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Customs-Trade Partnership Against Terrorism

C-TPAT

Cost/Benefit Survey

Report of Results
2007

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I Acknowledgement

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The Center for Survey Research, a unit of the Weldon Cooper Center for Public Service at the University of Virginia, is responsible for any errors in this report. Inquiries may be directed to: Center for Survey Research, University of Virginia, P.O. Box 400767, Charlottesville, VA 22904-4767. The Center can be reached by telephone at 1-434-243-5222, by e-mail to surveys@virginia.edu, or through the World Wide Web at www.virginia.edu/surveys.

II Executive Summary

C-TPAT Survey

- Of the 6,000 C-TPAT certified companies that were sent an invitation to participate in the survey, a total of 1,756 completed the survey (29.3%). Of the 1,756 responses received, 54.3% were received from importers, 20.6% from carriers, 17.8 % from service providers, and 7.3% from foreign manufacturers. The percentage of responses received by enrollment sector closely mirrors the size of each enrollment sector relative to total program membership
- The Center for Survey Research (CSR) at the University of Virginia conducted the 2007 C-TPAT Benefit Cost Survey from January to April 2007.

C-TPAT Partners Profile

- Nearly three-quarters of these businesses are privately owned (74.0%), while another quarter are publicly owned (24.0%). The participating companies have been C-TPAT certified for 2.6 years on average.
- Six out of ten (62.1%) companies that participated in the C-TPAT survey indicated that their company's headquarters were located in the United States. The remaining companies reported that their headquarters were located in Canada (25.0%), in Mexico (3.2%), or in other countries (9.7%).
- Of the 953 importers who responded to the survey, 64% have been validated. Of the validated importers, 21.7% were classified as Tier 3, receiving the maximum level of benefits provided under the program.

Prior to joining C-TPAT

- Prior to joining C-TPAT, survey respondents in more than half (54.8%) of the businesses surveyed did not know about the protection programs or initiatives their companies have put in place. In addition, nearly half of the businesses (46.6%) did not have a formal system in place for assessing and managing supply risk.
- Slightly more than one-third (35.7%) of businesses had a formal system in place for assessing and managing supply chain risk. Furthermore, about 4 out of 10 businesses had no formal supply chain continuity and contingency plans.
- However, because of their participation in previous Customs and Border Protection programs, or due to their company's risk management processes, half (50.3%) of the businesses had implemented most or nearly all the C-TPAT program criteria prior to applying for membership.

Motivations for Joining C-TPAT

- For all businesses, "reducing the time and cost of getting cargo released by CBP" is the most important potential benefit, followed by "reduced time and cost in CBP secondary cargo inspection lines." Of all the potential benefits presented to businesses, "reducing insurance rates" was the lowest rated item.
- According to Importers, the most important motivation for them to join C-TPAT is to "to reduce the disruptions to the supply chain". For non-importers, 62% indicated that their principle reason for joining the program was that their business partners required them to be C-TPAT certified.

Potential C-TPAT Implementation and Maintenance Costs

- Of all the potential C-TPAT implementation costs, "improving or implementing physical security costs (doors, windows, electronic access, cameras, fences, gates, lighting, etc.)" received the most mentions. It was also the highest among all the potential implementation costs with an average of $38,471.
- Of all the maintenance cost items, "maintaining physical security" and "maintaining in-house education, training, and awareness" received the most mentions by all the businesses.
- With respect to the average amount of money spent, "maintaining the use of security personnel" ($40,441) and "salaries and expenses of personnel" ($28,454) were the highest costs to maintain the C-TPAT program.
- The results of the survey also indicated that the ease of implementing the C-TPAT program criteria was found across all business types. Overall, 59.3% of Importers, 59.1% of Carriers, 62.0% of service providers, and 59.2% of manufacturers found that it was somewhat or very easy to implement the C-TPAT program criteria.

- During the last full year before they joined C-TPAT, Importers' total annual expenditures on supply chain security averaged an amount of $35,006. The estimated annual expenditures on supply chain averaged $66,353 in 2005 and were projected to be $77,997 and $69,905 in 2006 and 2007.

- For Non-Importers, total annual expenditures on supply chain security follow a similar pattern as that of Importers, with the total annual expenditures on supply chain security averaging $57,406 prior to joining C-TPAT. However, the 2007 projected expenditures ($100,025) were higher than the 2006 projected expenditures ($61,964).

Benefits of C-TPAT Participation

- Almost one-third (32.6%) of businesses said that the benefits outweighed the costs, while nearly one-quarter (24.2%) of businesses said that the C-TPAT benefits and the affiliated costs were about the same.

- For all businesses, the major impacts of their CTPAT participation have been in the field of workforce security, time to release cargo by CBP, time in CBP inspection lines, and predictability in moving goods.

- More than one third (35.4%) of Importers reported that their participation in C-TPAT has decreased their number of U.S. Customs and Border Protection (CBP) inspections. In a follow-up question, these importers indicated that their number of CBP inspections decreased by more than half (51.7%).

- Importers that have been C-TPAT certified for a period of more than 3 years were more likely to say that their number of inspections have decreased (42.8%) because of the C-TPAT participation than were those Importers which have been C-TPAT certified for a period of 2 to 3 years (33.8%) or less than 2 years (27.1%).

- Importers said that their participation in C-TPAT has increased their supply chain visibility and nearly one quarter (24.3%) indicated that their participation in C-TPAT has increased their ability to predict lead-time. Nearly 3 out 10 Importers (28.9%) reported that their participation in C-TPAT has decreased the disruptions in their supply chain.

- Of highway carriers, 41.5% reported that their participation in C-TPAT has decreased their wait times at the borders, while 44.4% said their wait times at the borders have stayed the same.

- More than two-thirds (68.7%) of non-Importers said that their number of customers has stayed the same, while 17.0% have reported that their participation in C-TPAT has increased their number of customers. About the same proportion of non-Importers (17.4%) also indicated their participation in C-TPAT has increased their sales revenues.

- Overall, since becoming C-TPAT certified, non-Importers who reported an increase in customers have gained 35.2% new customers. Non-Importers who reported an increase in sales indicated that their company's sales have increased by 24.1%.

C-TPAT Impact on Risk Management

- The vast majority (81.3%) of businesses that had a formal system in place for assessing and managing supply risk agreed or somewhat agreed that their businesses' ability to assess and manage supply risk has been strengthened as a result of joining C-TPAT.

- Three quarters (75.2%) of businesses that had formal supply continuity and contingency plans before joining C-TPAT reported that their supply continuity and contingency plans have been strengthened as a result of joining C-TPAT.

C-TPAT Supply Chain Security Conferences

- Nearly thirty percent of businesses (29.3%) said they have participated in Supply Chain Security conferences. The vast majority of the conferences' participants (98.4%) reported that the conferences were valuable, with 37.2 percent rating them as extremely valuable and 42.2 percent rating them as valuable. About half (50.2%) of the businesses would like to have these C-TPAT Supply Chain Security conferences presented once a year.

- Nine out of ten (92.6%) businesses have contacted the C-TPAT program personnel and 81.5% of these businesses said that they have not experienced difficulties in obtaining responses to their questions or concerns. In addition, 83.8% of these businesses indicated that C-TPAT responses to their questions or concerns were provided in a timely fashion.

- Businesses also had a positive evaluation of their Supply Chain Security Specialist (SCSS). An overwhelming majority (98.3%) of businesses reported that their Supply Chain Security Specialist was very knowledgeable (54.1%), knowledgeable (34.4%), or somewhat knowledgeable (9.8%). Interestingly, this appreciation of the knowledge of the Supply Chain Security Specialist was across all businesses regardless of their type, size, or the number of years they have been C-TPAT certified.

Overall C-TPAT Evaluation

- More than half (56.8%) of businesses indicated that C-TPAT benefits outweighed the costs (32.6%) or the benefits and the costs were are about the same (24.2%). Slightly more than one quarter (26.4%) reported that it was too early to compare the benefits and the costs.
- While more than one-third (38.4%) of businesses indicated that their management was concerned about the potential impact on cost when their companies were considering joining C-TPAT, the vast majority of businesses indicated they have never considered leaving the C-TPAT program (91.5%) and that they would definitely (78.1%) or probably (18.1%) stay in the program.

III Introduction

About the Report

The report is divided into three major sections: Introduction, Survey Development, and Survey Results. The Introduction provides an overview of the complete survey process starting with contract development and works through the project conceptualization and the development of the survey objectives. A brief summary is presented of the qualitative studies that were used to define the relevant study issues and the development of the data collection instrument. The section closes with the project timeline.

The Survey Development section presents a description of the Subject Matter Expert Workshop, the Semi-Structured Interviews and their results and recommendations. A description of the questionnaire development process is provided, including the instrument testing in an on-line pilot study.

The Survey Results section presents a summary of the survey findings and is divided into the following areas:

- Overview of Surveyed Companies
- Motivations for Joining C-TPAT
- Costs to Implement the C-TPAT Program
- Cost to Maintain the C-TPAT Program
- Tangible Benefits of the C-TPAT Program
- Intangible Benefits of the C-TPAT program
- Risk Management
- Overall Experience
- Summary

Survey Overview

U.S. Customs and Border Protection, Department of Homeland Security asked the Center for Survey Research at the University of Virginia to conduct a cost-benefit survey of C-TPAT partners. ViaTech Systems, Inc. issued a purchase order on April 11, 2006 establishing the Center for Survey Research as a subcontractor to conduct the requested survey. A subcontract agreement was completed on April 24, 2006.

When conceptualizing the survey, C-TPAT personnel specified that the major objective of the survey was to learn how the program benefits relate to the cost of participation. In addition, an interest was expressed in learning about motivations for joining C-TPAT and an overall evaluation of the program.

The objectives for the survey were eventually characterized by learning the answers to the following questions:

1. What motivates a company to become a partner?
2. What are the costs of implementation?
3. What are the costs of maintenance?
4. What are the tangible benefits?
5. What are the intangible benefits?
6. How do cost/benefits differ among company types?
7. Do the benefits outweigh the costs?
8. What is the overall evaluation of the program?
9. What is the likelihood of a partner staying with the program?

Qualitative studies were conducted to define the tasks required to meet the objectives set out in the conceptualization stage. This process started with a blank flipchart at a subject matter expert workshop held in Washington, DC. There, the research team began to learn about the experiences of C-TPAT partners in their efforts to comply with CBP requirements and cope with potential threats from terrorist activities.

The comments recorded on the workshop flipcharts were crafted into a semi-structured interview protocol. Thirteen C-TPAT contact persons from companies that were known supporters of the C-TPAT program were interviewed by telephone to begin the process of quantifying partners' experiences with the C-TPAT program.

The data developed by the semi-structured interviews were used to create a questionnaire (see Appendix A) that could be administered through Internet distribution. A pilot study involving 60 randomly selected C-TPAT partners was used to test the programming of the web format, including, but not limited to the readability and time to complete the questionnaire. The response rate was less than anticipated. Thirty debriefing interviews were conducted to learn what could be done to increase the response rate during the production phase of the survey.

Approximately 6,000 C-TPAT certified companies were sent an invitation to participate in the production phase of the web-based survey. The data collected from the web-based survey were analyzed to identify answers to the research questions posed in the conceptualization phase of the survey and then summarized in a report of findings (see Appendix B for frequencies and means).

The following Table III-1 shows the timeline for the project. The survey development process is further described in the next chapter.

Table III-1: Project timeline

Phase of Survey	***Date***
Contract signed	April 26, 2006
Subject Matter Expert Workshop	May 16, 2006
Semi-structured Interviews	July 2006
Web-based pilot study	December 2006
Pilot debriefing interviews	January 2007
Web-based production study	January to April 2007
Data analysis	May 2007
Report of findings	June 2007
Post survey interviews	July 2007
Final report	August 31, 2007

IV Survey Development

SME Workshop

The SME Workshop was the first in a series of steps to design the C-TPAT web survey. The goal of this workshop was to bring together a group of subject matter experts (SME) in supply chain security for the purpose of understanding C-TPAT and its impact on costs and benefits. The information gained from this workshop was used in shaping the survey instrument. Names of C-TPAT members from eleven large corporations were submitted to CSR by CBP. This list included seven importers and four carriers.

