the DHS components, with a budget representing 21 percent of the total. Other components involved in securing cross-border trade include U.S. Coast Guard (15 percent), Transportation Security Administration (11 percent), and Immigration and Customs Enforcement (10 percent), but none have the decided focus on both trade security and facilitation as CBP does.¹²⁹

While additional funds could certainly support improvements to the current CBP trade facilitation approach, the organization has clearly achieved the accomplishments to-date within the current budget constraints. DHS and CBP's mission and current authorities represent clear advantages for pursuing the "status quo," the first policy option. In fact, Congress has continued to emphasize the importance of the CBP trade mission and authorities, reasserting as recently as 2015 that the agency "ensure the overall economic security of the United States is not diminished by efforts, activities, and programs aimed at securing the homeland."¹³⁰ As a law enforcement agency, CBP has strong authorities to secure the people and goods crossing the border and ensure compliance with all relevant laws. A few salient examples include CBP's authority to collect manifest information from air, land, and sea modes of transportation, entry and invoice information on all goods crossing the border, and the uniquely broad authority to search and seize merchandise and assess penalties.¹³¹ CBP's border search and seizure

¹²⁸ As of early 2017, the five DHS mission priorities include: 1) Prevent Terrorism and Enhance Security, 2) Secure and Manage Borders, 3) Enforce and Administer Immigration Laws, 4) Safeguard and Secure Cyberspace, and 5) Strengthen National Preparedness and Resilience. "Budget-in-Brief: Fiscal Year 2017," DHS, 2–6.

¹²⁹ "Budget-in-Brief: Fiscal Year 2016," DHS, accessed June 18, 2017, 9, www.dhs.gov/sites/default/files/publications/FY_2016_DHS_Budget_in_Brief.pdf.

¹³⁰ Trade Facilitation and Trade Enforcement Act of 2015, P.L. 114-125, February 24, 2016, Section 7.

¹³¹ Information collection authorities (manifest and entry for all modes of transportation) can be found generally at 19 U.S.C. 1431, 1644a, 2071 and 19 U.S.C. 1481 and 1484. Authority for the examination of merchandise is at 19 U.S.C. 1499 and for searches and seizures at 19 U.S.C. 1595.

authority is particularly powerful in its reach; the authority extends beyond a violation of CBP's requirements and includes violations of any U.S. government law that impacts the admissibility of goods. In short, CBP can search and/or seize imported (and exported) goods if the agency "has probable cause to believe that ... duties have not been paid, or which has been otherwise brought into the United States unlawfully," meaning "any property which is subject to forfeiture under any provision of law enforced or administered by the United States Customs Service."¹³² These authorities have supported CBP's trade facilitation, security, and enforcement mission to-date and, by extension, its contributions to the nation's economic security.

2. Challenges

Despite several advantages, this first policy option also presents several challenges to CBP and DHS's ability to improve trade facilitation measures and, by association, contribute to overall efforts to strengthen national economic security. The elements of the "status quo" option outlined previously in this chapter have served DHS and CBP well and could provide a model for other relevant government agencies. However, evidence to-date suggests that, absent a concerted effort to better integrate and simplify the web of import-related government policies, procedures, and requirements, service levels at the border could actually worsen. This will hinder the U.S. government's ability to provide commercially meaningful benefits to businesses and could add to administrative costs for agencies. The fact that CBP has been the vanguard of modernization among U.S. border agencies is not unusual. As experts from the World Bank have explained,

Customs performance tends to be better than that of other border agencies; on average, customs clearance accounts for a third of import time. This underscores the importance of addressing the coordination of border agencies, *especially in countries that already have attained good customs clearance* [emphasis added].¹³³

¹³² 19 U.S.C 1595.

¹³³ Jean-François Arvis et al., *Connecting to Compete 2007: Trade Logistics in the Global Economy* (Washington, DC: The World Bank, 2007), 14.

In Executive Order 13659, *Streamlining the Export/Import Process for America's Businesses*, the U.S. government established a deadline of December 2016 for the completion of the Single Window and “signaled its intent to transition from a heavy reliance on distinct systems, standards, and operational processes and toward consistency” in the collection, utilization, and delivery of information.¹³⁴ As the author of this thesis previously described in *Homeland Security*,

The intent of this transition to electronic data elements (over paper forms) is to promote information sharing among agencies, improve targeting and risk assessment, and facilitate the movement of legitimate trade by assisting government decision-making. The transition is also intended to reduce the burden of compliance on industry and make the importing and exporting processes as simple and cost effective as possible. While the Single Window will provide new technical capabilities for collecting and sharing data, it is much more than an IT development project. Rather, the effort requires a fundamental change in the way that agencies work with each other and with the private sector. ... Experts from within and outside of government have highlighted the dangers inherent in too reflexive or too sudden of a transition from today's manual and paper processes into a much faster electronic, automated trade environment. The risk is that ... we speed inefficiencies and trigger an avalanche of unintended consequences.¹³⁵

Perhaps with these risks in mind, the Executive Order challenged agencies to re-think current policies and processes to achieve “measurable improvements” in trade facilitation and enforcement in the near-term and beyond.

Despite the potential value to be realized through the Single Window, the ongoing exercise of identifying and eliminating redundant requirements, simplifying processes, and translating existing paper forms to electronic data formats unearthed, not surprisingly, a number of complications. As one change management expert cautioned,

Heavy investments in information technology have delivered disappointing results—largely because companies tend to use technology to mechanize old ways of doing business. They leave the existing processes intact and use computers simply to speed them up. ... But

¹³⁴ Christa Brzozowski, “The United States’ Single Window: A Year in Review,” *Homeland Security* blog, December 18, 2014, <https://medium.com/homeland-security/the-united-states-single-window-a-year-in-review-dda6e91ce737>.

¹³⁵ Ibid.

speeding up those processes cannot address their fundamental performance deficiencies.¹³⁶

One example of this challenge is found in the ongoing aggressive transition of information collection from paper or through the Digital Imaging System (DIS) function to machine readable electronic data elements that can be tagged, manipulated, shared, and presented in myriad useful ways.¹³⁷ This hallmark feature of the new Single Window digital environment has the potential to greatly improve agencies' ability to stop illicit shipments through improved targeting. If done correctly, the effort will also simplify and streamline the data requirements and reduce the overall burden on industry stakeholders. However, some questions have arisen as agencies work to transition current paper-based collections to electronic data elements and reduce their reliance on the DIS function. For example, as they look to more fully leverage the automated capabilities to be enabled by the Single Window, agencies may find value in transitioning large amounts of data (or perhaps even the bulk of their requirements) into electronic data elements. This may have a negative impact if filers have to devote up-front time and resources to manually key in a much larger set of data, and could invite criticism of the U.S. government's commitment to streamline and simplify that process. On the other hand, too heavy a continued reliance on the DIS function would undermine the value of the Single Window system.

Another challenge to the status quo policy option is that, while CBP is responsible for collecting data on behalf of other U.S. government agencies through the Single Window, other agencies often rely upon their own legacy systems to receive the data and assess trade compliance. This exchange of data is complicated by the array of systems and technical formats used within the U.S. government. Also, the relative ease of collecting and assessing electronic information (versus paper documents) has triggered what some in industry have termed "government data creep," namely requirements for

¹³⁶ Michael Hammer, "Reengineering Work: Don't Automate, Obliterate," *Harvard Business Review* (July–August 1990), <https://hbr.org/1990/07/reengineering-work-dont-automate-obliterate>.

¹³⁷ DIS functions allow importers to supply supporting documentation electronically to the Single Window as image files, or scans of paper documents. Problematically, information received via DIS requires manual review. More information on DIS background and capabilities is available at CBP, *Document Imaging System Implementation Guide* (Washington, DC: DHS, 2015), https://www.cbp.gov/sites/default/files/documents/DIS_XML_Implementation_Guide_July_2015.pdf.

more or different data than had been required prior to the modernization. In addition, the government's technical capabilities to assess the import data provided by trade is not yet centralized in the Single Window. Rather, data review and decision making about the admissibility of goods largely occurs within individual agencies, slowing processing and increasing the overall costs of administration for government. Again, the United States is not unique in facing these challenges; experts on the topic have highlighted that

While automation/computerization can increase the efficiency of well-run operations, it is not a miracle solution to existing problems. Automation of customs procedures needs to be part of an overall modernization project if it is to avoid the inappropriate introduction of computer systems that can exacerbate existing problems.¹³⁸

Data from a series of COAC "Trade Efficiency Surveys" support the view that CBP's modernization efforts, while well received by industry, have not yet been fully adopted by the other government actors involved in the import process. In the surveys, industry ratings of "'very satisfied' or 'satisfied' with CBP's trade facilitation capabilities grew from 78% in 2010 to 83% in 2014. Compare these scores with the 36% satisfaction ranking for other government agencies in 2012, which increased to 46% in 2014 but still remained a bit more than half of the CBP score."¹³⁹ The discrepancy in the private sector's survey responses affirms a caution provided by the World Economic Forum that "reform of border and domestic barriers is less straightforward than changes to explicit outward-facing trade policy. Collaboration is needed among multiple government departments ... and other actors."¹⁴⁰

In short, the main disadvantage of the first "status quo" policy option is that it does not allow for the necessary improvements to the border administration indicators

¹³⁸ Michael Engman and Tadashi Yasui, "The Role of Modernization in Trade Facilitation," in *Overcoming Border Bottlenecks: The Costs and Benefits of Trade Facilitation* (Paris: OECD, 2009), 146.

¹³⁹ The COAC has conducted the Trade Efficiency Survey since 2012, "to establish a benchmark for costs associated with importing and exporting goods into and out of the United States, understand the key cares of trade, strengthen inter- and intra- governmental operations to promote efficient compliance, and report trends." "2014 COAC Trade Efficiency Survey Findings," CBP, accessed January 21, 2017, <https://www.cbp.gov/sites/default/files/documents/COAC%202014%20Trade%20Efficiency%20Survey%20Findings.pdf>.

¹⁴⁰ World Economic Forum and Global Alliance for Trade Facilitation, *The Global Enabling Trade Report 2016*, 5.

that involve agencies other than CBP. The activities detailed each of the sub-indexes other than the “customs service index” require extensive coordination, collaboration, and perhaps even integration among the forty-seven agencies with responsibilities for controlling cross-border trade.¹⁴¹ Therefore, the initial score of eleven provided earlier in this chapter for the first evaluative criterion is not improved under the first policy option and remains static.¹⁴² In addition, the option scores low on certain aspects of the second evaluation criterion, which asks if the policy would provide improvements that could address COAC recommendations focused on trade facilitation. In particular, it does not at all address the recommendations associated with “other government agencies” and therefore receives a score of zero in that category; it does not change the status of “industry partnerships” beyond those already established by CBP, so receives a zero in that category; and although it does improve automation through the development of the Single Window and attendant digital capabilities, it does not adequately address COAC concerns with the unintended consequences of automation in the complex supply chain environment, so receives a zero in that category.¹⁴³

The overall evaluation criteria scores for policy option 1 are shown in Table 5.

Table 5. Policy Option 1 Evaluation

Policy Option #	Criterion 1: Effectiveness/Efficiency of Import Processes	Criterion 2: Benefit to U.S. Business	Criterion 3: Feasibility of Implementation
1 Status Quo	11	1	Easy
2 Tailored Modernization			
3 Shifting the Paradigm			

¹⁴¹ Per Appendix Table 12, these other sub-indicators include “effectiveness and efficiency of the clearance process,” “time for import,” “documents for import,” and “cost to import.”

¹⁴² The customs service index includes twelve of twenty-three indicators within the border administration category. See Appendix Table 12, “Criterion 1: The Effectiveness and Efficiency of Import Processes.”

¹⁴³ See Appendix Table 13, “Criterion 2: Benefit to U.S. Businesses.”

B. POLICY OPTION 2: TAILORED MODERNIZATION

DHS can lead a program of collective action among a select group of agencies to improve trade facilitation in key areas most likely to exceed the “tipping point” necessary to result in meaningful benefits.

Building and implementing a national Single Window is a significant undertaking, involving many stakeholders and requiring commitment from government and business entities.¹⁴⁴ Experts agree that modernization of trade infrastructures like Single Window systems can enhance efficiencies to benefit public and private-sector stakeholders and improve government’s ability to enforce trade laws.¹⁴⁵ However, the uncertain process of obtaining national-level commitment and political will, coordinating policies and technical systems among the dozens of border agencies with authorities, and negotiating omnipresent funding limitations can complicate the process. As discussed previously, the modernization of customs processes is a positive start and can influence some parts of the process, but significant improvement cannot be made without similar progress from the array of other government stakeholders at the border. Gaozhang Zhu, director of enforcement and facilitation at the World Customs Organization, further emphasizes this point:

Interest in better and smarter border management is at an all-time high. Driving this interest has been the need to boost economic growth and development, while maintaining high levels of compliance to guarantee the safety and security of citizens as well as the collection of revenue. Governments in general, and customs more specifically, can contribute significantly to economic growth through modernization and automation, and through collaboration with other government agencies and trade.¹⁴⁶

Policy option 1 proposed that DHS should “stay the course” and contribute to the nation’s economic security by modeling its own successful campaign of modernization

¹⁴⁴ For more information on Single Window development requirements and needs, see World Customs Organization, *How to Build a Single Window Environment*; UN/CEFACT, *Recommendation No. 33*.

¹⁴⁵ These benefits were discussed in detail in Chapter II.

¹⁴⁶ World Economic Forum, *Enabling Trade: Enabling Smart Borders* (Geneva: World Economic Forum, 2014), 5, <http://reports.weforum.org/enabling-trade-from-valuation-to-action/wp-content/blogs.dir/38/mp/files/pages/files/5-enabling-smart-borders.pdf>.

and commitment to trade facilitation. This option envisioned a “lead from example” paradigm in which CBP would leverage its role as developer and operator of the Single Window to influence change among the dozens of other agencies with import-related requirements and responsibilities. While highly feasible, this option would not have addressed the complications noted by industry stakeholders arising from the continued web of requirements and other government agency border processes that, if left unaddressed, could lead to unintended negative consequences with the advent of automation.

Policy option 2 would seek to address this gap. Under this policy option, CBP would lead reform efforts among a subset of key agencies whose requirements and/or internal processes present the most significant barriers to international trade through their complexity, inconsistency, redundancy, or even obsolescence. Importantly, under this option DHS would work with other government agencies and industry partners to follow the recommendation offered to governments by the World Economic Forum in light of the complexity and “heterogeneity in supply chain barriers.” Because of this, the organization advises governments interested in making meaningful progress in trade facilitation to “understand their existing industries and potential future industries, and prioritize [for reform] which barriers are most costly to those industries.”¹⁴⁷ DHS and other agencies could identify the most problematic barriers (in essence the “low-hanging fruit”) by relying on the extensive body of trade survey data, indicators such as the World Economic Forum’s border administration index, and global reporting on the most problematic non-tariff barriers to trade. The distinguishing factor of policy option 2 is its selectivity; rather than instituting a broad agenda of reform among the dozens of relevant U.S. agencies, CBP would prioritize work with the handful of agencies with whom coordination is most likely to effect the tipping point necessary for consequential change. Recent guidance from the World Economic Forum explains the rationale behind this approach:

¹⁴⁷ World Economic Forum, *Enabling Trade: Valuing Growth Opportunities*, 5.

Most macroeconomic trade models assume that the relationship between removing a supply chain barrier and the resultant effect on trade is a continuous function. But the case studies in this report suggest that removing barriers has an effect only when the effort reaches a tipping point. Companies conduct rigorous analyses to determine profitable geographies for production and sale of their goods. These analyses are generally binary: the company either chooses to produce and/or sell in a specific market or does not. Incremental reductions in trade barriers thus may have no impact until a certain “set” of barriers is removed.¹⁴⁸

In short, DHS will pursue objectives outlined in policy option 1 but will develop an enhanced Single Window that enables not only the submission of electronic data from industry to government regulators, but the automated risk assessment of that data among key agencies, and more efficient government-to-business communication when involving key agencies. In addition, DHS will spearhead a modest campaign to streamline the current regulatory environment among key agencies and better coordinate, and in some cases integrate, government decision-making processes associated with the admissibility of imports to reduce costs and improve efficiencies and effectiveness.