To ensure that the workshop was as productive as possible, each of the participants received in advance, a packet with an overview letter, a brief survey, and two relevant articles. The articles described the framework that participants were asked to evaluate as a possible structure for categorizing and studying the costs and benefits of C-TPAT. The results of this preliminary survey were used to establish the expertise level of the SME panel and to evaluate the potential impacts of C-TPAT. Seven of the SME workshop participants completed the preliminary survey prior to the workshop.

The SME Workshop was held on May 16, 2006 at the Embassy Suites in Washington, D.C. The workshop was hosted by CBP and conducted by Thomas Guterbock, Director of CSR; David Hartman and Linda Tournade, Project Coordinators; and Steve Melnyk, Consultant. Deborah Rexrode, CSR Research Analyst, assisted with the workshop preparation recording of notes and summary report.

The workshop was organized into four main sessions as follows:

Session 1: Why C-TPAT? What are motivations for C-TPAT participation?

Session 2: Effects of C-TPAT participation; how has C-TPAT affected the performance and practices within companies and the supply chain?

Session 3: Review of the Strategic Profit Model; what are the costs and benefits of participating in C-TPAT?

Session 4: Relating Costs and Benefits to the Strategic Profit Model; what costs and benefits can be quantified?

As a result of the SME Workshop, the following categories were developed for utilization in the survey instrument: 1) Benefits; 2) Security; 3) Costs; 4) Impacts; 5) Compliance; and 6) Reasons for joining. The participants did not seem to be familiar with some of the concept in the Strategic Profit Model, and it was not retained as a framework for the study.

Semi-structured Interviews

Overview

Semi-structured interviews were conducted during July 2006 to pretest questions that had been developed from the data obtained during the SME Workshop. U.S. Custom and Border Protection provided a list of 27 potential contacts that were know to be active participants in the C-TPAT program. The list was also designed to include a variety of business sizes and representation from all of the business categories as defined by C-TPAT. Manufacturing was the only category not represented.

Sixteen businesses were chosen from the CBP list of 27 without informing CBP of the choices. The sample included 5 large, 6 medium, and 5 small businesses. For business types, the sample included 6 importers, 2 brokers, 3 consolidators, 3 highway carriers (one Mexican and one Canadian), and 2 sea carriers.

Participants were contacted by phone to schedule a time for the interviews. They were told that the interview would take approximately 30 minutes and that the information provided would be confidential and their name or their company's name would not be associated with responses in anyway.

Findings

Motivations for Joining

Respondents for importers generally agreed that joining C-TPAT reflected good corporate citizenship or was just the right thing to do. Other reasons included the desire to reduce or maintain time and costs of border inspections and protect the brand from a terrorist attack. Respondents for service providers tended to agree with importers, but emphasized the importance of meeting customer requirements and an interest in being more competitive.

Most respondents said their companies met between 65 and 90 percent of the C-TPAT standards before becoming a C-TPAT partner. Two importers and a brokerage, however, indicated that they had to start from the beginning. When considering joining C-TPAT, the senior management of most companies expressed concerns about costs and human resource issues, but set aside their concerns as a necessary cost of doing business.

Managing Suppliers and Business Partners

All but one of the importers reached in the Semi-Structured Interview phase had established processes for screening suppliers. Frequently mentioned processes include facilities visits, third-party certification, and financial review. Two importers had a formal audit survey process and one respondent mentioned that the company avoids certain countries altogether.

All of the responding importers relied on C-TPAT certification to screen business partners. Service companies were more likely to use other screening methods, including security survey screens and contractual security obligations, as their potential business partners are less likely to be C-TPAT certified.

Implementation

Respondents for importers reported that the greatest challenges to implementing the C-TPAT program included educating vendors and manufacturers about security procedures and ensuring compliance. Another challenge was developing consistency among peers to simplify security audit procedures. For suppliers, respondents reported challenges include getting non-USA companies to buy into a security program.

Importer respondents reported that the greatest costs of implementation occurred from new Sealock bars, salaries for newly dedicated positions, travel and building a new IT/business information system. For service companies, consultant fees and the time and effort required to explain documenting processes internally and externally with business partners were the major implementation costs.

Maintenance Costs

Maintenance costs for importers consisted of travel, Sealock bars, and factory audits. Staff time, security guards, and employee background checks were mentioned as maintenance costs for service companies.

Tangible Benefits

Respondents for importers identified improved supply chain predictability, reduced inspection costs, fewer supply chain disruptions, and help with carrier contract negotiations as tangible benefits. Most of the benefits were not tracked, although two importers reported tracking inspection costs, clearance time, and examination rates. For service companies, marketing opportunities, greater physical access control on ships, and reduced border crossing times were listed as tangible benefits from participation in the C-TPAT program. None of the service company respondents reported tracking tangible benefits.

Intangible Benefits

For intangible benefits, respondents for importers reported enhanced security within the supply chain, a better running supply chain, and a sense of doing the right thing. No attempt had been made by the reporting importers to measure intangible benefits. Respondents from service companies listed improved brand image, peace of mind, more efficient business processes, and heightened awareness of physical security needs as intangible benefits.

Overall Experience

Three of the respondents for importers indicated that the benefits of the program outweigh the costs; two believe that costs outweigh benefits; and one thought that it was too early to tell. All of the respondents for service companies agreed that the benefits of the C-TPAT program outweigh the costs. All of the respondents agreed that their companies would definitely stay in the program.

Questionnaire Development

The data collected in the Subject Matter Expert Workshop and the Semi-Structured interviews provided the input to create a web-based questionnaire. The questionnaire was designed with multiple skip patterns to ensure that the questions asked were appropriate for the responding business. The skip patterns accommodated the ten CBP categories of enrollment shown in Table IV-1 plus the "all businesses" category.

Table IV-1: CBP enrollment categories

1	U.S. Importer of Record
2	U.S./Canada Highway Carrier
3	U.S./Mexico Highway Carrier
4	Rail Carrier
5	Sea Carrier
6	Air Carrier
7	U.S. Marine Port Authority/Terminal Operator
8	U.S. Air Freight Consolidator, Ocean Transportation Intermediary, or Non-Vessel Operating Common Carrier (NVOCC)
9	Foreign Manufacturer
10	Licensed U.S. Customs Broker

The questionnaire was available in English and Spanish and respondents were able to furnish financial data in U.S. Dollars (USD), Canadian Dollars (CAD), or Mexican Pesos (MXN).

CSR research analysts created a draft of the questionnaire and it was sent out for review. For U.S. Customs and Border Protection, Robert Thommen, Program Manager, and Todd Owen, Executive Director of Cargo and Conveyance Security, contributed greatly to the review of the questionnaire. Center for Survey Research reviewers included Thomas Guterbock, Director; David Hartman, Senior Research Director; Abdoulaye Diop, Senior Research Analyst; and Deborah Rexrode, Research Analyst. Other reviewers included Professor Steven Melnyk, Michigan State University and Professor Edward Davis, University of Virginia. The review and editing process was lengthy and often involved extended conference calls in which each item in the questionnaire was discussed until all parties were satisfied.

The final paper version of the questionnaire consisted of 43 pages and 220 questions. The topics covered in the questionnaire included business practices, motivations for joining C-TPAT, implementation process, implementation costs, maintenance costs, tangible benefits from C-TPAT participation, intangible benefits from C-TPAT participation, risk management, overall experience, and demographics.

While the paper questionnaire is lengthy by most standards, the Internet version is much more flexible. The on-line program provides a number of skip patterns to ensure that respondents are presented only with questions that are relevant to their business. Data collected from earlier research provided ample evidence that a customized questionnaire would be required for each of the major business categories. For example, the business practices and security needs of an importer vary greatly from those of a highway carrier.

The questionnaire was then programmed and debugged for Internet distribution and readied for a pilot study.

Pilot Study

On December 1, 2006, a pilot study of the C-TPAT Cost-Benefit Survey was launched to test the web-based questionnaire. The pilot was in the field for five weeks and concluded on January 8, 2007.

Sample Selection for the Pilot Study

The population of C-TPAT participants was divided into four categories: Importers, 2) Manufacturers, 3) Carriers, and 4) Others for the purpose of selecting a stratified random sample of sixty partners to participate in the pilot study. The number from each group that participated in the pilot is indicated Table IV-2:

Table IV-2: Pilot sample distribution

Category	Pop	Pop %	Pilot responses	Resp %
Importers	3,209	54%	10	48%
Carriers	1,360	23%	2	9%
Manufacturers	298	5%	5	24%
Others	1,098	18%	4	19%
Total	5,965	100%	21	100%

Pilot Study Process

The survey methods for the C-TPAT pilot study were based on a modified version of the "Tailored Design Method" of web survey administration[1], a set of

[1] See Don A. Dillman, *Mail and Internet Surveys: The Tailored Design Method* (New York: John Wiley and Sons, 2000).

related techniques that has been shown to optimize cooperation, response rates, and accuracy in web surveys without compromising confidentiality. Table IV-3 indicates the steps involved:

Table IV-3: Pilot timeline

Task	Date Completed
Advance letters to Pilot sample	11/20/06
Announcement email to Pilot sample	12/1/06
Thank you/reminder email to Pilot sample	12/8/06
Second reminder email to non-respondents	12/14/06
Close-out email	12/20/06
Close-out of the web	1/8/07

Initial Frequencies

The initial frequencies from the pilot data indicate that respondents represented all the business type categories: Importers, Highway Carriers, Sea Carriers, Air Carriers, Freight Consolidators, Licensed Customs Brokers, and Foreign Manufacturers. The main observation about the data is that very few of the respondents were able to give exact amounts for costs and benefits in those specific sections of the questionnaire and that the invitations to participate in the study were often ignored. Since the pilot followed an anonymous response protocol, CSR did not know in advance of the debriefing interview whether or not any sampled company had responded.

Response Rate

A total of thirteen questionnaires were completed with an additional six partial responses. The response rate was disappointing and required further study before launching the production study. CSR requested approval from CBP to conduct debriefing interviews to identify factors that may have contributed to the low response rate. Thirty of the sixty C-TPAT partners chosen for the pilot study were randomly selected for the post-survey debriefing interviews.

Debriefing Interview Summary

Among the 30 C-TPAT participants in the pilot study sample who were interviewed for this debriefing initiative:

- Twelve did not recall receiving either the CBP/CSR advance letters or the email messages from CSR.
- Nine recalled receiving both the advance letters and the email messages but chose not to participate in the survey, citing its voluntary nature.
- Six completed the survey questionnaire. Only one of these six respondents reported having some difficulty completing the questionnaire.
- Two attempted to participate in the survey but had difficulty logging in and/or accessing the survey questionnaire.
- One reported that he intended to complete the survey but simply neglected to do so.

Recommendations

The following changes were made in the C-TPAT production survey as a result of the debriefing interviews:

- A C-TPAT logo was printed on the envelope for the announcement letter to better identify the purpose of the letter.
- Survey respondents were instructed to use revenue and costs estimates when actual data was not readily available.
- Web programming was reviewed to ensure easy access to the survey.
- CBP agreed to promote the survey on the C-TPAT web portal and at the C-TPAT spring conference.

V Survey Results

Internet Survey

The Center for Survey Research at the University of Virginia hosted the web-based production phase of the C-TPAT Cost Benefit Survey from February 14, 2007 to April 27, 2007. During that time, the Center received 1,378 completed questionnaires and 378 partially completed questionnaires for a total response of 1,756. Respondents completed 1,734 in English and 22 in Spanish. The margin of error for the survey is ±2.0 percent.

The website was designed with a secure entry that required participants to provide a password supplied by CSR and their C-TPAT account number. After verification, participants were taken to a website to obtain an ID and password that allowed access to the C-TPAT questionnaire. Participants were encouraged to save the ID and password so that they could leave the questionnaire before finishing and return later to complete it.

The administration of the field period started with an advance letter from CSR that was sent by U.S. Postal Service to 5,965 C-TPAT certified partners. The letter, dated January 4, 2007, informed the partners about the up and coming survey, explained its purpose, and encouraged participation.

A letter on U.S. Customs and Border Protection stationary over Todd Owen’s signature followed the advance letter. The purpose of the second letter was to reinforce the advance letter, stress the importance of the survey, and encourage participation.

Beginning on February 14, 2007, the first of three waves of emails was sent to the targeted participants. The remaining waves were sent during the ensuing week. The wave distribution was designed to protect against a server crash, although a backup system was in place and capable of resuming service quickly if the primary system failed.

A series of emails were sent to participants during the field period as detailed in Table V-1. The purpose of the emails was to thank those who completed a questionnaire and encourage those who had not to participate in the survey.

Response tracking was undertaken to avoid sending reminders to participants who completed the questionnaire. An anonymous protocol was used for the tracking procedure, in which participants were asked to send an email separately from their questionnaire responses, asking CSR to remove their name from the tracking list. The email could not be associated with their questionnaire responses and did not state whether or not the participant completed the questionnaire.

Table V-1: Internet survey timeline

Activities	**Dates**
Advance letter sent from CSR	1/4/07
Advance letter sent from CBP over Todd Owen’s signature	1/23/07
Announcement email	2/14/07
Thank you/reminder email	2/24/07
2nd reminder email	3/30/07
3rd reminder email	4/11/07
2007 C-TPAT Supply Chain Security Seminar (New Orleans)	
Presentation to Supply Chain Security Specialists	4/3/07
Conduct two works shops for conference participants	4/5/07
Presentation to general assembly of conference participants	4/6/07
Close out email	4/12/07
Close out postcard	4/16/07
Close website	4/27/07

An opportunity to promote the survey was provided by CBP at the 2007 C-TPAT Supply Chain Security Seminar. A CSR representative (Dave Hartman) attended the weeklong seminar and made a presentation to the Supply Chain Security Specialists, conducted two survey workshops for C-TPAT partners, and made a presentation to the general assembly of C-TPAT partners. The presentations and workshops all promoted the importance of the survey and encouraged participation, and were positively received.

Closeout communications were sent to non-responding partners during the middle of April 2007 and the website was closed on April 27, 2007. The total response of 1,756 complete and partial questionnaires gives an unadjusted response rate of 29.4%. This response rate allows for a margin of error of plus or minus 2.0% taking into account the finite size of the study population.

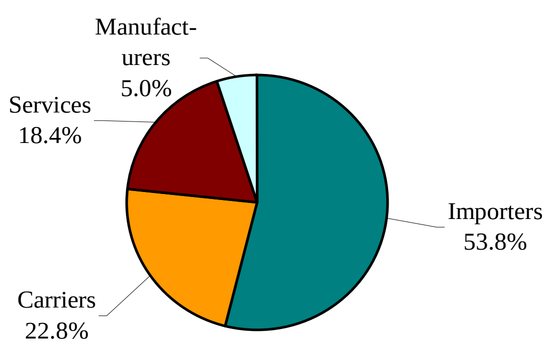
Overview of Surveyed Companies

C-TPAT's categories of enrollment include:

- U.S. Importers of Record
- U.S./Canada Highway Carriers
- U.S./Mexico Highway Carriers
- Rail Carriers
- Sea Carriers
- Air Carriers
- U.S. Marine Port Authority/Terminal Operators
- U.S. Air Freight Consolidators, Ocean Transportation Intermediaries and Non-Vessel Operating Common Carriers (NVOCC)
- Mexican and Canadian Manufacturers
- Certain Invited Foreign Manufacturers
- Licensed U.S. Customs Brokers

At the time of the survey, C-TPAT had about 5,965 business partners. For the purpose of the study, these C-TPAT business partners were grouped into Importers (53.8%); Carriers (22.8%), including U.S/Canada Highway Carriers, U.S/Mexico Highway Carriers, Rail Carriers, Sea Carriers, and Air Carriers; Service Providers (18.4%) including U.S. Marine Port Authority and Terminal Operators, U.S. Air freight Consolidators, Ocean Transportation Intermediaries or Non-Vessel Operating Common Carriers (NVOCC), and Licensed U.S. Customs Brokers and Foreign Manufacturers (5.0%) (see Figure V-1).

Figure V-1: C-TPAT business participants, 2007



Of these participants, a total of 1,756 businesses, nearly three out of ten (29.4%) of all C-TPAT business partners, responded to the 2007 survey. This response is composed of 54.3 percent of importers, 20.6 percent of carriers, 17.8 percent of services, and 7.3 percent of manufacturers. As illustrated in Table V-2, overall, the response distribution by business type is very close to that of the C-TPAT total business partners. This ensures that the survey data are representative of the survey population and reduces concerns about non-response bias.

Table V-2: C-TPAT business participants and respondents to the 2007 survey

Business Types	Population		Survey Participants	
	n	%	n	%
Importers	3,209	53.8	953	54.3
Carriers	1,360	22.8	362	20.6
Services	1,098	18.4	313	17.8
Manufacturers	298	5.0	128	7.3
Total	5,965	100	1,756	**100**

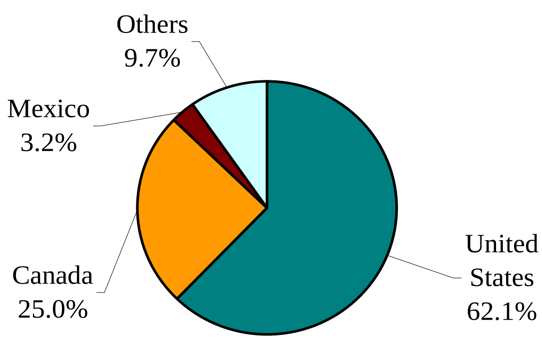
On average, the participating companies in this 2007 survey have been C-TPAT certified for about 2.06 years. Service Providers were more likely to be certified for a longer period (mean of 2.25) than were Manufacturers (1.65), Carriers (2.03), and Importers (2.08). Similarly, the C-TPAT certification period was significantly longer for Importers and Carriers than for Manufacturers.

Nearly three quarters (74.0%) of these businesses are privately owned and about one-quarter (24.0%) of the businesses are publicly owned. For about 2.0 percent of the participating businesses, respondents could not indicate whether or not these businesses were privately or publicly owned.

In order to ensure the broadest possible representation of results, the 2007 C-TPAT survey instrument was translated and conducted in Spanish. This Spanish version was offered to C-TPAT business partners operating in Mexico. While the majority of the companies (98.7%) completed the survey in English, 22 C-TPAT business partners (1.3%) completed the Spanish version of the questionnaire.

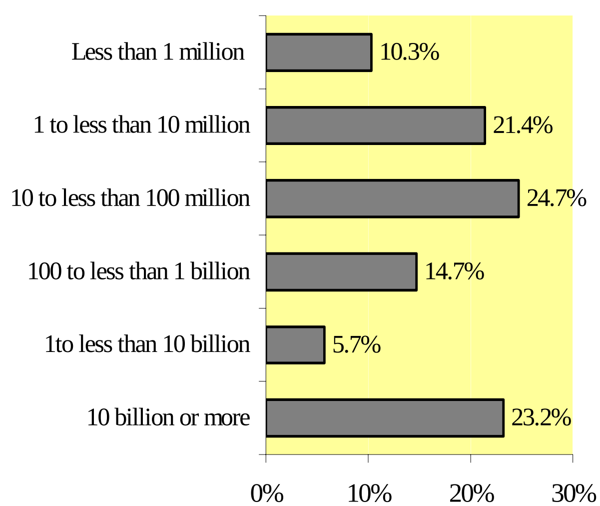
Six out of ten (62.1%) companies that participated in the C-TPAT survey indicated that their company's headquarters are located in the United States. The remaining companies reported that their headquarters are located in Canada (25.0%), in Mexico (3.2%), or in other countries (9.7%) (see Figure V-2).

Figure V-2: Location of company's headquarters



Respondents who completed the survey were also asked to indicate their company's annual revenue. They were able to provide their answers in U.S. Dollars (USD), Canadian Dollars (CAD), or Mexican Pesos (MXN). The survey program converted CAN and MXN into USD for purposes of analyses. For more than half (56.4%) of the companies the annual revenue reported was less than 100 million dollars and for 43.6 percent the annual revenue ranged from 100 million dollars to 10 billions dollars or more (See Figure V-3).

Figure V-3: Company's annual revenue



For comparison purposes, companies' annual revenues were grouped into four categories to represent a size demographic variable: less than $10 million; $10 million to less than $100 million; $100 million to less than $10 billion; and $10 billion or more. Businesses that participated to the 2007 C-TPAT survey showed significant differences with respect to size.

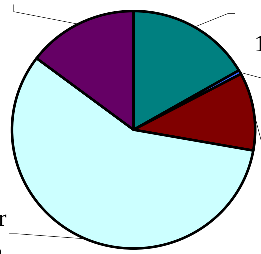
Overall, larger companies ($100 million or more) were more likely to be Importers and smaller businesses (less than $10 million) were more likely to be Service Providers and Carriers. For example, 74.3 percent of businesses with annual revenues of $100 million to less than $10 billion and 73.2 percent of business with annual revenues of $10 billion or more were identified as Importers. About one-third of businesses with annual revenues less than $10 million were identified as Carriers (33.5%) and Service Providers (35.9%). Manufacturers were more spread out across all business sizes (see Table V-3).

Table V-3: Businesses and annual revenues

Business Type	**Business Size**			
	Less than $10 million	$10 million to less than $10 billion	$100 million to less than $10 billion	$10 billion or more
Importers	24.8%	57.1	74.3%	73.2%
Carriers	33.5%	17.5%	13.3%	14.1%
Services	35.9%	15.0%	5.7%	6.9%
Manufacturers	5.8%	10.5%	6.6%	5.8%

With regard to standards certifications 16.7 percent of the companies indicated that they were certified in ISO 9000 only, 0.6 percent in ISO 14000. More than half (57.6%) of the companies were not certified in either the ISO 9000 or the ISO 14000. For a certain number of companies, respondents who completed the survey were not able to tell whether or not their businesses were certified in these standards (see Figure V-4).

Figure V-4: Company's certification in other standards



In a multiple response format, survey respondents were asked to select from a list of business systems all systems that their company has in place. On average, companies had 2.3 systems put in place. Of all the systems in place, "formal security and pilferage control system" was the most cited by the businesses (43.6%) followed by "centralized procurement" (36.8%) and "formal risk management system" (35.4%). Slightly more than one-third of the surveyed respondents indicated that none of the listed systems (18.3%) was in place or they were not sure or didn't know (16.5%). See Table V-4 for a complete list of the systems put in place, by the surveyed companies.

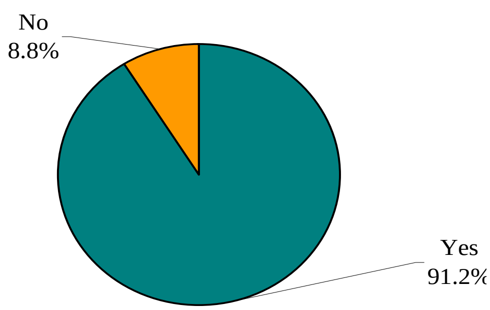
Table V-4: Systems put in place

Systems	**n**	**% of responses**	**% of cases**
Formal security and pilferage control system	733	18.6	43.6
Centralized procurement	619	15.7	36.8
Formal risk management system	594	15.1	35.4
Business Continuity Planning	566	14.3	33.7
Enterprise Resource Planning (ERP)	445	11.3	26.5
Manufacturing Resource Planning (MRP II)	404	10.2	24.0
None of the above	307	7.8	18.3
Not sure/Don't know	277	7.0	16.5
Total	**3,945**	**100**	**234.8**

Overview of Employees who completed the C-TPAT Survey

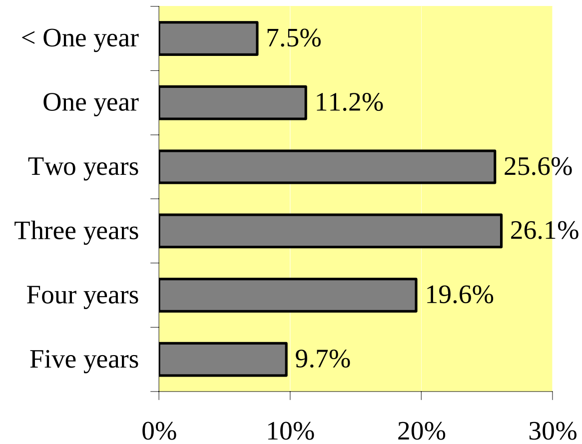
At the business level, the majority (91.2%) of those who completed the C-TPAT survey questionnaire identified themselves as the C-TPAT primary contact for their companies (see Figure V-5). The remaining 8.8 percent of the employees who were not their businesses' primary C-TPAT contact indicated that they were familiar with the costs and benefits of their companies' participation in the C-TPAT program. Consequently, all the employees who completed the survey were knowledgeable about the C-TPAT program.