1. Advantages

A key advantage of policy option 2, under which DHS would lead a program of reform among a select group of agencies, includes the relative ease with which this key group of agencies could be identified as well as the small number of entities that would need to be involved to effect meaningful change. Global organizations as well as U.S. importers indicate that agencies with health-related responsibilities (including consumer protection, agriculture, sanitary, and phytosanitary) have more requirements and “play a more prominent role with importers than others.”¹⁴⁹ For example, COAC respondents to a 2014 Trade Efficiency Survey indicated that “the Food and Drug Administration (FDA), U.S. Department of Agriculture (USDA), and Federal Consumer Product Safety Commission (CPSC) were the [partner government agencies] regulating most of their shipments.”¹⁵⁰ In addition, some agencies have a focused regulatory control on certain

¹⁴⁸ Ibid., 4.

¹⁴⁹ “2014 COAC Trade Efficiency Survey,” CBP, 7.

¹⁵⁰ Ibid.

industry sectors (such as automotive, pharmaceuticals, electronics, and textiles), making them good candidates for developing tailored approaches to improve import processing in their areas of responsibility. Survey data from the World Trade Organization supports and augments the COAC respondents' perspective. In their Integrated Trade Intelligence Portal, the World Trade Organization provides country-specific snapshots of the most problematic non-tariff barriers to trade. Data from this portal indicates that, for the last decade, sanitary and phytosanitary (SPS) requirements have remained the most significant of the barriers impacting U.S. imports, although the trend is moving downward, from a high of 208 SPS non-tariff measures identified in 2007 to a low of twenty-nine in 2015.¹⁵¹ This suggests that the most problematic non-tariff barriers have the potential to be addressed by the relatively small number of government agencies with responsibilities and requirements in those areas. Compared to the forty-seven agencies initially involved in the broader Single Window, a focused reform initiative involving CBP, USDA, FDA, and CPSC could develop tailored solutions to identified supply chain pain points and thereby more readily reach a "tipping point" after which meaningful outputs are made.

An additional advantage of this tailored approach is that it focuses resources and efforts on improvements to the several additional border administration indicators that rely most on active engagement from agencies other than CBP, and therefore would raise scores across both evaluative criteria. In particular, each of the four sub-indicators in the "effectiveness and efficiency of the clearance process" (to include advance information, post-clearance audits, authorized economic operators, and transparency/information availability) category can provide commercially meaningful benefits to trade and strengthen government compliance controls only if *all* the relevant agencies have accomplished the necessary modernization steps. The example of the "advance information" indicator is illustrative. While CBP may allow importers to provide advance information so that shipments could be reviewed and potentially released prior to arriving at a domestic port, the facilitative benefit will not be realized by traders if another agency

¹⁵¹ "Table by Members—United States (2005-2015)," World Trade Organization, December 31, 2016, <http://i-tip.wto.org/goods/Forms/GraphView.aspx?period=y&scale=lg>.

that regulates that same shipment does not have similar procedures. If focused on addressing this problem with just a subset of the most relevant agencies (again, those that regulate the most trade or that heavily regulate trade in certain industries), CBP could leverage capabilities currently available at the Commercial Targeting and Analysis Center (CTAC) in Washington, DC. At present, the eleven federal agencies with representatives at CBP's CTAC have access to advance manifest information that would otherwise be unavailable to them.¹⁵² While the current focus of the CTAC is "to streamline and enhance federal efforts to address import safety issues," the mandate could be expanded to facilitate interagency information sharing among key agencies in support of coordinated risk-assessment across a broader array of industry sectors.¹⁵³ Such coordination would help resolve one of the common areas of frustration expressed by importers: government "holding" of cargo at the border and subsequent release without any adverse action.¹⁵⁴ The point is not that the industry desires additional penalties, but that the low ratio of "holds" to enforcement actions by the government is indicative of faulty, or perhaps non-existent, risk management procedures.

An adherence to global entity and product identification elements by a subset of specific agencies also could achieve a tipping point of improvements in certain industries. The mechanisms currently used by agencies to identify imported entities or products for the purposes of targeting and admissibility decisions are not harmonized across agencies. For example, the Importer of Record (IOR) and Manufacturer's Identification Number (MID) are both used by a variety of U.S. agencies to identify stakeholders involved in the importation process, while the Harmonized Tariff Schedule (HTS) codes and other entry

¹⁵² "Commercial Targeting and Analysis Center Celebrates 5 Years," CBP, May 15, 2015, <https://www.cbp.gov/newsroom/national-media-release/commercial-targeting-and-analysis-center-celebrates-5-years>.

¹⁵³ "Commercial Targeting and Analysis Center (CTAC)," CBP, April 25, 2017, <https://www.cbp.gov/trade/priority-issues/import-safety/ctac>.

¹⁵⁴ One COAC Trade Survey found that "the vast majority of respondents indicated that none of their partner government agencies holds during 2013 resulted in an enforcement action." "2014 COAC Trade Efficiency Survey," CBP, 8.

data are used to identify products.¹⁵⁵ As a result, the trade community may have to provide multiple data elements in order to identify a single entity or product, and agency efforts to coordinate government actions on a particular shipment are complicated by the use of non-standardized identifiers. In their 2011 report, the U.S. Product Identification Committee assessed the business case for businesses and government agencies' use of the fourteen-digit Global Trade Item Number (GTIN) for determining the admissibility of specific products. In the case of toy and game products regulated by the Consumer Product Safety Commission, the net value was estimated to be nearly \$15 million, with total implementation costs of less than \$1 million after five years if the top ten toy importers were to begin using global identification and classification codes.¹⁵⁶ Similarly, the report estimated a seven-to-one benefit-to-cost ratio if the cut flower trade (regulated in part by the Animal Plant Health Inspection Service) were to use global classification codes to identify flower products in entries rather than current proprietary codes. These findings suggest that measurable reductions in processing costs and times for certain imports can be realized through tailored reforms undertaken by a relatively few number of agencies.

As noted previously, the activities detailed in each of the sub-indexes in the border administration category, other than the "customs service index," require extensive coordination, collaboration, and perhaps even integration among the forty-seven agencies with responsibilities for controlling cross-border trade. Because the tailored approach detailed in policy option 2 would allow for significant improvements in at least the "effectiveness/efficiency of the clearance process," the scores for this first evaluative criterion would improve to nineteen. Further, the option scores would increase on certain aspects of the second evaluation criterion, which asks if the policy would provide improvements that could address COAC recommendations focused on trade facilitation.

¹⁵⁵ ITDS Product Information Committee, "Guidance for Using E-Commerce Data to Manage Product Admission at International Borders," ITDS, October 2010, http://itds.gov/linkhandler/itds/tsn/product_info_comm/guidance.pdf.

¹⁵⁶ ITDS Product Information Committee, "The Business Case for Using E-Commerce Data at International Borders," ITDS, December 2011, http://itds.gov/linkhandler/itds/tsn/product_info_comm/businesscase.pdf.

In particular, it would address recommendations across all four categories, and therefore receives a total score of four.¹⁵⁷

2. Challenges

A reform initiative involving a subset of key agencies geared toward identifying a particular set of supply chain pain points that, if addressed, could achieve a “tipping point” depends absolutely on the commitment, close coordination, and possible delegation of authority among those key agencies.

The executive order *Streamlining Export and Import Processes for America’s Businesses* established new mechanisms for this coordination and enumerated near- and long-term strategic outcomes for the project overall. The relationships, organizations, and processes established throughout the initial years of the Single Window effort are strong foundations for the efforts envisioned in policy option 2, particularly Executive Order 13659’s establishment of the Border Interagency Executive Council (BIEC) in 2014.¹⁵⁸ The mandate of the BIEC was not to oversee the technical development of the Single Window system or ensure appropriate legal frameworks, but rather to “develop policies and processes to enhance collaboration across customs and ... agencies with border management authorities and responsibilities to measurably improve supply chain processes and improve the identification of illicit shipments.”¹⁵⁹ As explained in a *Homeland Security* article written by the author,

The Executive Order set expectations for the types of enhanced process interdependencies that the BIEC should work to implement. These include things like developing a common set of risk management principles and methods to improve collaboration among agencies and consistency for businesses importing and exporting goods. In addition, the Executive Order requires the BIEC to find ways to better orchestrate government activities at the border, re-engineer current operational processes, and re-

¹⁵⁷ See Appendix Table 13, “Criterion 2: Benefit to U.S. Businesses.”

¹⁵⁸ The functions of the BIEC are detailed in Barack Obama, *Executive Order—Streamlining the Export/Import Process for America’s Businesses* (Executive Order 13659) (Washington, DC: the White House, 2014), Section 5, 3–4.

¹⁵⁹ Obama, *Executive Order—Streamlining the Export/Import Process*, Section 4, 3.

think existing policies to achieve improved service outcomes for businesses.¹⁶⁰

While the BIEC provides an established forum for interagency discussion and empowers DHS with the designation of chair, certain factors limit the group's power and effectiveness and hinder CBP's ability to set the future agenda and maintain necessary momentum. First and foremost, the BIEC lacks the statutory authority given to other interagency governance structures and therefore has little means to adjudicate areas of conflict that inevitably arise among agencies or ensure continued fiscal support from key players. As a matter of law, the Department of Treasury is responsible for overseeing the development of the Single Window and ensuring the coordinated involvement of all relevant agencies. Section 405 of the Security and Accountability for Every Port Act of 2006 established this Treasury-led governance structure while at the same time requiring CBP to develop, operate, and maintain the technical foundation of the Single Window.¹⁶¹ The BIEC is responsible for providing strategic leadership and policy direction for a broader U.S. government campaign of coordinated border management that would be enabled by the automated capabilities available upon completion of the Single Window. The establishment of the BIEC did reflect commitment at the highest levels of government to the reform effort, a key factor in light of the fact that "political will is ranked consistently as one of the top success factors for a single window project in most of the global guidelines" available on the topic.¹⁶²

However, this bifurcated governance structure could complicate an effort requiring "a remarkable amount of coordination and collaboration among dozens of agencies, each with different missions, requirements, and budgets."¹⁶³ The current governance structure of the BIEC also presents challenges in its lack of a mechanism to leverage the expertise of private-sector stakeholders. While many agencies, including CBP, have advisory councils comprising representatives across affected industries, the

¹⁶⁰ Brzozowski, "E Pluribus Unum."

¹⁶¹ The Security and Accountability for Every Port Act, P.L. No. 109-347, 2006, Sec 405.

¹⁶² Brzozowski, "E Pluribus Unum." Examples of these global guidelines include UN/CEFACT, *Recommendation No. 33*; World Customs Organization, *How to Build A Single Window Environment*.

¹⁶³ Brzozowski, "The United States' Single Window."

BIEC does not yet have a formal means to solicit and receive such input. This deficiency represents a serious challenge for the BIEC, as close public and private-sector engagement during a time of reform and modernization would benefit both sides. Guidance from the World Customs Organization, the World Trade Organization, and other relevant international bodies supports this view. A stronger and more effective BIEC would therefore require some modest amount of additional DHS authorities and funding, or alternatively the means by which DHS (as the chair) could influence or even compel the engagement of the key agencies needed to reach identified “tipping points.”¹⁶⁴

The overall evaluation criteria scores for policy option 2 are shown in Table 6.

Table 6. Policy Option 2 Evaluation

Policy Option #	Criterion 1: Effectiveness/Efficiency of Import Processes	Criterion 2: Benefit to U.S. Business	Criterion 3: Feasibility of Implementation
1 Status Quo	11	1	Easy
2 Tailored Modernization	19	2	Hard
3 Shifting the Paradigm			

¹⁶⁴ See Appendix Figure 13, “Criterion 3: Feasibility of Implementation.”

C. POLICY OPTION 3: SHIFTING THE PARADIGM

DHS, by shedding some technical responsibilities and obtaining increased authorities as chair of the BIEC, can lead a U.S. government-wide program of coordinated border management to achieve an economy-wide vision of improved national economic security.

As discussed throughout this paper, the new automated capabilities provided by the Single Window have the potential to improve U.S. border management processes by providing the technical foundation for enhanced data sharing and better coordination among the dozens of agencies with border-related authorities and needs. By receiving accurate and timely electronic data, U.S. government agencies could orchestrate reviews, develop common risk-management policies and targeting systems, and leverage each other's expertise and resources at the border. These improvements could not only strengthen government agencies' ability to ensure compliance with U.S. import laws, but accelerate government decision-making time for releasing goods—from days to minutes—and dramatically speed the flow of secure and legitimate commerce across our borders. If implemented with vision and efficiency, the improvements have the potential to transform the way DHS and the U.S. government manage the flow of commerce across our border and strengthen both our national and economic security.

However, as previously suggested by this thesis author in *Homeland Security*,

Effective management of such a complex, multifaceted project promises to be challenging. Industry experts have expressed concerns with the uneven pace of different U.S. Government agencies' transition to electronic and automated processes and have cautioned that the diversity of current risk management cultures and inspection [requirements] may complicate efforts to streamline operations at the border.¹⁶⁵

In fact, as discussed previously in this chapter, approximately 38 percent of the recommendations provided by the Commercial Operations Advisory Council (CBP's trade advisory group) are geared toward improvements that can be made not by CBP but by the range of other government agencies with controls over imports. While CBP's

¹⁶⁵ Brzozowski, "E Pluribus Unum."

program of trade modernization and reform, its strong enforcement authorities, and its physical presence at hundreds of domestic ports of entry make it “the gatekeeper of the state and embodiment of its sovereignty at the border,” the agency and even the broader Department cannot alone effect meaningful trade facilitation improvements.¹⁶⁶ In particular, CBP’s responsibility for building, operating, and maintaining a digital platform as complex and vital as the Single Window is troublesome when viewed in light of the U.S. government’s track record for successful execution of such long-term and technically sophisticated activities. Examples of public-sector limitations in this area abound, to the extent that the Government Accountability Office recently added the general category of “Management of IT Acquisitions and Operations” to its high-risk program list.¹⁶⁷ According to the General Accountability Office’s 2015 report,

Although the executive branch has undertaken numerous initiatives to better manage the more than \$80 billion that is annually invested in information technology (IT), federal IT investments too frequently fail or incur cost overruns and schedule slippages while contributing little to mission-related outcomes.¹⁶⁸

The Single Window project is not included specifically as an example of an “at risk” IT acquisitions and operations program. However, the fact that the Single Window serves as the backbone of the nation’s cross-border trading system does raise questions concerning the private sector’s expertise and resources, which might be better leveraged to assist with the endeavor.

¹⁶⁶ Mariya Polner, “Coordinated Border Management: From Theory to Practice,” *World Customs Journal* 5, no. 2 (September 2011): 50.

¹⁶⁷ Government Accountability Office (GAO), *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others* (GAO-17-317) (Washington, DC: GAO, 2017), 1, <http://www.gao.gov/assets/690/682765.pdf>. According to GAO, it has maintained a high-risk program since 1990 “to focus attention on government operations that it identifies as high risk due to their greater vulnerabilities to fraud, waste, abuse, and mismanagement or the need for transformation to address economy, efficiency, or effectiveness.”

¹⁶⁸ GAO, *High-Risk Series: An Update* (GAO-15-290) (Washington, DC: GAO, 2015), 43, <http://www.gao.gov/assets/670/668415.pdf>.