Figure V-5: Are you primary C-TPAT contact for your company?



In addition, more than half (55.4%) of all the employees who completed the survey reported that they have been personally involved with their company's C-TPAT program for a period of three years or more. Overall, 18.7 percent of employees said they have been personally involved in their company's C-TPAT program for a period of one year (11.2%) or less than one year (7.5%). Figure V-6 displays employees' responses on this question.

Figure V-6: Employee's personal involvement in company's C-TPAT program



Employees with different job categories completed the C-TPAT survey. Of these employees, managers (40.2 %) were more likely to complete the C-TPAT survey. In some instances, the survey was completed by Directors (12.9 %) and Vice Presidents (11.3 %). For a few companies, the C-TPAT survey was completed by the President (6.9%), the General Manager (5.6%), the Chief Executive Officer (2.3%), the Chief Financial Officer (1.8%), and the Chief Operations Officer (1.0%). Table V-5 presents a full description of the job categories of those who completed the survey.

Table V-5: Job categories of employees who completed the C-TPAT survey

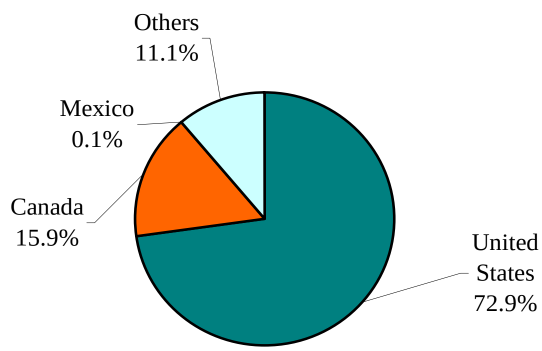
Job Categories	n	Percentage
Manager	643	40.2%
Director	225	12.9%
Vice President	198	11.3%
President	121	6.9%
General Manager	98	5.6%
Owner Partner	84	4.8%
CEO	41	2.3%
Supervisor, Leader, Coordinator	68	3.9%
CFO	32	1.8%
Administration, Assistant, Secretarial	49	2.8%
Accounting, Bookkeeping	24	0.9%
Specialist	24	1.4%
COO	18	1.0%
Other	295	4.1%
Total	**1,756**	**100%**

Importers

Overall, 953 companies classified as Importers and representing 54.3 percent of the sample completed the survey. For the vast majority of these Importers (99.8%), respondents completed the English version of the questionnaire. Only 2 Importers (0.2%) completed the Spanish version of the instrument.

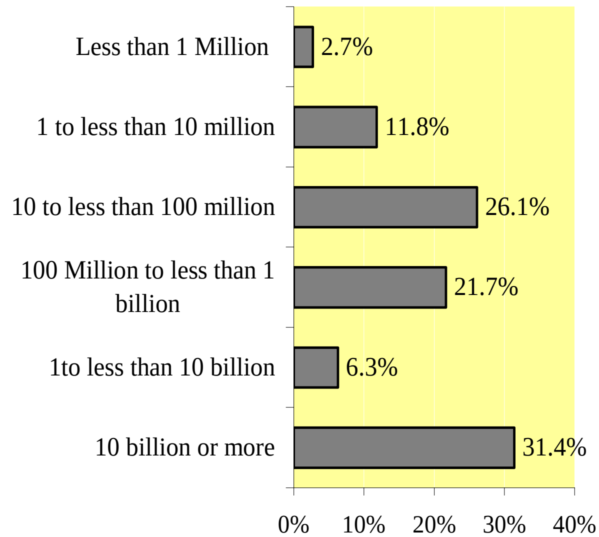
In regards to ownership, nearly two-thirds (64.5%) of Import businesses are privately traded companies while 33.9 percent are publicly traded. Nearly three-quarters (72.9%) of the Importers reported that their headquarters are located in the United States while 15.9% have their headquarters in Canada. The remainder of the Importers reported that their headquarters are located in other countries (11.1%) or in Mexico (0.1%) (see Figure V-7).

Figure V-7: Location of Importers' headquarters



The distribution of the annual revenue for the Importers follows a different pattern compared to companies in the overall sample. As illustrated in Figure V-8, Importers group reported higher annual revenues than all companies in the total sample. Consequently, fewer Importers have annual revenues less than 1 million (2.7%) and 1 to less than 10 million (11.8%).

Figure V-8: Importers' annual revenues in US dollars

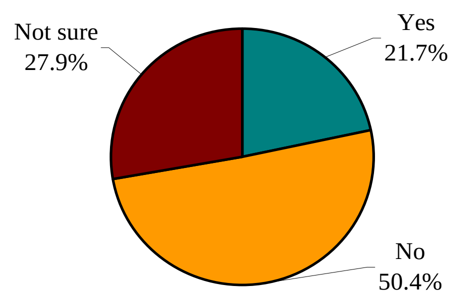


Importers' Validation

Nearly two-thirds (64.0%) of Importers reported that they have received C-TPAT validation and 6.1 percent were not sure about the status of their validation. The remaining 29.9 percent said they had not received C-TPAT validation. On average, C-TPAT-validated Importers received their validation 1.4 years ago.

Of the Importers with C-TPAT validation, 21.7 percent received C-TPAT Tier Three status for exceeding minimum standards while half (50.4%) had not. Slightly more than one-quarter (27.9%) indicated that they were not sure (see Figure V-9).

Figure V-9: Validated Importers with C-TPAT Tier Three status



Type of Goods Imported

In a multiple-response question format that allows the selection of more than one item, employees who completed the survey were asked to indicate the types of goods their companies import. Apparel and accessories (16.4%) followed by foods, beverages, and agricultural products (15.5%) were imported the most. Electronic equipment and components (13.6%) and automobiles and automobile parts were also components of the goods most imported as they were selected by more than 10 percent of all Importers. See Table V-6 for a complete list of all the imported goods.

Considering the past twelve months, on average 71.6 percent of these companies' products or materials came from outside the United States. During the same period, nearly 1 in 3 (29.3%) importers reported that 50 percent or less of their products or materials came from overseas. The survey results also indicated that nearly one-quarter (24.4%) of Importers received all their products and materials from outside of the United States.

Table V-6: Types of goods imported

Types of goods	n	% of responses	% of cases (n=894)
Apparel/accessories	147	11.1	16.4
Foods/beverages/agricultural products	139	10.5	15.5
Electronic equipment/components	122	9.2	13.6
Automobiles/auto parts	91	6.9	10.2
Home furnishings, house wares	71	5.3	7.9
Textiles/linens	62	4.7	6.9
Consumer electronics/appliances	60	4.5	6.7
Toys/games	60	4.5	6.7
General merchandise	59	4.4	6.6
Chemicals	58	4.4	6.5
Building materials/hardware	48	3.6	5.4
Heavy machinery	40	3.0	4.5
Sporting goods/equipment	37	2.8	4.1
Metals/mining materials	35	2.6	3.9
Computer hardware/software	32	2.4	3.6
Petroleum or petroleum products	17	1.3	1.9
Other	250	18.8	28.0
Total	**1,328**	**100**	**148.5**

Importers were asked, in a multiple-response format: "what are the primary points of origin for your company's imports?" The average company listed 3.7 primary points of origin. Table V-7 presents the list of primary points of origin for the companies' imported goods and materials. More than half (58.8%) of Importers reported China as a primary point of origin for their imported goods. China is followed by Canada (32.5%), the European Union (30.8%), and Hong Kong (27.1%). For nearly one-quarter (24.6%) of the Importers, Taiwan was a primary point of origin of their imported products. See Table V-7 for a complete list of primary points of origin for the imported products and materials.

Table V-7: Imported goods primary points of origin

Primary Points of Origin	n	% of responses	% of cases (n=883)
China	519	15.9	58.8
Canada	287	8.8	32.5
European Union	272	8.3	30.8
Hong Kong	239	7.3	27.1
Taiwan	217	6.6	24.6
Mexico	217	6.6	24.6
Japan	167	5.1	18.9
Other parts of Asia or Micronesia	162	5.0	18.3
India	155	4.7	17.6
Brazil	121	3.7	13.7
Malaysia	114	3.5	12.9
U.K./Ireland	103	3.2	11.7
Philippines	99	3.0	11.2
Turkey	58	1.8	6.6
Other parts of Central America	52	1.6	5.9
Pakistan	51	1.6	5.8
Israel	51	1.6	5.8
Argentina	41	1.3	4.6
Australia	41	1.3	4.6
Other parts of South America	40	1.2	4.5
Chile	37	1.1	4.2
Africa	35	1.1	4.0
Colombia	25	0.8	2.8
Other parts of the Middle East	21	0.6	2.4
Venezuela	17	0.5	1.9
New Zealand	16	0.5	1.8
Other	111	3.4	12.6
Total	**3,268**	**100**	**370.1**

Screening Customers for Security Risks

On average, Importers use approximately 92 foreign suppliers, manufacturers, or vendors. This number varies significantly across Importers. Nearly half of the importers (48.0%) reported using 15 or fewer foreign suppliers, manufacturers, or vendors and 52.0 percent reported 15 or more.

Importers reported using several methods to screen foreign suppliers, manufacturers, or vendors that were non-C-TPAT certified (see Table V-8). Of all the screening methods, “visiting the foreign suppliers, manufacturers, or vendors for security evaluation” is the most-used method by Importers. This method, which was mentioned by nearly two-thirds (63.6%) of Importers, is followed by the “use of formal security survey process” (52.6%) and the “review of certifications” (43.7%). Slightly more than one-third (34.0%) of Importers reported using the “assessment of transit time from shipping point” as a screening method for non-C-TPAT certified foreign supplies, manufacturers, or vendors.

While 20.5 percent of Importers reported using “third party-verifications” as a screening method, only 2.4 percent indicated that they “did not screen” at all (see Table V-8 for a complete list of the methods used by Importers to screen non-C-TPAT certified foreign suppliers, manufacturers, or vendors).

Of the Importers that screen non-C-TPAT suppliers, slightly more than three-quarters (78.1%) were able to estimate the number of suppliers that were screened out due to security concerns. About twenty-two percent (21.9%) of the Importers did not know if foreign suppliers had been screened out for security reasons. Of this group of importers, 12.2 percent indicated they have rejected at least one foreign supplier, manufacturer, or vendor due to security concerns in the past twelve months and 87.8 percent have not rejected any.

Table V-8: Importers' screening methods of Non-C-TPAT certified foreign suppliers, manufacturers, or vendors

Screening methods	**n**	**% of responses**	**% of cases (n=858)**
Visit foreign suppliers, manufacturers, or vendors	546	22.8	63.6
Use formal security survey process	451	18.8	52.6
Review certifications	375	15.6	43.7
Assess transit time to shipping point	292	12.2	34.0
Assess transit time from shipping point	275	11.5	32.1
Use third-party verifications	176	7.3	20.5
Use independent buying agents to vet factories	124	5.2	14.5
Other	104	4.3	12.1
Do not screen	21	0.9	2.4
Don’t know	35	1.5	4.1
Total	**2,399**	**100**	**279.6**

Importers were also asked the approximate number of service providers they use, including carriers, freight forwarders/consolidators, brokers, ports, terminal operators, and warehouse facilities. On average, Importers reported using 23 service providers of which 14 on average were C-CTPAT certified. The majority (90.7%) of importers had not dropped any service providers in the past twelve months due to security reasons. The remainder of the Importers (9.3%) recalled dropping at least one service provider due to security reasons. The mean number of service providers dropped or rejected due to security reasons was estimated at 0.3.