1. Introducing Policy Option 3

As a quick review, policy option 2 suggested that certain tipping points of efficiency could be reached through the concerted action of a relatively small number of agencies working to eliminate industry-specific barriers to trade. Again, the distinguishing factor of policy option 2 is its selectivity in prioritizing certain non-tariff barriers that, if addressed, would most likely effect the tipping point necessary for consequential change. While producing better scores than policy option for both “efficiency/effectiveness of the import process” (first criterion) and “benefits to business” (second criterion), policy option 2 did not deviate far from the current decentralized approach, in which one government agency (i.e., CBP) builds and operates the Single Window under the oversight of another government entity (the Department of Treasury) that services dozens of different government agencies as well as hundreds of thousands of business users, and must evolve at the break-neck speed of global trade.

Under policy option 3, dubbed “shifting the paradigm,” DHS would seek to institute a broader agenda of reform by leading U.S. government efforts to centralize and prioritize current trade facilitation efforts to rationalize activities across the spectrum of strategic goals, policy development, and programmatic implementation. The distinguishing factor here is that policies and activities across the trade facilitation space would be prioritized by and oriented toward the achievement of a unifying, economy-wide vision of desired performance outcomes. To effect such an approach, DHS would first work to divest itself of the responsibilities to maintain and operate the Single Window through new partnerships with private-sector experts. DHS would then work to obtain expanded authorities to strengthen its role as the chair of the BIEC while situating that interagency body within the National Trade Facilitation Committee process, an established framework for strategic U.S. policymaking. With this new imprimatur, DHS could drive a new program of collective action among a group of U.S. government agencies that have specific responsibilities to ensure the security of goods at the border and their compliance with national laws. This will require a paradigm shift away from the current decentralized model of government control, in which agencies understandably prioritize efforts to advance their individual missions and make admissibility decisions on

cargo based on varying risk-management cultures and resource levels. Instead, DHS will work to institute common principles, policies, and practices at the border among relevant agencies, toward the ultimate goal of implementing the strategic direction provided by the National Trade Facilitation Committee. To accomplish this, DHS would look to emulate two key lessons offered by the Government of Singapore in its development of a national single window system called TradeNet. In particular, DHS would seek to obtain the highest level of political commitment to a stated, if aspirational, strategic objective and then work to incorporate the private-sector technical expertise and resources to support future operations and maintenance of the Single Window system. Such an approach would allow DHS and other government agencies to identify the national economic security policy outcomes desired and prioritize supportive implementation activities while relaying divesting the technical operation of the complex Single Window to private-sector experts.

The key elements of policy option 3 include:

- *Governance Structures:* DHS will work to institutionalize the BIEC as the United States' National Trade Facilitation Committee required under Article 23.2 of the World Trade Organization's trade facilitation agreement.¹⁶⁹ This would differ from current practice, in which several interagency bodies chaired and administered by the Office of the USTR fulfill the functions of the required National Trade Facilitation Committee. This modified governance structure will enable the USTR's existing trade policy coordination groups to focus on "developing and coordinating U.S. Government positions on international trade and trade-related investment issues," and establishing domestic performance goals for the United States.¹⁷⁰ The BIEC, serving as the National Trade Facilitation Committee, will then be responsible for developing the necessary policies and programs to achieve implementation and for managing government-wide performance toward the stated strategic goals. DHS and the BIEC will be better positioned to design and oversee the implementation of a "policy with an economy-wide vision" than the current approach, in which

¹⁶⁹ Article 23.2 of the World Trade Organization Trade Facilitation Agreement requires that "each Member shall establish and/or maintain a national committee on trade facilitation or designate an existing mechanism to facilitate both domestic coordination and implementation of the provisions of this Agreement." In the United States, the Trade Policy Review Group (TPRG) serves as the National Committee on Trade Facilitation. The TPRG, established under the Trade Expansion Act of 1962, is chaired by United States Trade Representative and includes approximately 20 agencies with relevant equities from across the interagency.

¹⁷⁰ USTR, *2017 Trade Policy Agenda and 2016 Annual Report* (Washington, DC: USTR, 2017), 201.

decentralized agencies with varying requirements often complicate efforts to make coordinated progress toward agreed-upon goals.¹⁷¹ In turn, as required by law, the Department of Treasury will be responsible for “overseeing the implementation of, and participation in, the International Trade Data System,” including defining and periodically updating “the standard set of data elements to be collected, stored, and shared in the [International Trade Data System (ITDS)].”¹⁷²

- *Performance Targets:* DHS will work with the USTR and the Department of Commerce to develop and regularly monitor progress toward U.S. strategic-level trade facilitation performance targets to be realized through the Single Window, and associated modernization efforts over the subsequent five years. These performance targets could be based on the strategic vision and goals agreed to under the World Trade Organization’s trade facilitation agreement, or a subset of objectives identified as priorities by the current administration.¹⁷³ The Executive Office of the President will monitor the aggregate impact of all agency efforts toward meeting the performance targets on a regular (bi-annual) basis and compel re-doubled attention as necessary through directed budget allocations. By focusing on outcome-oriented performance targets, agencies will be influenced to follow the example set by CBP’s recent modernization reform effort, which included a shift to the concepts of informed compliance, and shared responsibility and a utilization of risk-management and post-audit practices that minimize delays at the border.
- *Role of the Private Sector:* DHS, acknowledging the public sector’s limitations in building and managing a digital platform as complex and dynamic as the national Single Window, will seek to augment the role of the private sector dramatically. DHS will institute a two-tiered public-private partnership arrangement, in which businesses and other private-sector entities will have expanded and institutionalized roles in advising on economy-wide strategic outcomes and subsequent policy development and implementation to achieve such outcomes. According to one relevant global organization, the “experience of many countries has shown that identifying trade issues and priorities can best be achieved through a dialogue between Government and the trading community.”¹⁷⁴ In addition, DHS will consider opportunities to divest itself of current responsibilities to build and operate the Single Window by exploring solutions through which private-sector expertise and resources might be leveraged. This could include the use of “open-source challenges” for

¹⁷¹ World Economic Forum, *Enabling Trade: Valuing Growth Opportunities*, 5.

¹⁷² The Security and Accountability for Every Port Act of 2006, P.L. 109-347, Section 405.

¹⁷³ For a reminder of the articles of the WTO trade facilitation agreement, see Appendix Table 1.

¹⁷⁴ UN/CEFACT, *Recommendation No. 4*, 1.

development of new parts of the system, as suggested by some experts, the provision of “grants and other financial assistance to the first group of companies willing to participate in the newly established system” as suggested by others, or the establishment of a corporate vehicle that has the “necessary capital to develop and operate the system ... that essentially performs a regulatory function for the government.”¹⁷⁵

- *Political Will.* DHS will work to obtain the support and endorsement of the new administration for the continuation of Single Window efforts, the establishment of the new governance structure proposed in this option, and the necessary funding to support transition of the Single Window technical build to a private-sector entity for maintenance. Such an endorsement can be made available through any type of executive action that does not conflict with existing law, and would support continued momentum by focusing leadership attention and agency budgets on the issue.

2. An Overview of the Singapore Model

Constructing border management policies and measures that achieve the delicate balance between trade facilitation and trade security is a difficult task for any nation. Singapore’s consistent top ranking in the World Bank’s “trading across border” index (first place from 2008–2015) may at first suggest that the nation has found ways to achieve this balance.¹⁷⁶ However, as Singapore is a large transshipment hub (meaning large volumes of goods pass through the port but little is imported or exported by Singapore itself), the addition of four new “compliance” criteria to the World Bank’s scoring methodology provides a more accurate view. As can be seen in Figure 10, Singapore’s 2016 ranking in this category dropped to forty-one, well behind even the lowest U.S. score over the last decade. While these data suggest that Singapore may not be pursuing the dual goals of trade facilitation *and* security as aggressively as the United

¹⁷⁵ Eric Miller, John Dillon, and Colin Roberson, *Made in North America: A New Agenda to Sharpen Our Economic Competitiveness* (Ottawa: Canadian Council of Chief Executives, December, 2014), 13, <http://thebusinesscouncil.ca/wp-content/uploads/2014/12/Made-in-North-America-paper-Nov-2014-FINAL-2-Dec-20141.pdf>; Jonathan Koh, “Towards a Single Window Trading Environment: Singapore’s TradeNet,” CrimsonLogic, accessed June 18, 2017, 9, 15, <http://www.crimsonlogic.com/Documents/pdf/resourceLibrary/viewPoint/Towards%20a%20SW%20Environment-SG%20TradeNet.pdf>.

¹⁷⁶ The World Bank produces annual *Doing Business* reports that score and rank nations according to ten criteria: 1) Starting a Business; 2) Dealing with Construction Permits; 3) Getting Electricity; 4) Registering Property; 5) Getting Credit; 6) Protecting Minority Investors; 7) Paying Taxes; 8) Trading Across Borders; 9) Enforcing Contracts; and, 10) Resolving Insolvency. Most relevant to this paper is the “trading across borders” ranking. The most recent report and report archives can be found at <http://www.doingbusiness.org/reports/global-reports/doing-business-2017>.

States, the fact that it places a premium on facilitation may be helpful nonetheless by highlighting key lessons in this space worthy of emulation. In particular, a brief assessment of the factors contributing to the development of Singapore’s TradeNet could inform U.S. efforts associated with the Single Window.

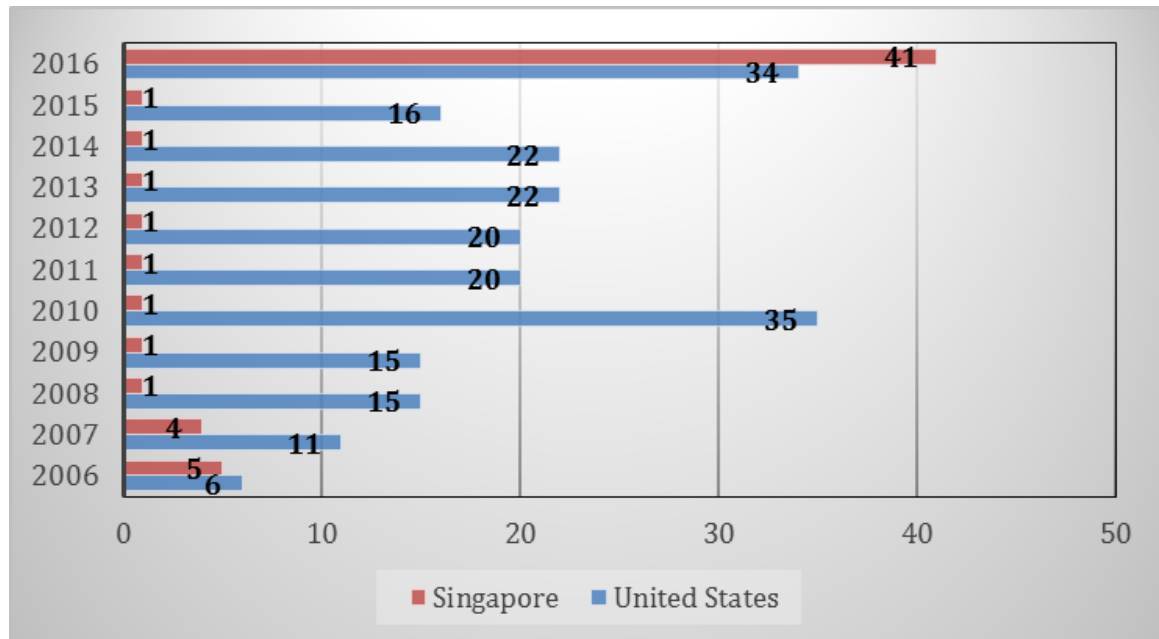


Figure 10. World Bank “Trading across Borders” Rankings, United States and Singapore (2006–2016)¹⁷⁷

¹⁷⁷ Adapted from World Bank, *Doing Business in 2006: Creating Jobs* (Washington, DC: World Bank, 2005); *Doing Business 2007: How to Reform* (Washington, DC: World Bank, 2006); *Doing Business 2008* (Washington, DC: World Bank, 2007); *Doing Business 2009* (Washington, DC: World Bank, 2008); *Doing Business 2010: Reforming through Difficult Times* (Washington, DC: World Bank, 2009); *Doing Business 2011: Making a Difference for Entrepreneurs* (Washington, DC: World Bank, 2010); *Doing Business 2012: Doing Business in a More Transparent World* (Washington, DC: World Bank, 2011); *Doing Business 2013: Smarter Regulations for Small and Medium-Size Enterprises* (Washington, DC: World Bank, 2012); *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises* (Washington, DC: World Bank, 2013); *Doing Business 2015: Going beyond Efficiency* (Washington, DC: World Bank, 2014); *Doing Business 2016: Measuring Regulatory Quality and Efficiency* (Washington, DC: World Bank, 2015); “Ease of Doing Business in Singapore,” World Bank, accessed June 19, 2017, <http://www.doingbusiness.org/data/exploreeconomies/singapore>; “Ease of Doing Business in United States,” accessed June 19, 2017, <http://www.doingbusiness.org/data/exploreeconomies/united-states>.

Singapore's challenging history and complete dependence on international trade were key motivating factors in the development of TradeNet. From its founding as a British colonial trading port in 1819, Singapore overcome its lack of natural resources by leveraging its strategic location between China and India to attract traders seeking alternatives to Dutch-owned ports in Southeast Asia. This strategic location and deep water access has fostered the development of the Port of Singapore into the one of the world's largest transshipment hubs, through which goods from over 600 ports in 123 countries transit.¹⁷⁸ In 1959, Singapore became self-governing, and in 1963 joined a federation of other newly independent states to form Malaysia. After a period of friction, Singapore separated from Malaysia in 1965 and became an independent republic. The nation then experienced several years of social and political turmoil and economic decline in the aftermath of World War II. High unemployment (up to 13.5 percent at its worst), damaged infrastructures and housing, limited sources of potable water, and a growing population all contributed to the unrest. Forced to gain access to critical foreign markets for resources, and with a society desperate for stability and jobs, Singapore became an early advocate of globalization.¹⁷⁹

Singapore's impressive turnaround since World War II can be credited to efficient government policies and a single-minded commitment to achieving power and autonomy through economic growth. Singapore is a unitary state with no local governments that operates under a unicameral parliamentary system composed of eighty-one elected members. The People's Action Party (PAP), the dominant political party since its ascension to power in 1959, has governed on a "social contract" platform geared toward the single goal of making Singapore a safe, stable, open, and thereby attractive country for investors.¹⁸⁰ The benefits of this platform were apparent in the government's

¹⁷⁸ Jasmine Siu Lee Lam, "Strategy of a Transshipment Hub: The Case of Port of Singapore," in *Dynamic Shipping and Port Development in the Globalized Economy*, eds. Paul Tae-Woo Lee and Kevin Cullinane, 12–38 (London: Palgrave Macmillan, 2016). Statistics on trade flows through the Port of Singapore are available at <https://www.singaporepsa.com/about-us/core-business>.

¹⁷⁹ Additional information on the history of Singapore can be found in Jim Baker, *Crossroads: A Popular History of Malaysia and Singapore* (Singapore: Marshall Cavendish, 2010); Jim Baker (ed.), *Singapore: Government and Politics*, 2nd edition (Singapore: Marshall Cavendish International, 2008).

¹⁸⁰ Baker, *Singapore*.

commitment to developing TradeNet. In addition to focusing significant attention on updating the relevant trade regulations and other legal frameworks, the government created the Economic Development Board in 1961 to oversee and fund the initial stages of TradeNet's development.¹⁸¹ The use of the Board in the TradeNet project allowed the Singapore Customs Service to maintain its position as the lead government ministry but defer technical aspects of the system's construction to private-sector experts. In addition, the model allowed private-sector entities to fund the upfront costs of the project and recoup the investment through a user fee arrangement.¹⁸² The public-private model used in the particular instance of TradeNet allowed Singapore to move from project conception to launch in the amazingly short timeframe of only three years. Subsequently, Singapore transferred TradeNet entirely to the private-sector company CrimsonLogic for operations and maintenance. After fully implementing TradeNet, Singapore realized a reduction in the turnaround time for processing of typical trade documents, from two to four days to as little as fifteen minutes, and reduced documentation processing costs by approximately 20 percent.¹⁸³ The Singapore government has since mandated the electronic submission of all trade documentation through TradeNet, and the system now processes an estimated 9 million trade documents a year. The United States does not share many of the same historical, geographic, political, and economic factors that informed the Singapore experience. However, the model provided by Singapore in the case of TradeNet is insightful, particularly the continued commitment from the highest levels of government to specific economic outcomes and the utilization of private-sector expertise to build and then maintain the TradeNet system.

¹⁸¹ In Singapore, the "statutory board" structure is a quasi-government agency staffed by private-sector experts and thereby not constrained in the way that government-only entities would be. Boards, like the Economic Development Board discussed in the text, are established by an act of Parliament and are created to build and/or manage large acquisition or development projects requiring specialized expertise and up-front capital investments. Baker, *Singapore*.

¹⁸² Additional information on the history and development of Singapore's TradeNet can be found in John L. King and Benn R. Konsynski, *Singapore TradeNet: A Tale of One City* (Boston, MA: Harvard Business School, 1995).

¹⁸³ Lynda M. Applegate, John L. King, and Boon-Siong Neo, *Singapore TradeNet: The Tale Continues* (Boston, MA: Harvard Business School, 1993).

3. Advantages

Policy option 3, “Shifting the Paradigm,” enjoys a number of advantages. First and foremost, as the dominant concept of the option is to centralize and streamline the variety of organizations and efforts focused on trade facilitation goals in the United States, it follows that much groundwork has already been laid. Therefore, one of the key advantages of this option is that its implementation by DHS and key partners from other agencies can benefit from building upon an established foundation of existing bodies and ongoing activities. For example, the interagency governance structures detailed previously are all chartered bodies with established members and regular meeting schedules. These groups include the Trade Policy Review Group and the supporting staff structure called the Trade Policy Staff Committee.¹⁸⁴ The USTR administers both interagency bodies, which together “constitute the principal mechanism for developing and coordinating U.S. Government positions on international trade and trade-related investment issues.”¹⁸⁵ The staff-level group includes approximately twenty agencies, meets several times annually, and is supported by numerous sub-groups focused on addressing non-tariff barriers encountered within specific industry supply chains. In addition to the Trade Policy Review Group, the BIEC and the ITDS Board of Directors also represent existing interagency bodies focused on specific aspects of trade facilitation. Both bodies, as discussed previously, have either authority deriving from law or executive action and are chartered entities that have focused recent efforts on the development and coordinated agency use of the Single Window.

Finally, the National Trade Facilitation Committee required under Article 23.2 of the World Trade Organization trade facilitation agreement exists currently under interagency structures within the USTR. This policy option does propose a modification to the current arrangement in that it would designate the BIEC as the National Trade Facilitation Committee and make it responsible for performing the required functions. (See Figures 11 and 12 for a comparison of the current and proposed governance

¹⁸⁴ Trade Expansion Act of 1962, 19 U.S.C. 1872 (as amended at 40 FR 18420, April 28, 1975; 40 FR 39497, August 28, 1975; 40 FR 60042, December 31, 1975; and 42 FR 55611, October 18, 1977), and as implemented by Executive Orders 11846 and 12188.

¹⁸⁵ USTR, *2017 Trade Policy*, 201.

structures proposed under policy option 3.) The fact that the BIEC is an established interagency body already performing an array of trade facilitation functions suggests that this re-designation from USTR to the BIEC could be seamless if approved at senior levels of government. Such a transition would require the BIEC to update its founding charter but would not require new legal or regulatory authorities. The fact that the BIEC currently lacks statutory authority, one of the disadvantages discussed in policy option 2, would be overcome in this case by ensuring that it received strategic direction from, and was accountable to, the Trade Policy Review Group.¹⁸⁶ That body could serve as the forum in which to resolve conflicts among agencies that could not be resolved within the BIEC. In short, policy option 3 has the advantage of rationalizing existing governance structure associated with trade facilitation goals that today engender duplication of effort at best, and at worst missed opportunities resulting from bureaucratic disorganization.

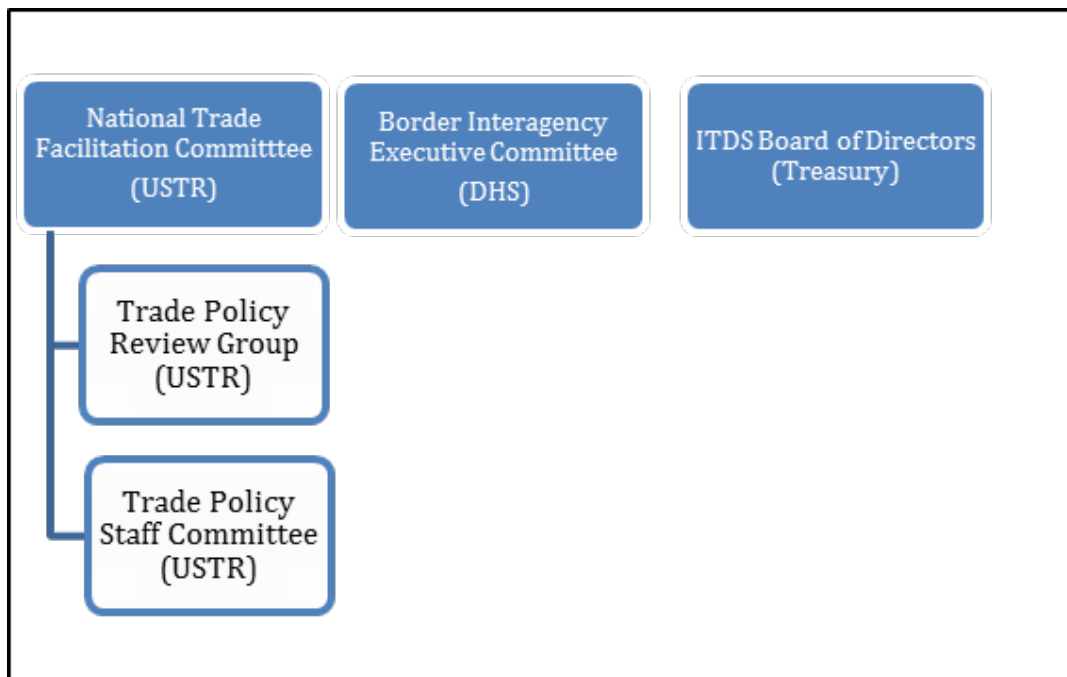


Figure 11. Current U.S. Government Interagency Bodies Focused on Trade Facilitation (Imports)

¹⁸⁶ As noted previously, the BIEC was established by Executive Order 13659, *Streamlining the Export/Import Process for America's Businesses*.

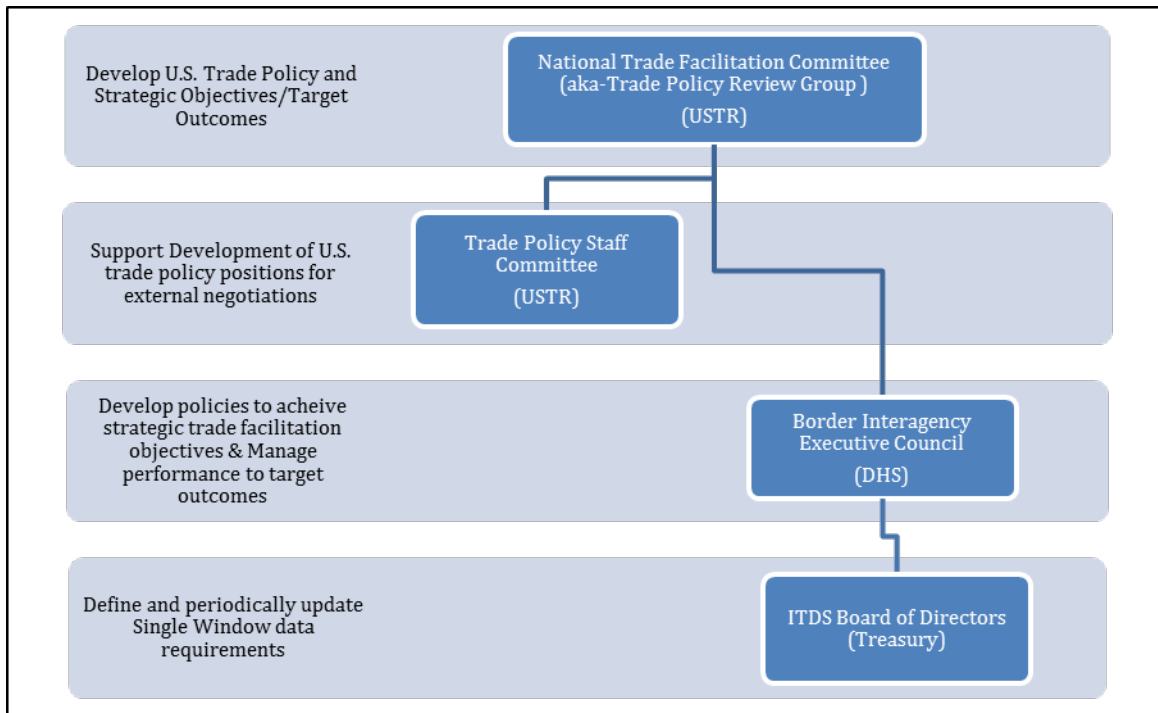


Figure 12. Policy Option 3 Proposed Modifications to U.S. Government Interagency Bodies Focused on Trade Facilitation (Imports)

Another advantage offered by the proposals under policy option 3 is that the modified governance structure will promote the prioritization of policy and program development and regulatory reform to address non-tariff trade barriers deemed most problematic to overall U.S. economic interests. The Trade Policy Review Group would not only ensure that the United States spoke with a unified voice during trade negotiations in the international arena, but would provide much-needed “commander’s intent” to the BIEC, the body responsible for ensuring that U.S. domestic policies, activities, and authorities are in place to achieve the desired performance outcomes without unduly impacting the flows of legitimate goods. This would address the key disadvantages of the current de-centralized approach, in which various agencies understandably prioritize efforts that advance individual missions with little to no understanding of how the aggregate impact of their efforts impact broader U.S. trade goals. For example, while the U.S. government has a strong process in place to vet, understand the costs and benefits of, and seek public comment on proposed regulations, complications remain in assessing the aggregate impact of these regulations as agencies,

and even the Office of Management and Budget, examine them with an eye for the impact on their own equities, and according to their own parochial interests.¹⁸⁷ In addition to promoting enhanced coordination of regulatory actions associated with cross-border trade, the Trade Policy Review Group in this policy option will direct the BIEC to develop policies geared toward achieving necessary tipping points in certain industry sectors or to address an identified subset of non-tariff barriers. This approach was part of the “tailored solution” offered under policy option 2, but has the added advantage of being directly informed by national-level goals and desired outcomes rather than an approach that seeks to tackle only the most obvious issues (the low-hanging fruit). Guidance provided by UN/CEFACT supports the view that the National Trade Facilitation Body function be established firmly “within a Government’s overall national trade policy framework.”¹⁸⁸ In its recommendations on the development of such bodies, the Centre elaborates on the responsibilities of such a body to:

Devise a strategy that offers a holistic approach to national trade facilitation activities including coordination at a policy level, the development of trade simplification measures and proposals for action plans. The National Trade Facilitation Body can present this strategy to the relevant government institutions for endorsement, for support and in order to obtain a mandate for implementation of the strategy.¹⁸⁹

In this regard, policy option 3 offers the most promising means to positively impact the effectiveness and efficiency of overall import procedures (the first evaluation criterion). While the scores of the customs service index within the border administration category would not change, the new governance structure would promote adoption of modern trade facilitation practices such as post-clearance audits and authorized economic operator programs by agencies other than CBP. Because of this, and the expected resulting reductions in the time, cost, and documents required to import goods, the score for this evaluation criterion is twenty-three, the highest of the three policy options.

¹⁸⁷ For additional information on the requirements for U.S. agency development of regulations, see William J. Clinton, *Executive Order 12866: Regulatory Planning and Review* (Washington, DC: the White House, 1993), and Barack Obama, *Executive Order 13563: Improving Regulation and Regulatory Review* (Washington, DC: the White House, 2011).

¹⁸⁸ UN/CEFACT, *Recommendation No. 4*, 1.

¹⁸⁹ *Ibid.*

A third advantage of policy option 3 is that it will seek to better leverage untapped expertise and resources from private-sector stakeholders in the development of not only U.S. national-level economic strategic objectives, but in the creation of the policy, programs, and infrastructures necessary to achieve the desired outcomes. As discussed previously, policy option 3 proposes that DHS institute a two-tiered, public–private partnership arrangement in which businesses and other private-sector entities have institutionalized roles in: 1) advising on economy-wide strategic outcomes and subsequent policy development and implementation to achieve such outcomes, and 2) supporting the daily maintenance and operation of the Single Window. Noted supply chain and logistics expert Mariya Polner provides helpful insights on the global guidance available regarding the “continuum of inter-governmental integration” that, according to policy option 3, can helpfully be used as a model for successful public–private partnerships with regard to management of the Single Window and participation in broader trade facilitation policy development.¹⁹⁰ Polner distinguishes levels of cooperation that include collaboration, “a more intensive process, sometimes involving a formal partnership,” and the less intensive coordination, which involves “formalized meetings and exchanges of information so that the organizations involved can achieve their respective goals more effectively.”¹⁹¹ Although Polner is commenting on the means by which different border agencies might move toward improved *collaboration*, the terminology is applicable to the increased formality of meetings and exchanges among agencies and private-sector stakeholders proposed under policy option 3.¹⁹²

By working collaboratively with other agencies and the private sector, DHS could better achieve common objectives that might be difficult to realize in isolation. This increase in “horizontal” collaboration is hailed by some management experts as an effective approach to overcoming obstacles in complex environments. “The most

¹⁹⁰ Polner, “Coordinated Border Management,” 53.

¹⁹¹ Ibid.

¹⁹² World Customs Organization, *Customs in the 21st Century: Enhancing Growth and Development through Trade Facilitation and Border Security* (Brussels: World Customs Organization, 2008); World Customs Organization, *Background Paper to Facilitate the Discussion on Coordinated Border Management* (Brussels: WCO Inter-Agency Forum on Coordinated Border Management, 2009); World Bank, *Customs Modernization Handbook* (Washington, DC: World Bank, 2005).

significant constraints to cross-organizational workings,” one recent work suggests, “is embedded bureaucratic cultures and reified everyday practices—means of administration which have been transformed into ends”; to overcome such challenges, organizations must “understand that outcomes are the goal,” and “learn to work horizontally and construct ways and means of getting there over time.”¹⁹³ The placement of the BIEC within the framework of the more strategic-level Trade Policy Review Group would help ensure that the former is able to avail itself of the private-sector expertise available to the latter. The Trade Policy Review Group has an established and effective means of obtaining private-sector input and recommendations, through the publication of proposals for public comment in the Federal Register, an advisory committee system that includes hundreds of experts from specialized industries, and the capacity to conduct public hearings.¹⁹⁴ As the private sector becomes more involved in the early identification of economy-wide priorities and development of policy and programmatic solutions to achieve agreed-upon outcomes, one would expect that businesses would be impacted positively. Supply chain expert Andrew Grainger highlights the benefits of a close dialogue between public and private stakeholders throughout border management and modernization reform efforts. Such dialogue “encourages a climate of shared responsibility and ownership. It helps to set reform priorities, leading to initiatives that focus on the most desired outcomes.”¹⁹⁵

Private-sector expertise and resources would also be useful in supporting the future maintenance and operation of the Single Window. As discussed previously, the Government of Singapore relied upon a public–private partnership to develop its TradeNet system, thereby ensuring the input of both industry and government officials, and then successfully outsourced the system’s operation to a private entity called CrimsonLogic. While CrimsonLogic charges user fees for transactions, other models in

¹⁹³ Elizabeth Eppel et al., “The Cross-organizational Collaboration Solution,” in *Crossing Boundaries in Public Management and Policy*, eds. Janine O’Flynn, Deborah Blackman, and John Halligan (New York: Routledge, 2014).