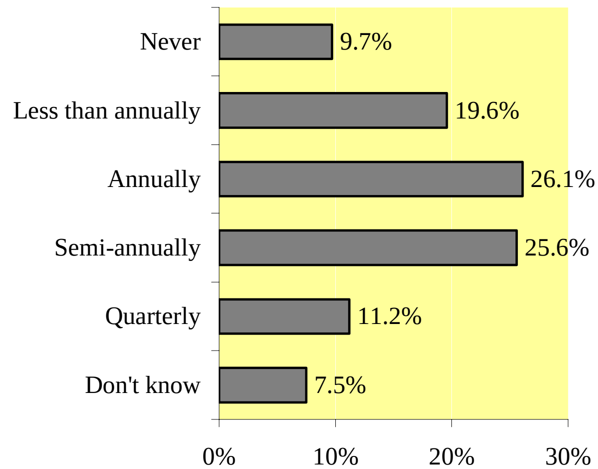
Importers were also asked, in a multiple mention question format, how they screen service providers that are not C-TPAT certified. Of all the screening methods, “security procedures used”, “business references”, and “financial soundness” were cited the most. These three screening methods were mentioned by more than half of Importers (see Table V-9). About five percent of Importers reported that they do not screen service providers that are not C-TPAT certified.

Table V-9: Importers' screening methods of Non-C-TPAT certified service providers

Screening methods	n	% of responses	% of cases (n=844)
Security procedures used	459	14.4	54.4
Business references	445	14.0	52.7
Financial soundness	431	13.5	51.1
Ability to meet contractual security requirements	390	12.2	46.2
Security evaluation results	371	11.6	44.0
Ability to identify and correct security deficiencies	333	10.4	39.5
Modes of transport	326	10.2	38.6
Routing	223	7.0	26.4
Other	131	4.1	15.5
Do not screen	39	1.2	4.6
Don't know	41	1.3	4.9
Total	**3,189**	**100**	**377.8**

In addition to the screening methods and the rejection statistics, Importers were asked how often they review security status and standards. Figure V-10 presents how often Importers review foreign suppliers, manufacturers, or vendors for adherence to C-TPAT standards.

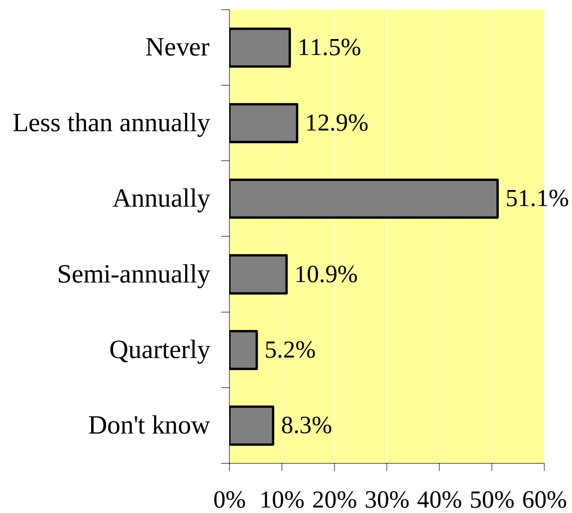
Figure V-10: Review of foreign suppliers for C-TPAT standards



While 19.6 percent of Importers reported conducting these reviews less than annually, slightly more than one quarter of Importers reported receiving C-TPAT standards reviews annually (26.12%) and semi-annually (25.6%). About ten percent (9.7%) of Importers have never conducted these reviews and 7.5% indicated that they did not know whether they conduct these reviews or not (see Figure V-10).

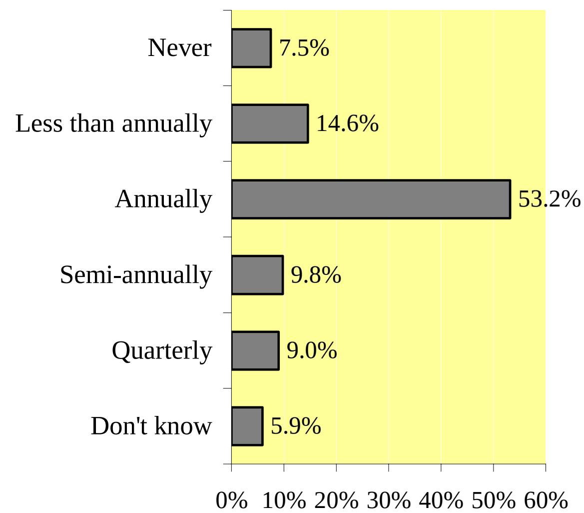
In regards to reviewing non-C-TPAT service providers for adherence to C-TPAT standards, more than half of the Importers (51.1%) indicated that they conduct the reviews annually. Slightly more than 11.5 percent (11.5%) of the Importers reported never conducting a standards review and 8.3 percent did not know whether reviews have conducted (see Figure V-11).

Figure V-11: Review of Non-C-TPAT service providers for adherence to C-TPAT standards



More than half (53.2%) of Importers reported that they review C-TPAT-certified service providers certification status annually and 14.6 percent said they have conducted these reviews less than annually (see Figure V-12). A total of 13.4 percent of Importers have never conducted these reviews (7.5%) or said they did not know about the frequencies of these reviews (5.9%).

Figure V-12: Review of C-TPAT certified Service Providers' certification status



Carriers

Overall, 362 companies classified as Carriers and representing 20.6 percent of the sample completed the survey. These Carriers include U.S/Canada Highway Carriers, U.S/Mexico Highway Carriers, Rail Carriers, Sea Carriers, and Air Carriers, which represent 22.8 percent of the C-TPAT partner population. As with the Importers, for the vast majority of the Carriers (98.3%), respondents completed the English version of the questionnaire. Only 6 Carriers (1.7%) completed the Spanish version of the survey instrument.

Six out of ten (60.0%) Carriers were characterized as being primarily bulk/break-bulk Carriers while 40.0 percent were primarily Container Carriers.

Figure V-13: Type of Carrier

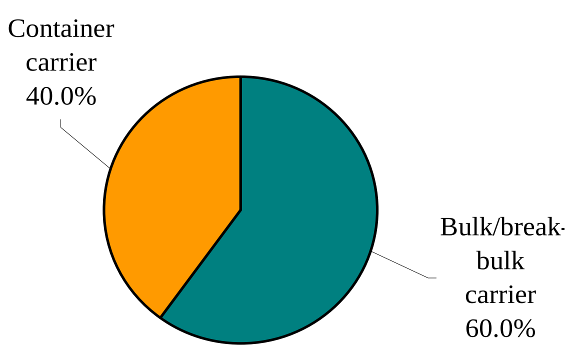


Table V-10 presents the major types of cargo that Carriers transport. General merchandise (59.0%), foods, beverages, agricultural products (45.1%) and automobiles and auto parts (44.8%) were the most cited types of cargo transported. Nearly half (44.0%) of the Carriers reported transporting building materials and hardware. Of the types of cargo transported, petroleum or petroleum products received the lowest mentions. Transportation of these products was mentioned by 14.7 percent of Carriers (see Table V-10).

Table V-10: Types of cargo transported

Screening methods	n	% of responses	% of cases (n=339)
General merchandise	200	11.6	59.0
Foods/beverages/agricultural products	153	8.9	45.1
Automobiles/auto parts	152	8.8	44.8
Building materials/hardware	149	8.6	44.0
Consumer electronics/appliances	98	5.7	28.9
Electronic equipment/components	96	5.6	28.3
Home furnishings/house wares	96	5.6	28.3
Chemicals	94	5.5	27.7
Textiles/linens	89	5.2	26.3
Apparel/accessories	87	5.0	25.7
Heavy machinery	87	5.0	25.7
Metals/mining materials	84	4.9	24.8
Computer hardware/software	79	4.6	23.3
Toys/games	78	4.5	23.0
Sporting goods/equipment	76	4.4	22.4
Petroleum or petroleum products	50	2.9	14.7
Other	56	3.2	16.5
Total	**1,724**	**100.0**	**508.6**

More than three-quarters (78.3%) of the Carriers said that they transport their cargo from Canada. Next on the list of primary points of origin is Mexico, which was mentioned by nearly a quarter (24.0) of all Carriers. China and the European Union are mentioned respectively by 10.7 percent and 9.5 percent of all the Carriers. Table V-11 presents the full list of primary points of origin from which Carriers transport their cargos.

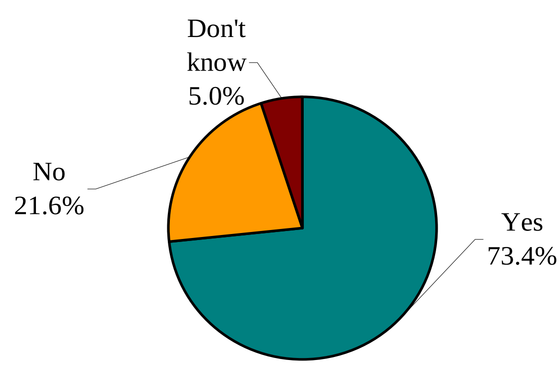
Table V-11: Primary points of origin from which Carriers transport their cargos

Primary Points of Origin	n	% of responses	% of cases (n=337)
Canada	264	31.5	78.3
Mexico	81	9.7	24.0
China	36	4.3	10.7
European Union	32	3.8	9.5
Japan	29	3.5	8.6
Hong Kong	25	3.0	7.4
U.K./Ireland	24	2.9	7.1
Other parts of Asia or Micronesia	22	2.6	6.5
Taiwan	21	2.5	6.2
India	21	2.5	6.2
Philippines	20	2.4	5.9
Malaysia	19	2.3	5.6
Colombia	18	2.1	5.3
Brazil	18	2.1	5.3
Venezuela	17	2.0	5.0
Turkey	17	2.0	5.0
Other parts of Central America	16	1.9	4.7
Argentina	15	1.8	4.5
Pakistan	15	1.8	4.5
Other parts of South America	14	1.7	4.2
Other parts of the Middle East	14	1.7	4.2
Chile	13	1.5	3.9
Israel	13	1.5	3.9
Africa	12	1.4	3.6
Australia	11	1.3	3.3
New Zealand	9	1.1	2.7
Other	43	5.1	12.8
Total	**839**	**100.0**	**249.0**

Screening Customers for Security Risks

Carriers were asked if, prior to joining C-TPAT, they were screening their customers for indicators of security risks using methods of financial checks, public sources, Dun and Bradstreet, etc. Nearly three-quarters (73.4%) responded to the affirmative while 21.6 percent said that, before joining C-TPAT, they were not screening their customers for indicators of security risks. For the remaining Carriers (5.0%), employees did not know if such screening took place.

Figure V-14: Screening for indicators of security risk prior to joining C-TPAT



Carriers reported having 685 customers on average. However, they indicated that, on average, 5 percent (35) of their current customers were C-TPAT certified. When asked about the percentage of customers they screen for indicators of security risk since becoming C-TPAT partners, 17.7 percent of Carriers said they did not know. Those that knew (82.3%) reported that on average 84.1% of their customers are screened since they became C-TPAT certified. In the past twelve months, Carriers have partly or wholly dropped (on average) 2 of their customers because of security concerns. This number is higher with prospective customers, for which an average of 3.5 are rejected in part or wholly due to security reasons.

Carriers use several methods to screen those of their customers that are not C-TPAT certified. Table V-12 lists all the methods used by Carriers. Of these methods, "business references" and "financial soundness" are the most used. These two methods were mentioned respectively by 71.6 percent and 69.1 percent of Carriers. Next on the list of most used screening methods are "security procedures" (43.4%)

and "ability to meet contractual security requirements" (34.6%).

Table V-12: Screening methods for Non-C-TPAT certified customers

Screening methods	n	% of responses	% of cases (n=327)
Business references	234	21.4	71.6
Financial soundness	226	20.6	69.1
Security procedures used	142	13.0	43.4
Ability to meet contractual security requirements	113	10.3	34.6
Security evaluation results	99	9.0	30.3
Ability to identify and correct security deficiencies	88	8.0	26.9
Modes of transport	77	7.0	23.5
Routing	67	6.0	20.4
Other	17	1.6	5.2
Do not screen	17	1.6	5.2
Don't know	16	1.5	4.9
Total	**1,095**	**100.0**	**334.9**

On average, Carriers use 37 service providers including cargo-handling facilities, terminal operators, vendors, and other contractors. Of these service providers, approximately 9 (24.3%) on average were C-TPAT certified and 0.5 on average are dropped in part or wholly due to security reasons. In addition, Carriers said they rejected on average 0.7 prospective service providers in the past twelve months due to security reasons.

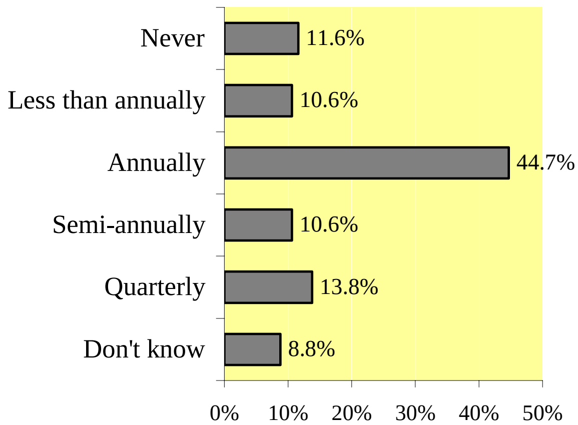
Carriers use several methods to screen service providers that are non-C-TPAT certified. These screening methods are similar to those used to screen non-C-TPAT certified customers including "business references" (69.3%), "financial soundness" (62.3%), and "security procedures" (42.7%) being the most used methods. The full list of screening methods for service providers that are not C-TPAT certified is presented in Table V-13.

Table V-13: Screening methods for Non-C-TPAT certified service providers

Screening methods	n	% of responses	% of cases (n=316)
Business references	219	21.2	69.3
Financial soundness	197	19.1	62.3
Security procedures used	135	13.1	42.7
Ability to meet contractual security requirements	127	12.3	40.2
Security evaluation results	96	9.3	30.4
Ability to identify and correct security deficiencies	89	8.6	28.2
Modes of transport	65	6.3	20.6
Routing	50	4.8	15.8
Other	20	1.9	6.3
Do not screen	15	1.5	4.7
Don't know	19	1.8	6.0
Total	**1,032**	**100.0**	**326.6**

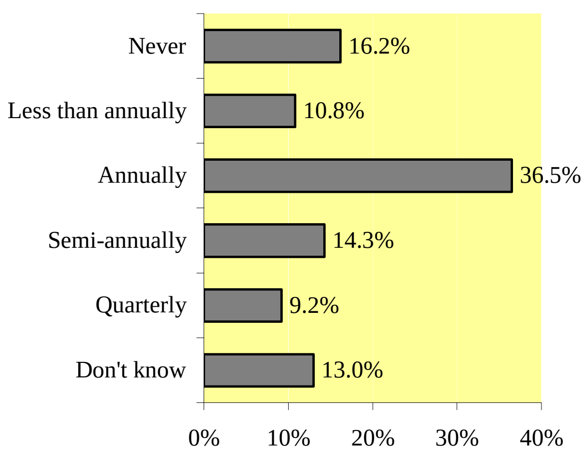
As in the case of Importers, Carriers were asked how often they review security status and standards (see Figure V-15). These revisions are mostly done annually. However, 11.6 percent of Carriers mentioned that they never reviewed their customers' C-TPAT certification status and 8.8 percent indicated that they did not know.

Figure V-15: Review of C-TPAT certified customers' certification status



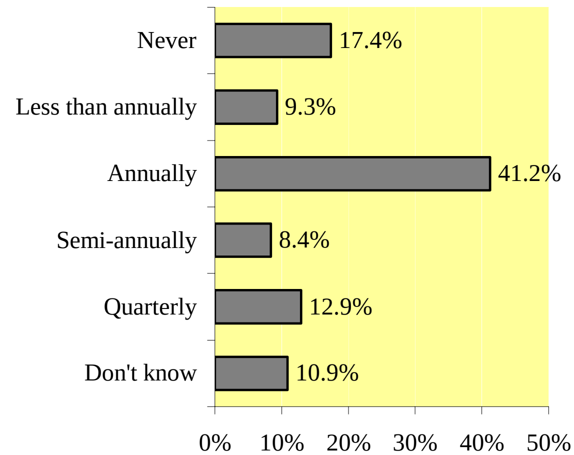
In regards to reviewing non C-TPAT service providers for adherence to C-TPAT standards, slightly more than one-third of Carriers (36.5%) indicated that they conduct the reviews annually. For these service providers, 16.2 percent reported never conducting the reviews and 13.0 percent indicated not knowing whether or not these reviews have been done (13.0). See Figure V-16 for a detailed presentation of the responses for this question.

Figure V-16: Review of Non-C-TPAT service providers for adherence to C-TPAT standards



Four out of ten Carriers (41.2%) reported that they reviewed C-TPAT certified service providers' certification status annually and 12.9 percent said they have conducted these reviews quarterly (see Figure V-16). A total of 17.4 percent of Carriers have never conducted these reviews and 10.9 percent said they did not know about these reviews.

Figure V-17: Review of C-TPAT certified service providers' certification status



Foreign Manufacturers

Overall, 128 companies classified as Foreign Manufacturers and representing 7.3 percent of the sample completed the survey. The majority of Manufacturers (89.8%) completed the English version of the questionnaire and 10.2 percent completed the Spanish version of the instrument.

On average Foreign Manufacturers use 27 service providers including security contractors, transportation providers, cargo-handling services, warehouse facilities, and other service providers, of which 7 on average were reported to be C-TPAT certified. In the past twelve months, 0.4 service providers were dropped on average in part or wholly due to security reasons. This number is estimated at 0.3 for the prospective service providers.

Manufacturers were also asked about the major types of goods they manufacture and export to the United States. Foods, beverages, agricultural products (20%), electronic equipment and components (12.8%) and automobiles and auto parts (11.2%) were the most cited products. See Figure V-16 for the full list of products exported to the United States.

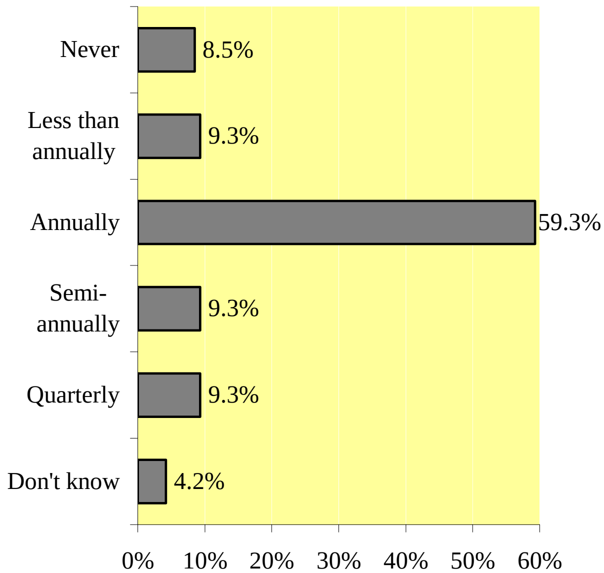
Table V-14: Major types of goods manufactured and exported to the United States

Products	**n**	**% of responses**	**% of cases (n=125)**
Foods/beverages/agricultural products	25	17.1	20.0
Electronic equipment/components	16	11.0	12.8
Automobiles/auto parts	14	9.6	11.2
Consumer electronics/appliances	10	6.8	8.0
Apparel/accessories	6	4.1	4.8
Chemicals	4	2.7	3.2
Computer hardware/software	4	2.7	3.2
Building materials/hardware	3	2.1	2.4
General merchandise	3	2.1	2.4
Heavy machinery	3	2.1	2.4
Metals/mining materials	3	2.1	2.4
Home furnishings/house wares	2	1.4	1.6
Sporting goods/equipment	2	1.4	1.6
Toys/games	2	1.4	1.6
Petroleum or petroleum products	1	0.7	0.8
Textiles/linens	1	0.7	0.8
Other	47	32.2	37.6
Total	**146**	**100.0**	**116.8**

Screening Providers for Security Risks

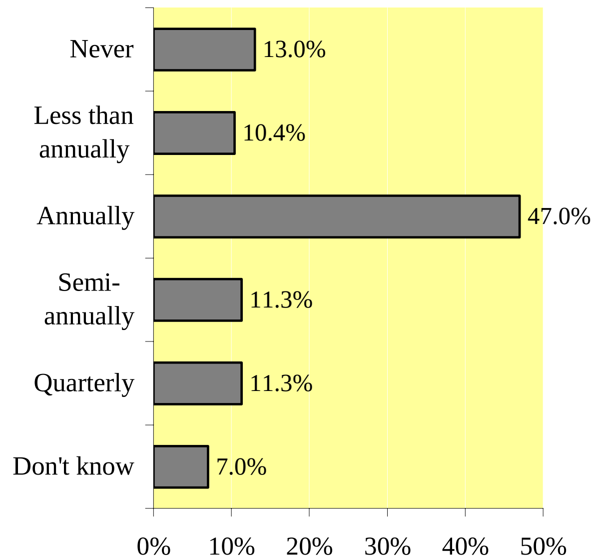
When asked how often they review the certification status of C-TPAT certified service providers, more than half (59.3%) of the Manufactures indicated that they do it on an annual basis whereas 9.3 percent reported they do it either less than annually, semi-annually or quarterly. The remaining (8.5%) of the Manufacturers never reviewed the certification status of the C-TPAT certified service providers (see Figure V-18)

Figure V-18: Review of C-TPAT certified service providers' certification status



For non-C-TPAT service providers, 47.0 percent of Manufacturers reported that they reviewed their adherence to C-TPAT standards annually and 11.3 percent conducted either semi-annual or quarterly reviews. Thirteen percent of Manufactures said they have never conducted these reviews for non-C-TPAT service providers (see Figure V-19).

Figure V-19: Review of Non-C-TPAT service providers for adherence to C-TPAT standards



Service Providers

Overall, 313 Service Providers completed the survey. Service Providers include U.S. Marine Port Authority and Terminal Operators, U.S. Air freight Consolidators, Ocean Transportation Intermediaries or Non-Vessel Operating Common Carriers (NVOCC), and Licensed U.S. Customs Brokers. Only one Service Provider (0.3%) completed the Spanish version of the survey instrument while the rest (99.7%) completed the English version.

On average, Service Providers have 605 customers. However, when asked how many of their current customers were C-TPAT certified 40.3 percent of Service Providers were unable to provide the information. The rest (59.7%) of the Service Providers reported that, on average, 31 of their current customers were C-TPAT Certified.

In regards to their prospective customers that are not C-TPAT certified, Service Providers use a variety of methods for security screening purposes. Of these methods, "business references" (77.7%), "financial soundness" (75.3%), and "security procedures used" (39.2%) are the most used (see Table V-15). One third (33.1%) of the Service Providers also mentioned the use of the "security evaluation results." In the past twelve months, Service Providers partly or wholly rejected approximately 1.5 prospective customers due to security concerns.

In addition, Service Providers use, on average, 135 other service providers. These service providers include carriers, foreign consolidators, foreign facilities, vendors, conveyance providers, domestic warehouse facilities, and other contractors. Of these other service providers approximately 25 on average were estimated to be C-TPAT certified.