¹⁹⁴ USTR, *2017 Trade Policy*, 201.

¹⁹⁵ Andrew Grainger, “The Role of the Private Sector in Border Management Reform,” in *Border Management Modernization*, edited by Gerard McLinden et al. (Washington, DC: International Bank for Reconstruction and Development, 2011), 159.

which the government covers the costs of outsourcing operations and maintenance could be considered by DHS and other agencies. Such an approach could help ensure that the system development is able to keep pace with the rapid evolution of IT capabilities as well as new requirements that inevitably arise in today's dynamic trade environment. This would address current challenges that arise when CBP and other agencies seek to accommodate new IT and regulatory requirements within the constraints of long-term budget cycles, legacy systems, and government salaries that cannot compete with the public sector. Because policy option 3 provides the most collaborative approach for a public-private relationship during the policy development as well as program implementation phases, it represents the best means by which industry could focus attention and influence change on the 47 percent of recommendations provided by the COAC to DHS between 2013 and 2016 (the second evaluation criterion).¹⁹⁶

4. Challenges

The key challenge in policy option 3 is the fact that many agencies with border responsibilities do not share CBP's legal basis and established policy to promote trade facilitation as an affirmative objective, in addition to their respective enforcement and security missions. As a result, CBP may find it difficult to drive a modernization agenda focused on facilitation among other departments and agencies focused exclusively on ensuring enforcement of relevant laws. Several laws establish and reaffirm CBP's trade facilitation and enforcement mission, including the Security and Accountability for Every (SAFE) Port Act and the more recent Trade Facilitation and Trade Enforcement Act of 2015. Specifically, the SAFE Port Act includes several provisions focused on facilitation, including: the establishment of a public-private partnership program "to facilitate the movement of secure cargo through the international supply chain," the establishment of a director of trade policy position to "promote trade facilitation on a department-wide basis," the creation of the International Trade Committee to advise on trade facilitation functions, the inclusion of "facilitating trade" among the priority trade functions of CBP, and requirements for CBP to seek to "align customs procedures globally in order to

¹⁹⁶ See Appendix Table 13, "Criterion 2: Benefit to U.S. Businesses," for the scores of each policy option according to trade facilitation recommendations from the COAC.

facilitate the efficient flow of international trade.”¹⁹⁷ Additionally, the Trade Facilitation and Trade Enforcement Act contains numerous references to “the expedited release of cargo” and “facilitating the flow of legitimate trade” as distinct from the trade enforcement/revenue collection mission, which requires establishing among the duties of the commissioner the requirement to “facilitate and expedite the flow of legitimate travelers and trade.”¹⁹⁸ Even as the co-chair of the BIEC, DHS may have difficulty in implementing an aggressive trade facilitation agenda unless the array of other departments with equities receive unequivocal policy direction from the highest levels in the White House or new legal mandates to achieve their enforcement mission according to prescribed efficiency targets. Analysts from the Congressional Research Service suggested that one approach to overcoming this challenge would be “to require other agencies to work more closely with CBP at various stages of the trade enforcement process,” or “delegate additional enforcement powers to CBP.”¹⁹⁹ However, the obvious shortcomings of this approach would be the potential for this to “dilute the enforcement authority of other federal agencies, undermining their own missions.”²⁰⁰ A recent publication from the World Customs Organization sums up the challenges associated with any reform program requiring collective action among a group of diverse agencies with varying cultures and responsibilities at the border. “The most difficult part is not really defining the concept [of coordinated border management],” the WCO notes, “but rather implementing it, whether on its own or by coupling it to the introduction of a national trade Single Window environment.”²⁰¹ The fact that other key departments and agencies do not have the same affirmative trade facilitation mission and legal authorities as CBP could complicate a coordinated, government-wide implementation. For this reason, the feasibility of this final option is assessed as “hard.”²⁰²

¹⁹⁷ The Security and Accountability for Every Port Act of 2006, P.L. No. 109-347, Sec. 211, 401, 402, 403, 404.

¹⁹⁸ Trade Facilitation and Trade Enforcement Act of 2016, P.L. 114-125, Sec. 103, 110, 802.

¹⁹⁹ Jones and Rosenblum, *U.S. Customs and Border Protection*, 35.

²⁰⁰ *Ibid.*

²⁰¹ World Customs Organization, “Dossier: Introduction,” *WCO News*, no. 76 (February 2015): 8, http://www.wcoomd.org/~media/wco/public/global/pdf/media/wco-news-magazines/wco_news_76.pdf.

²⁰² See Appendix Figure 13, “Criterion 3: Feasibility of Implementation.”

The overall evaluation criteria scores for policy option 3 are shown in Table 7.

Table 7. Policy Option 3 Evaluation

Policy Option #	Criterion 1: Effectiveness/Efficiency of Import Processes	Criterion 2: Benefit to U.S. Business	Criterion 3: Feasibility of Implementation
1 Status Quo	11	2	Easy
2 Tailored Modernization	19	4	Hard
3 Shifting the Paradigm	23	4	Hard

D. RECOMMENDED PATH FORWARD

This paper proposed three distinct policy options by which DHS could better achieve its stated goal of pursuing both security and trade efficiency as mutual, rather than mutually exclusive, goals and contribute most to ensuring the nation’s economic security. Under policy option 1, “maintaining the status quo,” DHS would maintain its current risk-based and layered approach to ensuring both trade enforcement and trade facilitation while leading other agencies by its own example of modernization. Under policy option 2, DHS would lead a program of “tailored modernization” among a select group of agencies in which concerted effort would be focused on achieving tipping points that would help overcome specific non-tariff barriers in specific industry supply chains. And finally, under policy option 3, DHS would work to “shift the paradigm” toward a more centralized model of government controls of imports geared toward national strategic trade policy outcomes. Each option presents variations on the foundational theme, supported by relevant literature, that “trade facilitation measures have introduced new ways to fulfil the traditional mandates of border agencies, often making them more efficient and effective by rationalizing resource use.”²⁰³ Each option also builds in varying ways upon the traditional customs revenue collection role that CBP plays within

²⁰³ Moise, “Costs and Challenges of Implementing Trade Facilitation Measures,” 11.

DHS, as well as how DHS now or in the future could contribute to national economic security goals. And finally, this paper evaluated each option according to three evaluation criteria: 1) the impact on the effectiveness and efficiency of overall import procedures, 2) the impacts on American businesses, and 3) the feasibility of implementing the policy.

After detailing and evaluating each of the options, policy option 3 emerged as approach by which DHS would have the most potential to implement recent rhetoric and address the characteristics of the modern trade environment that, if left unaddressed, could weaken the United States' economic security. As DHS has asserted that homeland security is "inseparable from economic security," and affirming that part of its mission is to "enhance the Nation's global economic competitiveness," DHS bears responsibility for addressing these challenges and concerns.²⁰⁴ The distinguishing factor of policy option 3 is that it provides a new governance structure that directly links economy-wide strategic objectives, developed by existing interagency trade policy bodies and informed by private-sector stakeholders, to direct the activities of the BIEC.

Policy option 3 seeks to address the key disadvantage of maintaining the status quo (policy option 1), namely the fact that a continuation of the current decentralized approach to border management might actually degrade import processing service levels in the near term until agencies can coordinate the array of procedures and policies impacted by the new information technology communication systems like the Single Window. Researchers from the OECD advised nations seeking to improve coordination between customs and border agencies to be cautious of "choosing implementation tools before elaborating the relevant policies (for instance introducing computer networks before modernizing control and clearance procedures)," as such approaches may "run the risk of reducing available policy options and making subsequent changes lengthier and more costly."²⁰⁵ Policy option 3 seeks to address this risk by proposing that DHS work to situate the BIEC that it chairs within an established trade policy-making network that could then develop common service standards with valuable input from the private sector. Orienting relevant policy development and implementation activities across the

²⁰⁴ DHS, *2014 QHSR*, 31; CBP, *Vision and Strategy 2020*, 7.

²⁰⁵ Moise, "Costs and Challenges of Implementing Trade Facilitation Measures," 11.

interagency toward a common strategic performance goal requires other agencies to more rapidly adopt the modernization efforts already advanced by CBP. The difference in scores between option 3 and option 1 for the first evaluation criterion (efficiency of import processes) and the second evaluation criterion (benefits to U.S. businesses) results from the fact that option 3 requires improvements from the dozens of non-customs agencies whose requirements impact the processing of imported goods at the border. Additionally, option 3 provides the means by which DHS could better unlock the transformative potential of the newly developed Single Window as the chair of an empowered BIEC. Again, according to guidance from the OECD, “Single Windows are probably the most sophisticated instrument for ensuring coordination of controls between agencies”; however, “the main challenges relate to the complex interactions between the multiple entities involved, each having their own work culture and wishing to retain their *modus operandi*.”²⁰⁶ Simply put, policy option 3 provides a feasible, if longer-term, approach for overcoming this salient challenge.

Policy option 2, the “tailored modernization” approach, is preferable to option 1 in that it would likely improve both national homeland security and economic competitiveness goals in select industries (such as agriculture, electronics, or pharmaceuticals) and would thereby yield additional benefits to U.S. businesses and modest improvements to the efficiency of import processes. However, the approach discussed under policy option 2 would not move the needle for other industry sectors and would likely be stymied by the lack of a unifying work plan or strategy, as offered by policy option 3. A small group of agencies might collaborate successfully to streamline documentary requirements and simplify procedures identified as problematic within certain supply chains. These efforts could be directed by widely available global reporting on the most problematic non-tariff barriers to trade, to include the World Economic Forum’s border administration index. However, while these activities represent the necessary first steps of a trade facilitation reform effort, it remains unlikely that the meaningful economic benefits arising from more aggressive steps would be accomplished absent significant political will and an articulated strategy for which all

²⁰⁶ Ibid., 14.

agencies strove and were held accountable.²⁰⁷ The feasibility of option 2 is complicated further by the fact that the current BIEC lacks the statutory authority of the ITDS Board of Directors under the Department of Treasury as well as a formal mechanism to seek input from private-sector experts. Policy option 3 seeks to address both shortcomings by proposing a new governance structure that would distinguish the BIEC's role from the statutory requirements of the ITDS Board and connect both to the private-sector advisory network available through the Trade Policy Review Group structure.

²⁰⁷ These “more aggressive” trade facilitation measures include activities outlined in the section on policy option 2, such as coordinated risk management and increased use of post-clearance audits and authorized economic operator programs.

THIS PAGE INTENTIONALLY LEFT BLANK

V. CONCLUSION

This chapter summarizes Chapters I–III, and proposes next steps for implementation of the recommended policy option. The chapter concludes by identifying remaining questions or issues that were outside the scope of this study, but warrant further examination.

This thesis asserted that the national economy and the vital commercial flows that feed it are the *sine quibus non* of national influence, power, and security. It argued that hallmark features of globalization (including lower transportation costs and improved information technology) occasioned the rise of a new global trade environment, itself characterized by the increased exchanges of intermediate products across political borders and a trend toward tariff reductions globally. However, the integration of interdependent and “lean” supply chains created an increasingly fragile global supply chain system in which even localized shocks could trigger significant disruptions across the entirety of the complex system. Added to this mix were the spate of government controls, particularly in the United States, established in the wake of the September 11 terrorist attacks to ensure the security of cross-border trade. These new requirements complicated the business of importing goods into the nation by adding time and cost to the process; they introduced “friction,” as if “fine sand [had] been sprinkled into the gears of American business.”²⁰⁸

This thesis also argued that, problematically, the modern trade environment is still supported and enabled by policies, processes, and information communication technologies constructed in and for a previous century. Addressing this gap and ensuring government regulators are best situated to respond to the evolving characteristics of a dynamic commercial market requires an “all hands on deck” mentality in which relevant agencies each leverage their unique authorities and expertise to maintain and promote national economic prosperity and, by extension, national economic security. Securing and managing the vital flow of international commerce being imported and exported across

²⁰⁸ Bernasek, “Friction Economy.”

American borders remains a core mission area of DHS, delegated in large part to CBP. DHS works to “improve upon border security, to exclude terrorist threats, drug traffickers, and other threats to national security, economic security, and public safety.”²⁰⁹ However, as this paper discussed, neither DHS nor CBP have primary roles in the development of trade policy, laws, or strategic objectives, but they are responsible for the implementation, enforcement, and administration of these policies, laws, and goals. This complicates CBP’s ability to drive action among the dozens of different U.S. agencies with hundreds of border-related requirements while maintaining the stated commitment to both trade facilitation and enforcement. CBP and the broader DHS could best position themselves to overcome these challenges by drawing authority from trade policymakers (including USTR and the NEC) for the BIEC to serve as the interagency body responsible for rationalizing trade enforcement and facilitation activities across the U.S. government toward the achievement of a unifying, economy-wide vision of desired performance outcomes. This approach, described in detail as policy option 3, “Shifting the Paradigm,” would enable CBP to leverage its border authorities to address inefficiencies with the current manner in which the U.S. government as a whole manages the processing and ensures the security of imported goods. This thesis concluded that such an effort could improve trade facilitation and provide commercially meaningful benefits to public and private stakeholders alike.

A. NEXT STEPS FOR IMPLEMENTING POLICY OPTION 3: SHIFTING THE PARADIGM

DHS and the broader interagency would do well to consider a series of near-term actions to initiate the reform agenda that may take several years to implement fully. Of vital importance will be the development of an outcome-oriented strategic vision for the Single Window effort. As explained by this thesis author in the *Homeland Security* blog,

Building a Single Window system and modernizing current trade-related processes for an economy the size of the United States is a big undertaking and an immensely complex challenge. The effort requires close coordination among policy, legal, fiscal, and operational offices from scores of government agencies. It depends upon active and sustained

²⁰⁹ DHS, 2014 QHSR, 6.

engagement from an array of private-sector players, to include importers and exporters of all sizes, brokers, freight forwarders, software developers and more.²¹⁰

CBP and the interagency have to-date been guided by statutory requirements for the establishment of the Single Window and an executive order that imposed timelines for its completion and charged agencies with using the system to improve supply chain processes and further prevent illicit or non-compliant shipments.²¹¹ Both the law and the executive order defined success in two ways, “the degree to which U.S. Government agencies are better able to enforce laws at the border; and the extent to which it is easier, faster, and cheaper to import and export goods across U.S. borders.”²¹² However, ensuring the coordinated use of the new digital capabilities by the dozens of agencies involved will require renewed agreement on the strategic-level “yardstick” by which the required measurable improvements will be judged. Despite the stated effort to pursue trade facilitation and security as mutually inclusive goals, conflicts between the two will certainly arise as government regulators find themselves empowered with better means of processing increased data flows and as businesses seek ways to squeeze more efficiency out of already lean supply chains. Experts highlight the need for development of a common agenda for such an effort, which will inevitably advantage some parties or interests over others. They note that the assumption that public and private-sector stakeholders “will universally benefit from improved systems and procedures” under such reform projects is “frequently incorrect ... as all meaningful change creates some winners and losers.”²¹³

The BIEC did work to establish an overarching strategic document for the national Single Window project in late 2014. An early draft version of that strategic vision made publicly available in 2014 sought to distinguish public and private

²¹⁰ Brzozowski, “E Pluribus Unum.”

²¹¹ As noted previously, the statutory authority for the Single Window is found in Public Law 109-347, and the deadline of December 31, 2016, for the system’s completion was established by Executive Order 13659.

²¹² Brzozowski, “E Pluribus Unum.”

²¹³ Yue Li, Gerard McLinden, and John Wilson, “Building a Convincing Business Case for Border Management Reform,” in *Border Management Modernization* (Washington, DC: World Bank, 2010), 85.

experiences and capabilities at the time with the vision for the future after completion of the Single Window system. The 2014 statement detailed aspirational Single Window capabilities as of December 2016 as well as “system capabilities and related activities that the U.S. Government will test in the near-term and continue to develop and refine” in the future.²¹⁴ As helpful as the vision document was to developing interagency agreement about the salient features that a completed Single Window should have, the effort at that time did not speak to the specific ends to which the Single Window should be used once completed and available. Therefore, DHS and the interagency should renew efforts to develop and make publicly available a strategic vision that goes beyond a description of system capabilities and establishes performance outcomes able to be assessed qualitatively or quantitatively over time. Again referring to supply chain experts, the development of such “service standards are important components of change management endeavors.”²¹⁵

After establishing the necessary strategic framework and expected outcomes, DHS can and should drive additional efforts to develop a performance management plan by which the dozens of agencies with control authorities at the border have the means to gauge progress (independently and collectively) toward the strategic outcomes. As discussed previously, a variety of U.S. agencies require an array of data as well as access to and temporary custody of cross-border shipments for security, safety, health, and compliance reasons. However, U.S. government agencies currently have limited insight into the average length and causes of cargo delays at the border. This is because of the historic reliance on paper-based information exchanges and manual processes that hinder data aggregation. With the development of the automated capabilities under the Single Window and associated advances in data processing, the U.S. government is well positioned to accurately measure the average time taken between the arrival of goods at the border and their release by the government. The World Customs Organization supports and promulgates guidelines for such efforts, called “Time Release Studies,” noting their usefulness in identifying bottlenecks in the import or export process caused

²¹⁴ The strategic vision statement was made publicly available in a series of four posts on the social media site Medium’s blog *Homeland Security*, by the author, Christa Brzozowski, acting in her official capacity as Counselor for the Deputy Secretary of Homeland Security. See <https://medium.com/@cmbrzozo>.

²¹⁵ Moise, “Costs and Challenges of Implementing Trade Facilitation Measures,” 11.

by customs, other agencies, or private-sector stakeholders, and providing recommendations for process improvements.²¹⁶ As CBP currently is responsible for operating and maintaining the Single Window, the agency could work to program the necessary features of a Time Release Study into the system. The resulting data would allow performance managers to assess the time, cost, and outcome of agency-specific interventions at the border as well as determine aggregate government progress toward strategic outcome goals.

B. ISSUES REQUIRING ADDITIONAL STUDY

This paper focused primarily on DHS (specifically CBP) policies and activities associated with cross-border trade, with a particular emphasis on imported goods. After a retrospective examination of the major evolutions in the trade environment brought about by globalization and post-9/11 security requirements, it sought to identify viable policy options by which the department could support national economic goals in furtherance of its stated premise that homeland security supports and is inseparable from economic security.

Importantly, however, additional research into certain topics beyond the scope of this paper could inform the continued dialogue and potentially warrant a reconsideration of the conclusions drawn here. For example, while this paper focused on imports, the challenges and opportunities for promoting and securing American exports is a deserving topic of continued inquiry. According to the Department of Commerce, the export of goods and services across U.S. borders “supported an estimated 11.5 million U.S. jobs” in 2015, with these jobs being dependent upon exports to the 95 percent of world consumers who live outside our borders.²¹⁷ The increase of exports over the last five years, up roughly 50 percent to a record high of \$2.35 trillion in 2014, is not likely to slow in light of the continued exponential growth of e-commerce and the opportunities it

²¹⁶ World Customs Organization, *Guide*, 9.

²¹⁷ Jeffrey Hall and Chris Rasmussen, “Jobs Supported by State Exports,” International Trade Administration, Department of Commerce, May 31, 2016, 2. http://www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005411.pdf; “Fact Sheet: National Export Initiative,” Department of Commerce, May 24, 2013, <https://www.commerce.gov/news/fact-sheets/2013/05/fact-sheet-national-export-initiative>.

brings to U.S. and global exporters.²¹⁸ As one expert noted, the increased buying and selling of goods through online digital platforms has empowered “U.S. small companies and entrepreneurs to export, diversify their markets, scale their sales, and expand their businesses at a relatively low cost.”²¹⁹ The U.S. International Trade Commission further highlighted the benefits of e-commerce to U.S. exporters of all sizes, noting an estimated two-fold increase in productivity when compared to their non-exporting counterparts.²²⁰ With projections of an 8–12 percent e-commerce growth rate and up to \$443 billion in estimated sales in 2017, further research into the design of global supply chains and the adequacy of government security and revenue collection requirements will be necessary.²²¹ According to a survey conducted by the U.S. International Trade Commission, “50 percent of small and medium sized businesses said customs procedures pose a major burden.”²²² The concern with customs procedures was particularly acute among the subset of small and medium-sized businesses in the manufacturing industry, with 48 percent identifying customs as a “major burden” and their top concern.²²³ Such findings support continued efforts among national customs authorities to collaborate on the development of internationally recognized standards and best practices and harmonized data requirements and processes. Such activities will enable improved assessment of risk by government controllers while easing the burden of compliance on businesses as they look to take advantage of the new opportunities afforded them through digital trade.

²¹⁸ “U.S. Exports Hit New Annual Record, Reaching \$2.35 Trillion in 2014,” Department of Commerce, February 5, 2015, <http://www.commerce.gov/news/press-releases/2015/02/us-exports-hit-new-annual-record-reaching-235-trillion-2014>.

²¹⁹ Kati Suominen, *Fueling the Online Revolution: A New Customs Security Framework to Secure and Facilitate Small Business eCommerce* (New York: Center for Strategic and International Studies, Rowman and Littlefield, 2015), 2.

²²⁰ International Trade Commission, *Small and Medium Sized Enterprises: Characteristics and Performance* (Washington, DC: International Trade Commission, 2010), xi.

²²¹ “National Retail Federation estimates 8–12% U.S. e-commerce growth in 2017,” Business Insider, February 10, 2017, <http://www.businessinsider.com/national-retail-federation-estimates-8-12-us-e-commerce-growth-in-2017-2017-2>.

²²² International Trade Commission, *Small and Medium Sized Enterprises*, 619.

²²³ *Ibid.*

In addition to exports, an assessment of DHS's role in protecting domestic critical infrastructure could contribute to an evaluation of the department's contributions to ensuring economic security. A central aspect of DHS's mission, performed largely by the National Protection and Programs Directorate, is to "provide strategic guidance, promote a national unity of effort, and coordinate the overall Federal effort to promote the security and resilience of the Nation's critical infrastructure."²²⁴ These critical infrastructure sectors include the water, food, and transportation sectors that support and connect American cities. They provide vital health, manufacturing, and emergency services to citizens, feed our defense industrial base, and provide the information technology and energy backbone upon which the entire nation depends. The growing interdependence among cyber and physical critical infrastructure sectors, and a large degree of private-sector ownership of these vital systems, complicates DHS's protection mission. In addition, public and private sectors' increased use of new technical capabilities such as advanced computing, Internet-enabled devices, and cloud computing render these critical sectors as well as networks, devices, and citizens more vulnerable to cyber intrusions and attacks. With some recent assessments estimating global costs of cyber-crime to exceed \$6 trillion annually by 2021, future analysis on how DHS could protect the national economy so dependent upon these critical infrastructures is warranted.²²⁵

The dynamic nature of the global trade environment and the interests of key players in it will create new threats and opportunities; these emerging trends also could occasion a reconsideration of this paper's baseline assumptions and findings. A salient example can be found in the rise of what Klaus Schwab of the World Economic Forum has identified as the "Fourth Industrial Revolution"—the "reshaping of behaviors, production, consumption, transportation, and delivery systems" caused by the increasing integration of new technologies across the physical, digital, and biological worlds.²²⁶ DHS and the broader U.S. government will not be alone in needing to address the policy

²²⁴ Barack Obama, *Presidential Policy Directive 21: Critical Infrastructure Security and Resilience* (Washington, DC: White House, 2013).

²²⁵ Steve Morgan, *Hackerpocalypse: A Cybercrime Revelation* (Toronto: Herjavec Group, 2016), 3, <https://www.herjavecgroup.com/wp-content/uploads/2016/08/Hackerpocalypse.pdf>.

²²⁶ Klaus Schwab, *The Fourth Industrial Revolution* (Geneva: World Economic Forum, 2016), 1.

and governance challenges resulting from this new digital economy. While new capabilities such as artificial intelligence, supercomputing, 3D printing, and networked devices can bring tremendous new benefits to the United States and the global market, the consequent shift in modes of production away from manual labor toward automation and innovation will require fewer workers and could exacerbate income inequality and fuel social tensions.²²⁷

In addition, marked shifts to the political environment, both domestically and globally, are likely to alter characteristics of the global trade environment and present new policy challenges not addressed in this paper. Early indications from the Trump administration suggest that the new trade agenda, while inchoate, will depart from President Obama's pursuit of large multilateral trade agreements (such as the Trans-Pacific Partnership and the Transatlantic Trade and Investment Partnership). Instead, the administration will look to deliver on its hallmark "American first" message when considering new trade agreements, establishing import and export requirements and controls, and exercising its powers to combat unfair trade practices through the imposition of protectionist measures. According to the recently released *2017 Trade Policy Agenda*, the top trade priorities of the new administration include:

[Defending] U.S. national sovereignty over trade policy; strictly [enforcing] U.S. trade laws; [using] all possible sources of leverage to encourage other countries to open their markets to U.S. exports of goods and services ... and [negotiating] new and better trade deals with countries in key markets around the world.²²⁸

The domestic skepticism of international institutions, global cooperation, and market-driven globalization is reflective of a more pervasive global trend and presents a unique set of policy and governance challenges. However, the new administration's focus on "improving the efficiency, effectiveness, and accountability of the executive branch" and commitment to service-based and outcome-oriented government requirements

²²⁷ Klaus Schwab, "A New Narrative for Globalization," World Economic Forum, March 17, 2017, <https://www.weforum.org/agenda/2017/03/klaus-schwab-new-narrative-for-globalization>.

²²⁸ USTR, *2017 Trade Policy*, 2.

presents opportunities for positive change as well.²²⁹ In today's charged atmosphere, with political and social tensions deepening divides within and between nations around the world, it is helpful to conclude with a reminder offered again by Klaus Schwab from the World Economic Forum:

The tension between globalism and nationalism is artificial. We have to manage our future based on the fact that we are simultaneously local, national and global citizens with overlapping responsibilities and identities.²³⁰

²²⁹ Donald J. Trump, *Presidential Executive Order on a Comprehensive Plan for Reorganizing the Executive Branch* (Washington, DC: White House, 2017). See also Donald J. Trump, *Presidential Executive Order on Reducing Regulation and Controlling Regulatory Costs* (Washington, DC: White House, 2017) and Donald J. Trump, *Presidential Executive Order on Enforcing the Regulatory Reform Agenda* (Washington, DC: White House, 2017), which both seek to lower the regulatory burden on the American people by imposing new requirements on federal agencies prior to the promulgation of requirements.

²³⁰ Schwab, "A New Narrative for Globalization."

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX

Table 8. Comparison of Trade Facilitation Indicators

<u>World Economic Forum</u> ²³⁹ Enabling Trade Index (ETI)	<u>World Bank</u> ²⁴⁰ Performance Logistics Index (PLI)	<u>OECD</u> Trade Facilitation Index (TFI)	<u>World Trade Organization Trade Facilitation Agreement</u> ²⁴¹
Border Administration • Customs service index • Effectiveness/efficiency of clearance process • Time to import • Cost to import	Customs The efficiency of customs and border management clearance	Information Availability Publication of trade information, availability of enquiry points	Publication and Availability of Information
Availability and Quality of Transport Infrastructure	Infrastructure	Involvement of the Trade Community	Opportunity to Comment Opportunity to comment information before entry into force and consultation
Availability and Quality of Transport Services	Ease of Arranging Shipments The ease of arranging competitively priced shipments	Advance Rulings	Advance Rulings
Foreign Market Access Tariff barriers faced by a country's exporters in destination markets	Quality of Logistic Services The competence and quality of logistics services—trucking, forwarding, and customs brokerage	Appeal Procedures	Procedures for Appeal or Review

²³⁹ World Economic Forum and the Global Alliance for Trade Facilitation, *Global Enabling Trade Report*, 14.

²⁴⁰ The World Bank, *Connecting to Compete*, 6.

²⁴¹ World Trade Organization, “Agreement on Trade Facilitation.”

<u>World Economic Forum</u> Enabling Trade Index (ETI)	<u>World Bank</u> Performance Logistics Index (PLI)	<u>OECD</u> Trade Facilitation Index (TFI)	<u>World Trade Organization</u> <u>Trade Facilitation Agreement</u>
Domestic Market Access The level and complexity of a country's tariff protection as a result of its trade policy	Tracking and Tracing The ability to track and trace consignments	Governance and Impartiality	Other Measures To enhance impartiality, non-discrimination, and transparency
Operating Environment Quality of a country's operating environment, which impacts the capacity of companies that export, import, trade, and/or transport merchandise to do business	Timeliness The frequency with which shipments reach consignees within scheduled or expected delivery times	Fees and Charges Disciplines on the fees and charges imposed on imports and exports	Formalities Connected with the Importation and Exportation and Transit • Documentation requirements • Acceptance of copies • Use of international standards • Single Window • Pre-shipment inspection • Use of customs brokers • Return of rejected goods • Temporary admission of goods
Availability and Use of Information and Communication Technologies As approximated by the use of mobile telephony and Internet		Documents Simplification of trade documents; harmonization in accordance with international standards; acceptance of copies	Release and Clearance of Goods • Pre-arrival processing • Electronic payment • Separation of release from final duties, taxes, fees • Risk management • Post-clearance audit • Publication of average release times • Authorized economic operators • Expedited shipments • Prioritizing perishable goods

<u>World Economic Forum</u> Enabling Trade Index (ETI)	<u>World Bank</u> Performance Logistics Index (PLI)	<u>OECD</u> Trade Facilitation Index (TFI)	<u>World Trade Organization</u> <u>Trade Facilitation Agreement</u>
		Border Procedures Streamlining of border controls; single submission points for all required documentation (single windows); post-clearance audits; authorized economic operators	Border Agency Cooperation
		Automation Electronic exchange of data; automated border procedures; use of risk management	Movements of Goods under Customs Control Intended for Import
		Cooperation (Internal) Cooperation between various border agencies of the country; control delegation to customs authorities	Customs Cooperation • Measures promoting compliance and cooperation • Exchange of information • Verification • Documentation requests • Protection and confidentiality • Provision of information • Postponement or refusal of request • Reciprocity • Administrative burden
		Cooperation (External) Cooperation with foreign countries	Disciplines on fees and charges imposed or in connection with imports/exports
			Freedom of Transit
			Bilateral and Regional Agreements

Gray shading represents similar indicators among the various organizations. The World Economic Forum's "border administration" indicator includes the shaded indicators provided by the World Bank and the OECD and, for reference, the trade facilitation requirements under the World Trade Organization's trade facilitation agreement.

Table 9. Comparison of Enabling Trade Index Coverage from 2008–2014²⁴²

YEAR	U.S. Total ETI Rank	U.S. Score	U.S. Border Admin Rank/Score	Changes in Coverage	Total #
2008	14th	5.4	21st/5.3		118
2010	19th	5.0	19th/5.6	9 Added: Cote d'Ivoire, Gambia, Ghana, Malawi, Botswana, Georgia, Ireland, Montenegro, Serbia 2 Removed: Uzbekistan, Moldova	125
2012	23rd	4.9	20th/5.4	7 Added: Angola, Haiti, Iran, Lebanon, Moldova, Rwanda, Yemen	132
2014	15th	5.0	21st/5.7	8 Added: Bhutan, Gabon, Guinea, Lao PDR, Liberia, Libya, Malta, Myanmar 2 Removed: Syria, Tajikistan	138

²⁴² Adapted from Lawrence et al., *The Global Enabling Trade Report 2008*; Lawrence et al., *The Global Enabling Trade Report 2010*; Lawrence, Hanouz, and Doherty, *The Global Enabling Trade Report 2012*; Hanouz, Geiger, and Doherty, *The Global Enabling Trade Report 2014*.