Table V-15: Screening methods for prospective customers that not C-TPAT certified

Screening methods	**n**	**% of responses**	**% of cases (n=296)**
Business references	230	21.4	77.7
Financial soundness	223	20.7	75.3
Security procedures used	116	10.8	39.2
Modes of transport	100	9.3	33.8
Security evaluation results	98	9.1	33.1
Ability to meet contractual security requirements	96	8.9	32.4
Ability to identify and correct security deficiencies	91	8.5	30.7
Routing	77	7.2	26.0
Do not screen	11	1.0	3.7
Other	29	2.7	9.8
Don't know	5	.5	1.7
Total	**1,076**	**100.0**	**363.5**

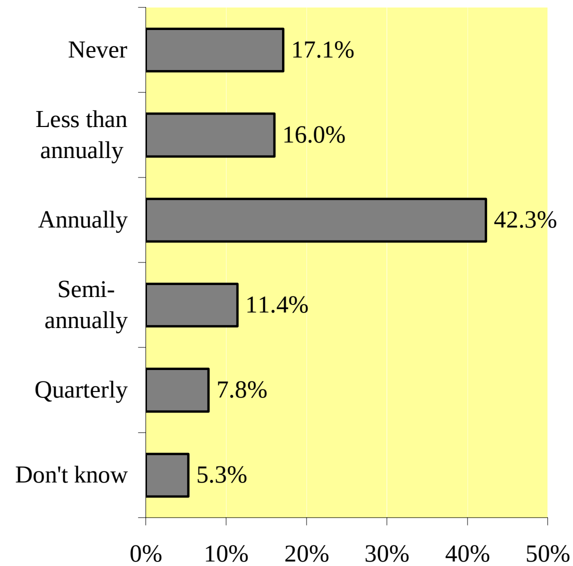
For services that are not C-TPAT certified, Service Providers use almost the same methods as they use to screen prospective customers that are not C-TPAT certified. These methods include "business references" (73.9%), "financial soundness" (67.2%), "security procedures used" (50.9%), and the "ability to meet contractual security requirements" (47.7%). The "modes of transport" (40.8%) are also used as a screening method for the service providers that are not C-TPAT certified (see Table V-16). Because of these screening methods, on average 2.5 prospective service providers were in part or wholly rejected due to security concerns.

Table V-16: Screening methods for Non-C-TPAT service providers

Screening methods	n	% of responses	% of cases (n=287)
Business references	212	18.5	73.9
Financial soundness	193	16.9	67.2
Security procedures used	146	12.8	50.9
Ability to meet contractual security requirements	137	12.0	47.7
Modes of transport	117	10.2	40.8
Ability to identify and correct security deficiencies	117	10.2	40.8
Security evaluation results	103	9.0	35.9
Routing	103	7.0	27.9
Do not screen	12	1.0	4.2
Other	23	2.0	8.0
Don’t know	5	0.4	1.7
Total	**1,145**	**100**	**399.0**

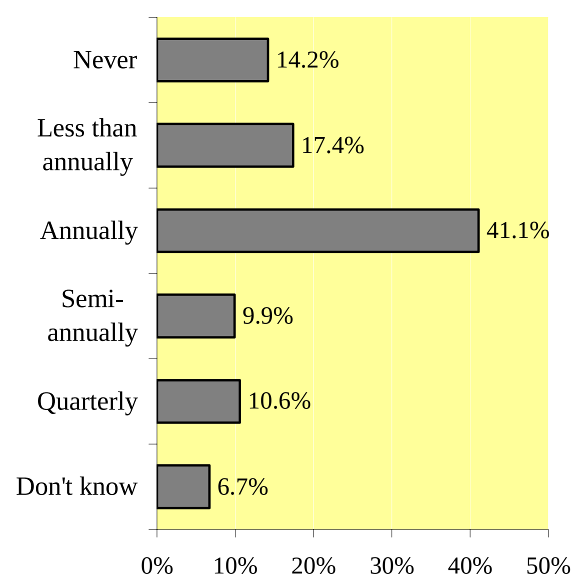
As with the Importers, Carriers, and Manufacturers, Service Providers were also asked how often they review their customers, and providers’ certification status and adherence to C-TPAT standards. Figure V-20 presents how often Service Providers review the certification status of C-TPAT certified customers. These revisions are mostly done annually (42.3%). However, 17.1 percent of Service Providers reported that they have never reviewed their customers’ C-TPAT certification status and 5.3 percent indicated that they did not know.

Figure V-20: Review of C-TPAT certified customers' certification status



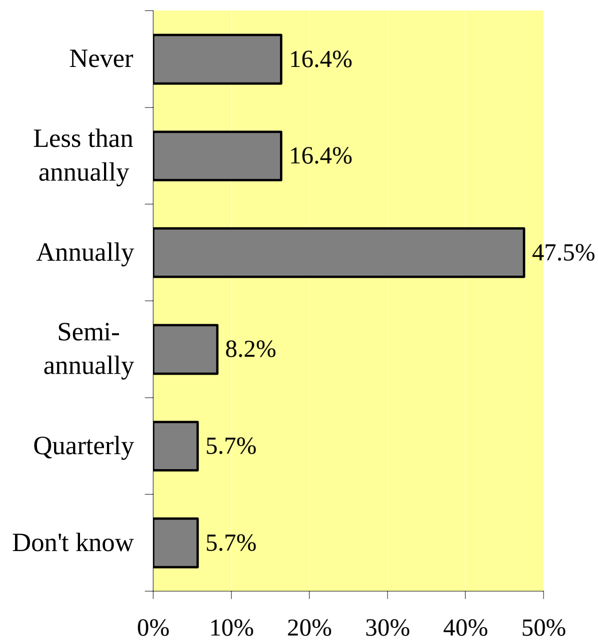
For non-C-TPAT service providers, 41.1 percent of Service Providers reported that they reviewed their adherence to C-TPAT standards annually and 17.4 percent conducted the review less than annually. Fourteen (14.2%) percent of Service Providers said they have never conducted these reviews for non-C-TPAT service providers (see Figure V-21)

Figure V-21: Review of Non-C-TPAT certified service providers for adherence to C-TPAT standards



Nearly half (47.5%) of Service Providers reported that they reviewed C-TPAT certified service providers' certification status annually and 16.4 percent said they have conducted these reviews less than annually (see Figure V-22). A total of 16.4 percent of Service Providers have never conducted these reviews and 5.7 percent said they did not know about these reviews.

Figure V-22: Review of C-TPAT certified service providers' certification status



Summary of Screening Service Providers

Overall, more than 6 out of 10 businesses reviewed the C-TPAT certification status and standards of C-TPAT and non C-TPAT certified service providers annually or more frequently. More Manufacturers (77.9%) and Importers (72.0%) reviewed the certification status of C-TPAT service providers than Carriers (62.5%) and Service Providers (61.4%). Table V-17 also shows the percentages of businesses that reviewed the C-TPAT standards for non-C-TPAT service providers annually or more. All businesses, except for Service Providers, reviewed the C-TPAT certification status more than the C-TPAT standards. Manufacturers (69.6%) and Importers (67.2%) reviewed C-TPAT certification status more than Carriers (60.0%) and Service Providers (61.6%) (see Table V-17).

Table V-17: Frequency of reviews of C-TPAT certification status and standards

Labels	Reviewed certification of C-CTPAT Certified Service Providers annually or more frequently	Reviewed non-C-TPAT Service Providers for adherence to C-TPAT standards annually or more frequently
Importers		
Foreign suppliers	--	62.9%
Service Providers	72.0%	67.2%
Carriers		
Service Providers	62.5%	60.0%
Manufacturers		
Service Providers	77.9%	69.6%
Service Providers		
Service Providers	61.4%	61.6%

Table V-18 shows the percentages of C-TPAT business partners that have never reviewed the certification status of C-TPAT service providers or the adherence to C-TPAT standards of non-CTPAT service providers. For both types of service providers (C-TPAT and non-C-TPAT) these percentages are higher for Carriers and Service Providers. For example, 17.4 percent of Carriers reported that they have never checked the certification status of C-TPAT certified service providers compared to 7.5 percent of Importers.

Table V-18: Review of C-TPAT certification status and standards

Labels	Never reviewed certification of C-CTPAT Certified Service Providers	Never reviewed non-C-TPAT Service Providers for adherence to C-TPAT standards
Importers		
Foreign suppliers	--	9.7%
Service Providers	7.5%	11.5%
Carriers		
Service Providers	17.4%	16.2%
Manufacturers		
Service Providers	8.5%	13.0%
Service Providers		
Service Providers	16.4%	14.2%

Motivations for Joining C-TPAT

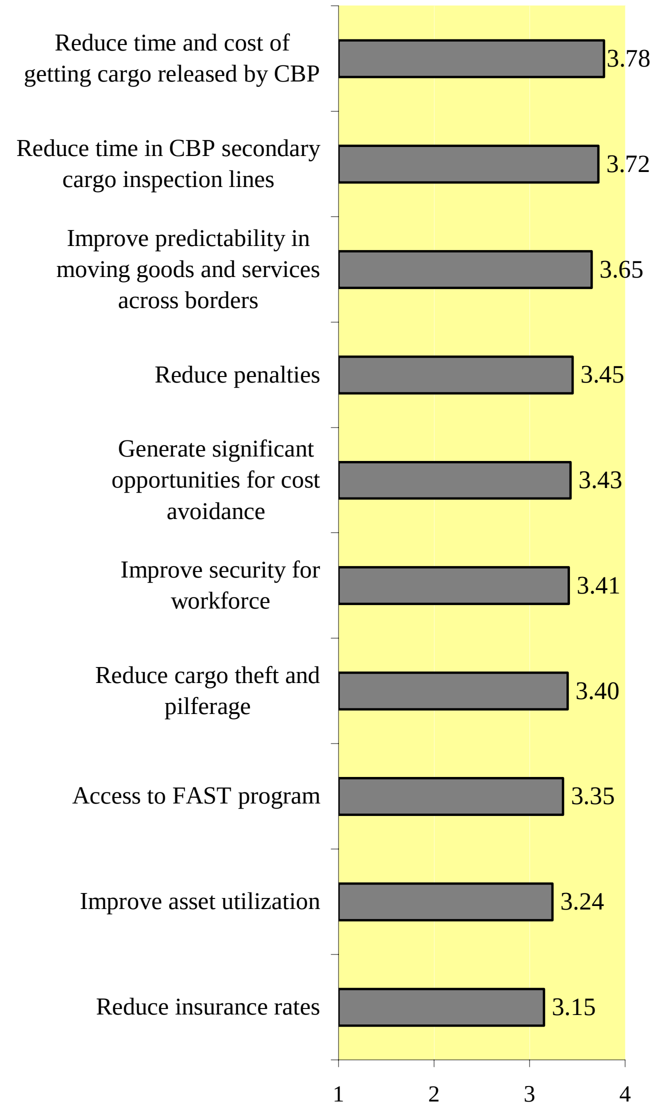
In the second section of the survey instrument, participating businesses were asked a series of questions about factors that had been considered in their companies' decisions to join C-TPAT. For each type of potential benefit listed, survey respondents were asked to indicate on a four-point scale, how important the potential benefit was in their companies' decisions to join C-TPAT.

The ratings were initially based on a 6 point scale where 6 means "extremely important", 3 means "extremely unimportant", 1 means "does not apply", and 2 was reserved for the category "do not consider this a potential benefit of C-TPAT." In the analysis of the mean ratings, the responses options "1" and "2" were excluded and the remainder of the scale was recalibrated on a four point scale so that the higher numbers correspond to positives outcomes. With this coding scheme 4 means "extremely important" and 1 means "extremely unimportant".

Potential Benefits for all Businesses

All businesses (Importers, Carriers, Manufacturers, and Service Providers) were asked to rate a series of 10 potential benefits that may have been considered in their companies' decisions to join C-TPAT. Figure V-23 presents the mean ratings for all the potential benefits. For all businesses, "reducing the time and cost of getting cargo released by CBP" is the most important potential benefit. On the four-point scale, this item scored a mean rating of 3.78. More than three-quarters (76.5%) of all businesses reported that it is extremely important to "reduce the time and cost of getting cargo released by CBP". Next on the list of most important motivations for joining C-TPAT are "to reduce the time in CBP secondary cargo inspection lines" (3.72) and to "improve the predictability in moving goods and services across borders" (3.65). Of all the potential benefits presented to businesses, "reducing insurance rates" was the lowest rated item. On the four-point scale, this benefit received a mean score of 3.15, a high rating, but lower than the ratings for the other potential benefits (see Figure V-23).