The addition of new economies to the enabling trade index from 2008–2014 had only a nominal impact on the U.S. ranking. In fact, the addition of Ireland in 2010 was the only situation in which a newly added economy impacted the U.S. rank by achieving score and ranking higher than the United States. When finally included, Ireland ranked 21st in 2010 (compared to the United States' 19th place position) and 22nd in 2012 (compared to the United States' 23rd place position). All other economies added in 2010, 2012, and 2014 were ranked well below the United States; therefore, while they added to the overall totals for each year, they did not impact U.S. overall ranks relative to those totals.

Table 10. World Economic Forum Enabling Trade Index, Global Rankings for
Border Administration Indicator Category (2008–2014)²⁴³

Rank	2008	2010	2012	2014
1	Singapore (6.51)	Singapore (6.56)	Singapore (6.53)	Singapore (6.3)
2	Sweden (6.32)	Sweden (6.32)	Sweden (6.35)	Finland (6.2)
3	New Zealand (6.16)	Denmark (6.22)	Denmark (6.22)	Sweden (6.2)
4	Finland (6.15)	Netherlands (6.03)	Hong Kong (6.02)	Netherlands (6.1)
5	Denmark (6.10)	New Zealand (6.02)	Netherlands (6.00)	Japan (6.0)
6	Norway (6.06)	Hong Kong (5.96)	New Zealand (5.99)	New Zealand (6.0)
7	Hong Kong (5.99)	Ireland (5.86)	Finland (5.88)	UK (6.0)
8	Netherlands (5.98)	Finland (5.83)	Japan (5.83)	Estonia (5.9)
9	Canada (5.78)	Austria (5.77)	UK (5.80)	Denmark (5.9)
10	Luxemburg (5.77)	Switzerland (5.76)	Ireland (5.79)	Austria (5.8)
Total	6.08	6.03	6/04	6.04

²⁴³ Adapted from Lawrence et al., *The Global Enabling Trade Report 2008*; Lawrence et al., *The Global Enabling Trade Report 2010*; Lawrence, Hanouz, and Doherty, *The Global Enabling Trade Report 2012*; Hanouz, Geiger, and Doherty, *The Global Enabling Trade Report 2014*.

Table 11. World Bank Logistics Performance Indicators, Global Rankings for Customs Indicator Category (2007–2014)²⁴⁴

Rank	2007	2010	2012	2014
1	Netherlands (3.99)	Luxemburg (4.04)	Singapore (4.10)	Norway (4.21)
2	Denmark (3.97)	Singapore (4.02)	Finland (3.98)	Germany (4.10)
3	Singapore (3.90)	Germany (4.00)	Hong Kong (3.97)	Singapore (4.01)
4	Germany (3.88)	Netherlands (3.98)	Denmark (3.93)	Netherlands (3.96)
5	Switzerland (3.85)	Sweden (3.88)	Switzerland (3.88)	UK (3.94)
6	Sweden (3.85)	Norway (3.86)	Germany (3.87)	New Zealand (3.92)
7	Hong Kong (3.84)	Finland (3.86)	Belgium (3.85)	Switzerland (3.92)
8	Austria (3.83)	Hong Kong (3.83)	Netherlands (3.85)	Finland (3.89)
9	Canada (3.82)	Belgium (3.83)	Austria (3.77)	Australia (3.85)
10	Ireland (3.82)	Japan (3.79)	UK (3.73)	Luxemburg (3.82)
Total	3.87	3.90	3.89	3.96

²⁴⁴ Adapted from World Bank, *Doing Business 2007*; *Doing Business 2010*; *Doing Business 2012*; *Doing Business 2014*.

Table 12. Criterion 1: The Effectiveness and Efficiency of Import Processes²⁴⁵

Criterion 1: The Effectiveness and Efficiency of Import Processes <i>Would the policy improve U.S. ratings in the World Economic Forum's Border Administration category?</i>			
Border Administration Indicators	Policy Option 1	Policy Option 2	Policy Option 3
<u>Customs Service Index (0–12 points)</u> • clearance of shipments via electronic data interchange • separation of physical release of goods from fiscal control • full-time automated processing • customs working hours adapted to commercial needs • fee for services conducted during normal service hours • inspection / release of goods arriving by air by the operator's facility • automated risk assessment as basis for physical exam of shipments • # and promptness of inspections by agencies other than customs • exemptions from full customs for shipments of minimal value • exemptions from duties and taxes for shipments of minimal value • clearance of shipments by a third party • appeal of customs decisions to a higher-level / independent tribunal	+ + X + + + + + + + + +	+ + X + + + + + + + + +	+ + X + + + + + + + + +
<u>Effectiveness / Efficiency of Clearance Process (0–4 points)</u> • advanced information • post-clearance audits • authorized economic operators • transparency / information availability	X X X X	+ X X +	+ + + +
<u>Time for Import (0–2 points)</u> • less days to import • publication of average release times	X X	+ +	+ +
<u>Documents for Import (0–2 points)</u> • less documents/information required • harmonization in accordance with international standards; acceptance of copies	X X	+ +	+ +
<u>Cost to Import (0–3 points)</u> • improved predictability • IT requirements • broker requirements	X X X	+ X +	+ + +
<u>TOTAL SCORE</u>	11	19	22

²⁴⁵ Adapted from World Economic Forum and Global Alliance for Trade Facilitation, *Global Enabling Trade Report 2016*, 14.

Table 13. Criterion 2: Benefit to U.S. Businesses

Criterion 2: Benefit to U.S. Businesses <i>Would the policy provide improvements that could address COAC recommendations focused on trade facilitation? (Y/N)</i>					
Policy Option #	COAC Trade Facilitation Recommendations				
	Industry Partnerships	Automation	Other Government Agencies	Info/Transparency	TOTAL
1	N	Y	N	Y	2
2	Y	Y	Y	Y	4
3	Y	Y	Y	Y	4

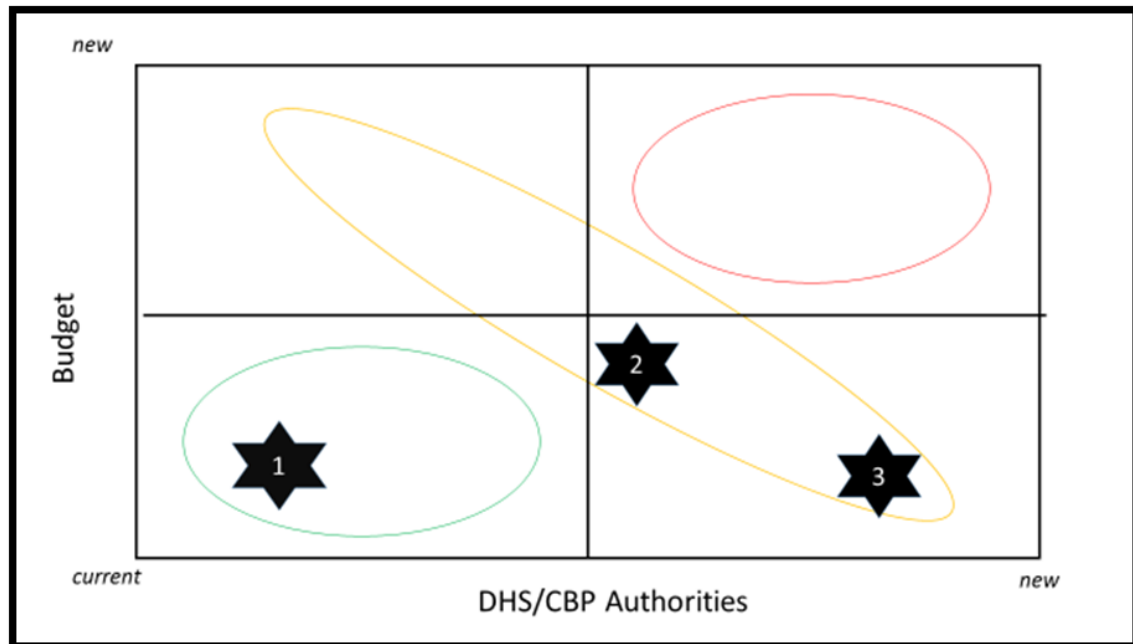


Figure 13. Criterion 3: Feasibility of Implementation

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

- American Association of Exporters and Importers. "The American Trader's Guide to Post 9/11 Homeland Security Programs." Accessed September 19, 2013.
<http://www.aaei.org/LinkClick.aspx?fileticket=voD5U22%2bcqQ%3d&tabid=79>.
- Anderson, James E., and Eric van Wincoop. "Trade Costs." *Journal of Economic Literature* 42, no. 3 (September 2004): 691–751.
- Applegate, Lynda M., John L. King, and Boon-Siong Neo. *Singapore TradeNet: The Tale Continues*. Boston, MA: Harvard Business School, 1993.
- Arvis, Jean-François, Monica Mustra, John Panzer, Lauri Ojala, and Tapio Naula. *Connecting to Compete 2007: Trade Logistics in the Global Economy*. Washington, DC: The World Bank, 2007.
- Baker, Jim. *Singapore: Government and Politics*, 2nd edition. Singapore: Marshall Cavendish International, 2008.
- Bernasek, Anna. "The Friction Economy." *Fortune* 145, no. 4 (February 2002): 104–110.
- Boudreaux, Don. "Almost All Imports Are Inputs." Café Hayek, August 1, 2016.
<http://cafehayek.com/2016/08/almost-all-imports-are-inputs.html>.
- Brzozowski, Christa. "E Pluribus Unum...SINGLE WINDOW!?!." *Homeland Security* blog, December 17, 2014. <https://medium.com/homeland-security/e.pluribus-unum-9251abd4324c>.
- . "The United States' Single Window: A Year in Review." *Homeland Security* blog, December 18, 2014. <https://medium.com/homeland-security/the-united-states-single-window-a-year-in-review-dda6e91ce737>.
- Business Insider. "National Retail Federation estimates 8–12% U.S. e-commerce growth in 2017." February 10, 2017. <http://www.businessinsider.com/national-retail-federation-estimates-8-12-us-e-commerce-growth-in-2017-2017-2>.
- Cadot, Olivier, Maryla Maliszewska, and Sebastian Saez. "Non-tariff Measures: Impact, Regulation, and Trade Facilitation." *Border Management Modernization* (November 2010): 215.
- Carr, Edward. *The Twenty Years' Crisis, 1919–1939: An Introduction to Study International Relations*. New York: Palgrave, 2001.
- Cohen, R., and P. A. Wilson. "Superpowers in Decline? Economic Performance and National Security." *Comparative Strategy* 7, no. 2 (1988): 99–132.

- Customs and Border Protection. “2014 COAC Trade Efficiency Survey Findings.” Accessed January 21, 2017, <https://www.cbp.gov/sites/default/files/documents/COAC%202014%20Trade%20Efficiency%20Survey%20Findings.pdf>.
- . “2016 COAC Recommendations.” Accessed June 17, 2017. www.cbp.gov/trade/stakeholder-engagement/coac.
- . “FY 2013–2015 COAC Recommendations.” Accessed June 17, 2017. <http://www.cbp.gov/sites/default/files/documents/COAC%20Recommendations%2013th%20Term.pdf>
- . “Commercial Targeting and Analysis Center Celebrates 5 Years.” May 15, 2015. <https://www.cbp.gov/newsroom/national-media-release/commercial-targeting-and-analysis-center-celebrates-5-years>.
- . “Commercial Targeting and Analysis Center (CTAC).” April 25, 2017. <https://www.cbp.gov/trade/priority-issues/import-safety/ctac>.
- . *Vision and Strategy 2020: U.S. Customs and Border Protection Strategic Plan*. Washington, DC: DHS. <https://www.cbp.gov/sites/default/files/documents/CBP-Vision-Strategy-2020.pdf>.
- . *What Every Member of the Trade Community Should Know about Reasonable Care*. Washington, DC: DHS, 2004.
- Department of Commerce. “Annual Trade Highlights: 2016 Press Highlights.” Last modified November 17, 2016. <https://www.census.gov/foreign-trade/statistics/highlights/annual.html>.
- . “Fact Sheet: National Export Initiative.” May 24, 2013. www.commerce.gov/news/fact-sheets/2013/05/fact-sheet-national-export-initiative.
- Department of Homeland Security. *The 2014 Quadrennial Homeland Security Review*. Washington, DC: DHS, 2014. <https://www.dhs.gov/sites/default/files/publications/2014-qhsr-final-508.pdf>.
- . “Budget-in-Brief: Fiscal Year 2013.” Accessed June 18, 2017, www.dhs.gov/sites/default/files/publications/dhs-budget-in-brief-fy2013.pdf.
- . “Budget-in-Brief: Fiscal Year 2015.” Accessed June 18, 2017. www.dhs.gov/sites/default/files/publications/FY15BIB.pdf.
- . “Budget-in-Brief: Fiscal Year 2016.” Accessed June 18, 2017. www.dhs.gov/sites/default/files/publications/FY_2016_DHS_Budget_in_Brief.pdf.
- . “Budget-in-Brief: Fiscal Year 2017.” Accessed June 18, 2017. www.dhs.gov/sites/default/files/publications/FY2017BIB.pdf.

- . “U.S. Exports Hit New Annual Record, Reaching \$2.35 Trillion in 2014.” Department of Commerce, February 5, 2015. <http://www.commerce.gov/news/press-releases/2015/02/us-exports-hit-new-annual-record-reaching-235-trillion-2014>.
- Draper, Peter, Uri Dadush, Gary Hufbauer, James Bacchus, and Robert Lawrence. *The Shifting Geography of Global Value Chains: Implications for Developing Countries and Trade Policy*. Geneva: World Economic Forum, 2012.
- Ekwall, Daniel. “Supply Chain Security: Threats and Solutions.” In *Risk Management: Current Issues and Challenges*, edited by Nerija Banaitiene. Rijeka, Croatia: InTech, 2012.
- Engman, Michael, and Tadashi Yasui. “The Role of Modernization in Trade Facilitation.” In *Overcoming Border Bottlenecks: The Costs and Benefits of Trade Facilitation*. Paris: OECD, 2009.
- Eppel, Elizabeth, Derek Gills, Miriam Lips, and Bill Ryan. “The Cross-organizational Collaboration Solution.” In *Crossing Boundaries in Public Management and Policy*, edited by Janine O’Flynn, Deborah Blackman, and John Halligan. New York: Routledge, 2014.
- Flynn, Steven. “America the Vulnerable.” *Foreign Affairs* 81, no. 1 (2002): 60–74.
- Friedman, Thomas L. *The Lexus and the Olive Tree: Understanding Globalization*. New York: Farrar, Straus, and Giroux, 1999.
- Froman, Michael. “U.S. Trade Negotiations Aim to Raise Labor and Environmental Standards.” Council on Foreign Relations, June 16, 2014. <https://www.cfr.org/event/us-trade-negotiations-aim-raise-labor-and-environmental-standards>.
- Government Accountability Office. *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others* (GAO-17-317). Washington, DC: GAO, 2017. <http://www.gao.gov/assets/690/682765.pdf>
- . *High-Risk Series: An Update* (GAO-15-290). Washington, DC: GAO, 2015., <http://www.gao.gov/assets/670/668415.pdf>.
- Grainger, Andrew. “Developing the Case for Trade Facilitation in Practice.” *World Customs Journal* 5, no. 2 (September 2011) 65–76.
- . “The Role of the Private Sector in Border Management Reform.” In *Border Management Modernization*, edited by Gerard McLinden, Enrique Fanta, David Widdowson, and Tom Doyle. Washington, DC: International Bank for Reconstruction and Development, 2011.

- . “Supply Chain Security: Adding to a Complex Operational and Institutional Environment.” *World Customs Journal* 1, no. 2 (2007): 17–29.
- . “Trade Facilitation: A Conceptual Review.” *Journal of World Trade*, 45 no. 1 (February 2011) 39–62.
- Gresser, Edward. “Trade Facilitation as a Growth Tool.” *Progressive Economy*, July 17, 2013. <http://www.progressive-economy.org/wp-content/uploads/2013/07/trade.facilitation.pdf>.
- Hall, Jeffrey, and Chris Rasmussen. “Jobs Supported by State Exports.” International Trade Administration, Department of Commerce, May 31, 2016. www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005411.pdf.
- Hammer, Michael. “Reengineering Work: Don’t Automate, Obliterate.” *Harvard Business Review* (July–August 1990). <https://hbr.org/1990/07/reengineering-work-dont-automate-obliterate>.
- Hanouz, Margareta Drzeniek, Thierry Geiger, and Sean Doherty. *The Global Enabling Trade Report 2014*. Geneva: World Economic Forum, 2014.
- Heo, Uk, and Robert Eger. “Paying for Security: The Security-Prosperity Dilemma in the United States.” *Journal of Conflict Resolution* 49, no. 5 (2005): 792–817.
- Hobbes, Thomas. *Leviathan: Or the Matter, Forme, and Power of a Common-Wealth Ecclesiasticall and Civill*. Edited by Ian Shapiro. New Haven, CT: Yale University Press, 2010.
- Hufbauer, Gary, and Jeffrey Schott. *Payoff from the World Trade Agenda 2013*. Washington, DC: Peterson Institute for International Economics, 2013.
- International Monetary Fund. “World Economic Outlook: The Global Economy After September 11.” Accessed June 17, 2017. <http://www.imf.org/external/pubs/ft/weo/2001/03/>.
- . “World Economic Outlook Report: Groups and Aggregates Database.” Accessed March 25, 2015. <http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/index.aspx>.
- International Trade Commission. *Small and Medium Sized Enterprises: Characteristics and Performance*. Washington, DC: International Trade Commission, 2010.
- ITDS Product Information Committee. “The Business Case for Using E-Commerce Data at International Borders.” ITDS, December 2011. http://itds.gov/linkhandler/itds/tsn/product_info_comm/businesscase.pdf.

- . “Guidance for Using E-Commerce Data to Manage Product Admission at International Borders.” ITDS, October 2010. http://itds.gov/linkhandler/itds/tsn/product_info_comm/guidance.pdf.
- Jones, Vivian C., and Marc R. Rosenblum. *U.S. Customs and Border Protection: Trade Facilitation, Enforcement, and Security* (CRS Report No. R43014). Washington, DC: Congressional Research Service, 2013.
- Jones, Vivian C., and Lisa Seghetti. *U.S. Customs and Border Protection: Trade Facilitation, Enforcement, and Security* (CRS Report No. R43014). Washington, DC: Congressional Research Service, 2015. <https://fas.org/sgp/crs/homsec/R43014.pdf>.
- Kennan, George. “The Sources of Soviet Conduct.” *Foreign Affairs*, July 1947.
- Keophane, Robert O. and Joseph S. Nye. *Power & Interdependence*, 2nd edition. Glenview, IL: Harper Collins, 1990.
- Koh, Jonathan. “Towards a Single Window Trading Environment: Singapore’s TradeNet.” CrimsonLogic, accessed June 18, 2017. www.crimsonlogic.com/Documents/pdf/resourceLibrary/viewPoint/Towards%20a%20SW%20Environment-SG%20TradeNet.pdf.
- Lam, Jasmine Siu Lee. “Strategy of a Transshipment Hub: The Case of Port of Singapore.” In *Dynamic Shipping and Port Development in the Globalized Economy*, edited by Paul Tae-Woo Lee and Kevin Cullinane, 12–38. London: Palgrave Macmillan, 2016.
- Lawrence, Robert Z., Jennifer Blanke, Margareta Drzeniek Hanouz, and John Moavenzadeh. *The Global Enabling Trade Report 2008*. Geneva: World Economic Forum, 2008. http://www3.weforum.org/docs/WEF_GlobalEnablingTrade_Report_2008.pdf.
- Lawrence, Robert Z., Margareta Drzeniek Hanouz, and Sean Doherty. *The Global Enabling Trade Report 2012* (Geneva: World Economic Forum, 2012). http://www3.weforum.org/docs/GETR/2012/GlobalEnablingTrade_Report.pdf.
- Lawrence, Robert Z., Margareta Drzeniek Hanouz, Sean Doherty, and John Moavenzadeh. *The Global Enabling Trade Report 2010*. Geneva: World Economic Forum, 2010. http://www3.weforum.org/docs/WEF_GlobalEnablingTrade_Report_2010.pdf.
- Li, Yue, Gerard McLinden, and John Wilson. “Building a Convincing Business Case for Border Management Reform.” In *Border Management Modernization*. Washington, DC: World Bank, 2010.

- Luciani, Giacomo. "The Economic Content of Security." *Journal of Public Policy* 8, no. 2 (April 1988): 151–173.
- Maritime Administration. "CMTS Portal." Accessed June 17, 2017. www.marad.dot.gov/ports_landing_page/marine_transportation_system/MTS.htm.
- Miller, Eric, John Dillon, and Colin Roberson. *Made in North America: A New Agenda to Sharpen Our Economic Competitiveness*. Ottawa: Canadian Council of Chief Executives, December, 2014. <http://thebusinesscouncil.ca/wp-content/uploads/2014/12/Made-in-North-America-paper-Nov-2014-FINAL-2-Dec-20141.pdf>
- Moise, Evdokia. "The Costs of Introducing and Implementing Trade Facilitation Measures." In *Overcoming Border Bottlenecks: The Costs and Benefits of Trade Facilitation*, 173–217. Paris: OECD, 2009. doi: 10.1787/9789264056954-en.
- Moise, Evdokia, Peter Minor, and Thomas Orliac. *Trade Facilitation Indicators: The Impact on Trade Costs*. Paris: OECD, 2011.
- Morgan, Steve. *Hackerpocalypse: A Cybercrime Revelation*. Toronto: Herjavec Group, 2016. <https://www.herjavecgroup.com/wp-content/uploads/2016/08/Hackerpocalypse.pdf>.
- Morgenthau, Hans. *Politics Among Nations: The Struggle for Power and Peace*, 6th edition. New York: McGraw-Hill, 1985.
- National Retail Federation. *Organized Retail Crime Survey: 2015*. Washington, DC: National Retail Federation, 2015.
- Nester, William R. *Globalization, Wealth, and Power in the Twenty-first Century*. New York: St. Martin's, 2010.
- Nye, Joseph S., and Robert O. Keohane. *Power and Interdependence: World Politics in Transition*, 2nd edition. Glenview, IL: Person Education, 1989.
- Obama, Barack. *Executive Order—Streamlining the Export/Import Process for America's Businesses* (Executive Order 13659). Washington, DC: the White House, 2014.
- . *Presidential Policy Directive 21: Critical Infrastructure Security and Resilience*. Washington, DC: the White House, 2013.
- Organization for Economic Co-operation and Development. "Trade Facilitation Indicators: United States Country Note." Accessed October 23, 2015. <http://www2.compareyourcountry.org/trade-facilitation?cr=oeed&lg=en&page=0>.
- Polner, Mariya. "Coordinated Border Management: From Theory to Practice." *World Customs Journal* 5, no. 2 (September 2011): 46–64.

- Prince, Carl E., and Mollie Keller. *The U.S. Customs Service: A Bicentennial History*. Washington, DC: Department of the Treasury, U.S. Customs Service, 1989.
- Private Sector Consultative Group. “Orientation Package for Decision Makers.” World Customs Organization, June 2013. http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/capacity-building/instruments-and-tools/orientation-package-decision-makers/or_package_decision_makers_v2en.pdf?db=web.
- Schwab, Klaus. *The Fourth Industrial Revolution*. Geneva: World Economic Forum, 2016.
- . *The Global Competitiveness Report 2016–2017*. Geneva: World Economic Forum, 2016.
- . “A New Narrative for Globalization.” World Economic Forum, March 17, 2017. <https://www.weforum.org/agenda/2017/03/klaus-schwab-new-narrative-for-globalization>.
- Staiger, Robert W. “The Economics of GATT.” National Bureau of Economic Research. Accessed February 1, 2017. <http://www.nber.org/reporter/spring99/staiger.html>.
- Suominen, Kati. *Fueling the Online Revolution: A New Customs Security Framework to Secure and Facilitate Small Business eCommerce*. New York: Center for Strategic and International Studies, Rowman and Littlefield, 2015.
- Thucydides. *The Peloponnesian War*. Translated by Steven Lattimore. Indianapolis, IL: Hackett, 1998.
- Trump, Donald J. *Presidential Executive Order on a Comprehensive Plan for Reorganizing the Executive Branch*. Washington, DC: the White House, 2017.
- United Nations Centre for Trade Facilitation and Electronic Business. *Recommendation No. 4: National Trade Facilitation Bodies*. Geneva: United Nations, 2015.
- . *Recommendation No. 33: Recommendation and Guidelines on Establishing a Single Window*. Geneva: United Nations, 2005.
- . *Trade Facilitation and the Single Window*. Geneva: United Nations, 2011.
- United States Census Bureau. “Exhibit 10: Real U.S. Trade in Goods by Principal End-Use Category Chained (2009) Dollars.” In *U.S. International Trade in Goods and Services (FT900)*, last modified November 17, 2016. https://www.census.gov/foreign-trade/Press-Release/current_press_release/index.html.
- United States Trade Representative. *2017 Trade Policy Agenda and 2016 Annual Report*. Washington, DC: USTR, 2017.

- . “Mission of the USTR.” Accessed March 19, 2017. <https://ustr.gov/about-us/about-ustr>.
- . “Resource Center: Economy and Trade.” Accessed August 4, 2015. <https://ustr.gov/issue-areas/economy-trade>.
- Waltz, Kenneth. *Theory of International Politics*. Long Grove, IL: Waveland Press, 1979.
- The White House. *National Strategy for Global Supply Chain Security*. Washington, DC: The White House, 2012. <https://www.hsdl.org/?abstract&did=698202>.
- The World Bank. *Connecting to Compete: Trade Logistics in the Global Economy*. Washington, DC: The World Bank, 2016.
- . “Cost to Export (US\$ per Container).” Accessed June 18, 2017. <http://data.worldbank.org/indicator/IC.EXP.COST.CD>.
- . “Country Score Card: United States 2007.” Accessed June 17, 2017. <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2007/>.
- . “Country Score Card: United States 2010.” Accessed June 17, 2017. <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2010/>.
- . “Country Score Card: United States 2012.” Accessed June 17, 2017. <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2012/>.
- . “Country Score Card: United States 2014.” Accessed June 17, 2017. <http://lpi.worldbank.org/international/scorecard/radar/254/C/USA/2014/>.
- . *Customs Modernization Handbook*. Washington, DC: World Bank, 2005.
- . *Doing Business in 2006: Creating Jobs*. Washington, DC: World Bank, 2005. <http://www.doingbusiness.org/reports/global-reports/doing-business-2006>.
- . *Doing Business 2007: How to Reform*. Washington, DC: World Bank, 2006. <http://www.doingbusiness.org/reports/global-reports/doing-business-2007>.
- . *Doing Business 2008*. Washington, DC: World Bank, 2007. <http://www.doingbusiness.org/reports/global-reports/doing-business-2008>.
- . *Doing Business 2009*. Washington, DC: World Bank, 2008. <http://www.doingbusiness.org/reports/global-reports/doing-business-2009>.
- . *Doing Business 2010: Reforming through Difficult Times*. Washington, DC: World Bank, 2009. <http://www.doingbusiness.org/reports/global-reports/doing-business-2010>.

- . *Doing Business 2011: Making a Difference for Entrepreneurs*. Washington, DC: World Bank, 2010. <http://www.doingbusiness.org/reports/global-reports/doing-business-2011>.
 - . *Doing Business 2012: Doing Business in a More Transparent World*. Washington, DC: World Bank, 2011. <http://www.doingbusiness.org/reports/global-reports/doing-business-2012>.
 - . *Doing Business 2013: Smarter Regulations for Small and Medium-Size Enterprises*. Washington, DC: World Bank, 2012. <http://www.doingbusiness.org/reports/global-reports/doing-business-2013>.
 - . *Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises*. Washington, DC: World Bank, 2013. <http://www.doingbusiness.org/reports/global-reports/doing-business-2014>.
 - . *Doing Business 2015: Going beyond Efficiency*. Washington, DC: World Bank, 2014. <http://www.doingbusiness.org/reports/global-reports/doing-business-2015>.
 - . *Doing Business 2016: Measuring Regulatory Quality and Efficiency*. Washington, DC: World Bank, 2015. <http://www.doingbusiness.org/reports/global-reports/doing-business-2016>.
 - . “Ease of Doing Business in Singapore.” Accessed June 19, 2017. <http://www.doingbusiness.org/data/exploreeconomies/singapore>.
 - . “Ease of Doing Business in United States.” Accessed June 19, 2017. <http://www.doingbusiness.org/data/exploreeconomies/united-states>.
 - . *Trade and Transport Facilitation Assessment: A Practical Toolkit for Country Implementation*. Washington, DC: The World Bank, 2010. <https://openknowledge.worldbank.org/handle/10986/2490>
- World Customs Organization. *Background Paper to Facilitate the Discussion on Coordinated Border Management*. Brussels: WCO Inter-Agency Forum on Coordinated Border Management, 2009.
- . *Customs in the 21st Century: Enhancing Growth and Development through Trade Facilitation and Border Security*. Brussels: World Customs Organization, 2008.
 - . “Dossier: Introduction.” WCO News, no. 76 (February 2015): 8. www.wco-omd.org/~media/wco/public/global/pdf/media/wco-news-magazines/wco_news_76.pdf.
 - . *Guide to Measure the Time Required for the Release of Goods*. Brussels: World Customs Organization, 2011.

- . *How to Build a Single Window Environment*. Brussels: World Customs Organization, 2011.
- World Economic Forum. *Enabling Trade: Enabling Smart Borders*. Geneva: World Economic Forum, 2014. <http://reports.weforum.org/enabling-trade-from-valuation-to-action/wp-content/blogs.dir/38/mp/files/pages/files/5-enabling-smart-borders.pdf>.
- . *Enabling Trade: Valuing Growth Opportunities*. Geneva: World Economic Forum, 2013. http://www3.weforum.org/docs/WEF_SCT_EnablingTrade_Report_2013.pdf.
- World Economic Forum and Global Alliance for Trade Facilitation. *The Global Enabling Trade Report: 2016*. Geneva: World Economic Forum, 2016.
- World Trade Organization. “Agreement on Trade Facilitation.” July 15, 2014. http://tfig.unece.org/pdf_files/931.pdf.
- . “Integrated Trade Intelligence Portal.” Accessed June 17, 2017. <http://i-tip.wto.org/goods/Forms/GraphView.aspx?period=y&scale=lg>.
- . “Table by Members—United States (2005-2015).” December 31, 2016. <http://i-tip.wto.org/goods/Forms/GraphView.aspx?period=y&scale=lg>.
- . *World Trade Report 2012: A Closer Look at Non-tariff Measures in the 21st century*. Geneva: The World Trade Organization, 2012. https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report12_e.pdf.

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
Ft. Belvoir, Virginia
2. Dudley Knox Library
Naval Postgraduate School
Monterey, California