Figure V-23: Potential benefits for all businesses



Except for the item "generate significant opportunities for cost avoidance," the ratings for the rest the potential benefits were significantly different by business type. For example, Importers (3.82), Carriers (3.79), and Manufacturers (3.78) gave significantly higher ratings to "reducing time and cost of getting cargo released by CBP" as an important potential benefit than Service Providers (3.59). Ratings of the potential benefits "reduce time in CBP secondary cargo inspection lines" and "improve predictability in moving goods and services across borders" follow the same pattern. Carriers (3.74) and Manufacturers (3.52) were also more likely to say that it is important "to obtain access to the FAST program" as compared to Service Providers (3.02) and Importers (3.24). The U.S. FAST program offers an expedited clearance process for eligible goods to pre-authorized importers, carriers and drivers. Current FAST processing of U.S. imports is based on advanced electronic transmission of cargo manifest information. Ratings of the potential benefit "reducing cargo theft and pilferage" were significantly higher with Carriers (3.52) than with Importers (3.34). Table V-19 presents the potential benefits ratings by business type. On these items, businesses showed no significant differences with respect to size or number of C-TPAT certification years.

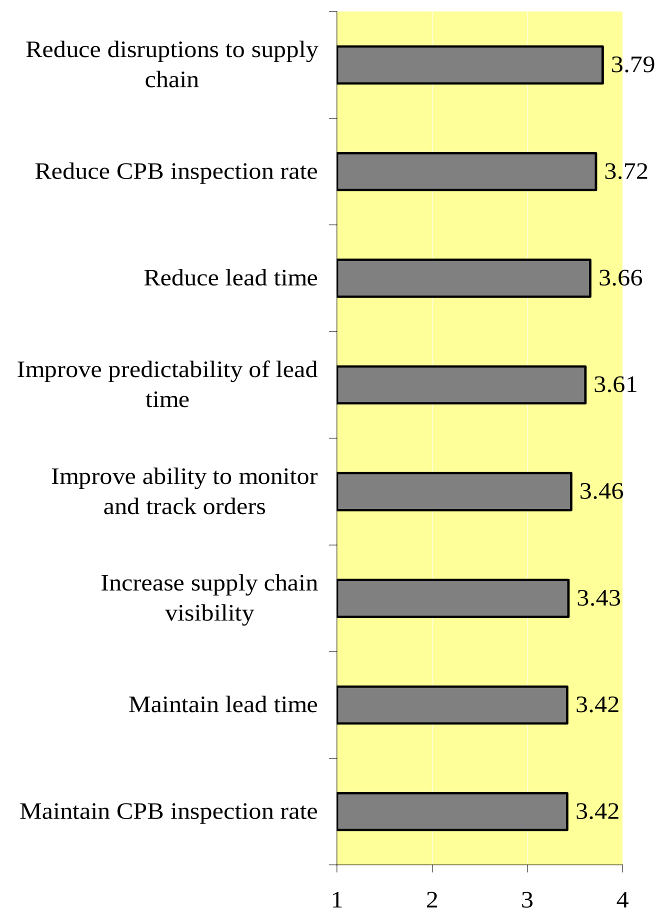
Table V-19: Potential benefits for joining C-TPAT by business type (mean ratings)

Potential benefits	Importers	Carriers	Service Providers	Manufacturers
Obtain access to the FAST program	3.24	3.74	3.02	3.52
Reduce time and cost of getting cargo released by CBP	3.82	3.79	3.59	3.78
Reduce time in CBP secondary cargo inspection lines	3.73	3.76	3.58	3.82
Improve predictability in moving goods and services across borders	3.70	3.70	3.42	3.73
Generate significant for cost avoidance	3.45	3.49	3.23	3.40
Reduce cargo theft and pilferage	3.34	3.52	3.47	3.36
Improve asset utilization	3.22	3.38	3.14	3.10
Improve security for workforce	3.38	3.57	3.36	3.32
Reduce penalties	3.45	3.55	3.40	3.26
Reduce insurance costs	3.15	3.34	3.09	2.80

Potential Benefits for Importers

Figure V-24 presents the mean ratings of the potential benefits for Importers to join C-TPAT. According to Importers, the most important motivation for them to join C-TPAT is to "to reduce the disruptions to the supply chain." On the four point scale, this potential benefit scored a mean rating of 3.79. The vast majority of Importers reported "reducing the disruptions in the supply chain" is extremely important (78.2%) or somewhat important (15.0%). Second on the list of most important motivations is "to reduce CBP inspection rate (3.72). Nearly three-quarters (74.1%) of Importers indicated that this potential benefit is extremely important. Next on the list of motivations are "to reduce the lead time" (3.66), and "to improve the ability to monitor and track orders within the supply chain" (3.61). Of all the potential benefits, "maintaining the U.S. CBP inspection rate" and "maintaining the lead time" received the lowest mean ratings (3.42). Importers showed no significant differences with respect to size or period of time they have been C-TPAT certified.

Figure V-24: Motivations for Joining C-TPAT for Importers

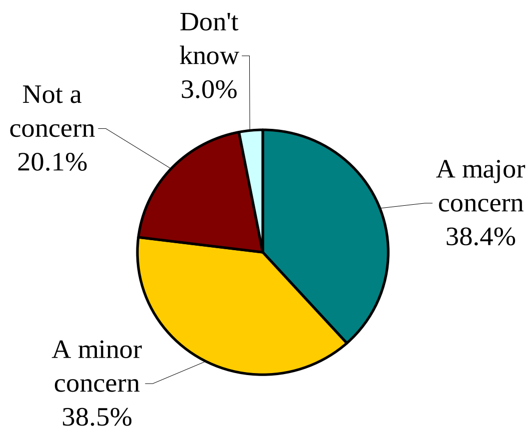


Potential Benefits for Non-Importers

Non-Importers represented 45.7 percent of the sample and consisted of Carriers, Manufacturers, and Service Providers. Six out of ten (62.6%) non-Importers indicated that their customers required them to be C-TPAT certified. Carriers (71.7%) were more likely to say that their customers required a C-TPAT certification than Service Providers (63.3%) and Manufacturers (36.4%). Furthermore, the percentage of businesses reporting that their customers required a C-TPAT certification was significantly higher with businesses having a C-TPAT certification period of more than 3 years (72.5%) than with businesses with a 2 to 3 year certification period (58.6%) and less than 2 years (55.4%). With respect to size, non-Importers showed no significant differences on this item.

In addition, more than one-third (38.4%) of businesses indicated that their management was concerned about the potential impact on cost when their companies were considering joining C-TPAT. A similar percentage (38.5%) of companies reported the potential impact on costs was a minor concern for management (see Figure V-25)

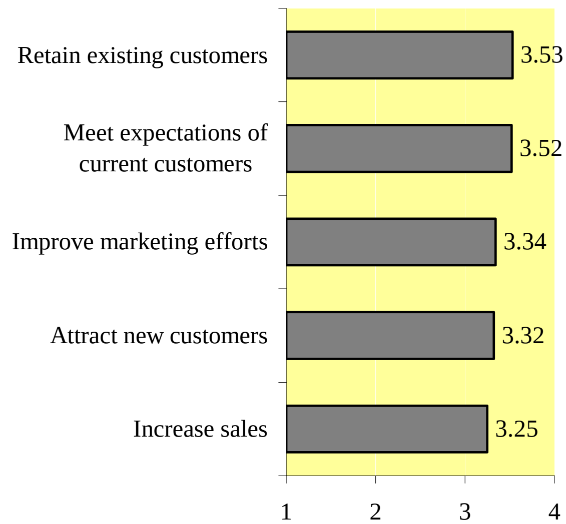
Figure V-25: Potential impact on costs for joining C-TPAT



Overall, one third (33.3%) of the non-Importers had developed a business case for joining C-TPAT and nearly half (49.9%) had not. There were no significant differences based on size, type of business, or number of C-TPAT certification years. However, those companies for which the potential impact on cost was a major concern were more likely to develop a business case (49.4%) compared to companies for which the potential impact on cost was a minor concern (34.6%) or not a concern at all (14.4%).

In addition to these characteristics, non-Importers were asked a different set of potential benefits about their sales, marketing efforts and customers. Figure V-26 presents the potential benefit mean ratings for non-Importers. Of all the items, "retaining existing customers" (3.53) and "meeting expectations of current customers" (3.52) received the highest mean ratings and more than half (57.9% and 58.9% respectively) of non-Importers rated them as extremely important. Next on the list of most important potential benefits is "improving marketing sales" with a mean rating of 3.34. "Increasing sales" received the lowest importance ratings with a mean of 3.25 on the four point scale (see Figure V-26).

Figure V-26: Potential benefits for Non-Importers

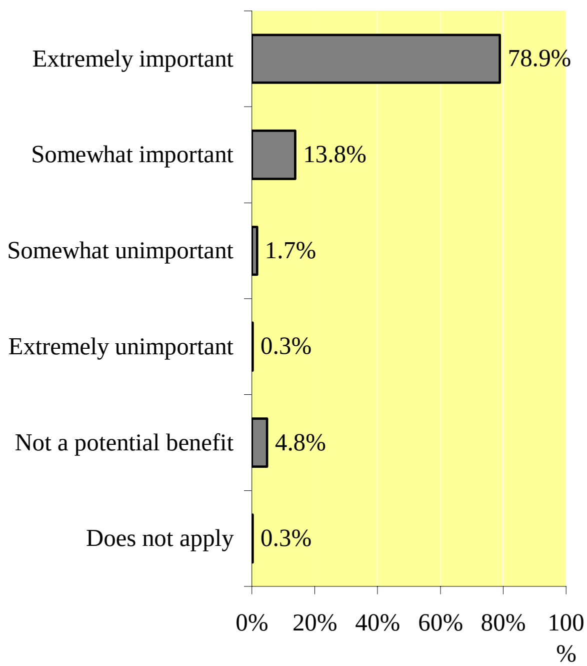


With regard to the potential benefits "improving marketing efforts" and "increasing sales, the results showed no significant differences among Carriers, Manufacturers, and Service Providers. However, Carriers were more likely to give higher ratings to "attracting new customers" (3.41) and "retaining existing customers" (3.59) than Manufacturers, who rated these benefits at 3.14 and 3.37 respectively. Carriers also gave higher ratings to "meeting expectations of current customers" than Manufacturers (3.37) and Service Providers (3.46). There were no significant differences by business size or the number of years or the business has been C-TPAT certified.

Potential Benefits for Highway Carriers

In addition to these potential benefits, Highway Carriers, which consist of U.S./Canada Highway Carriers and U.S./Mexico Highway Carriers, were asked how important it was to "decrease wait time at the borders". This potential benefit received a mean rating of 3.81 on the four-point scale. About 8 out of 10 (78.9%) Carriers reported that "decreasing wait times at the borders" is extremely important. Nearly 5.0 percent (4.8%) reported that they would not consider the item to be a potential benefit (see Figure V-27). On this item, the results show no significant differences between the U.S./Canada Highway Carriers (3.79) and U.S./Mexico Highway Carriers (3.88).

Figure V-27: Potential benefit for Highway Carriers: decrease wait times at the borders.



Summary

Overall, businesses gave high mean importance ratings to the potential benefits they considered in their decisions to join C-TPAT. Of all the potential benefits, "reduce time and cost of getting cargo released by CBP" and "reducing time in CBP secondary cargo inspections" received the highest ratings. For Importers, "reduce disruptions to supply chain" and "reducing CBP inspection rate" were the most important potential benefits. For non-Importers, the most important potential benefits included "retaining existing customers" and "meeting expectations of current customers. For highway carriers, "decreasing wait times at the borders" is extremely important for most businesses.

Costs to Implement the C-TPAT Program

This section of the report analyzes the costs associated with the implementation of the C-TPAT program. Prior to analyzing the costs, companies were asked in a multiple response format to list all the U.S. Customs and Border Protection programs or initiatives they had implemented before joining C-TPAT.

U.S. Border Customs and Border Protection Programs or Initiatives before C-TPAT

Slightly more than half of the businesses (54.8%) respondents did not know about the protection programs or initiatives their companies had put in place prior to joining C-TPAT. Of all the programs, the PIP (Partners in Protection) has been the program most implemented by the businesses (see Table V-20). This program has been implemented by more than one-quarter (27.1%) of the businesses. Next on the list of most implemented program is the Business Anti-Smuggling Coalition (BASC) (see Table V-20).

Table V-20: U.S. Customs and Border Protection programs or initiatives implemented before C-TPAT

Programs implemented before C-TPAT	n	% of responses	% of cases (n=1,023)
Business Anti-Smuggling Coalition (BASC)	105	9.7	10.3
America's Counter-Smuggling Initiative (ACSI)	18	1.7	1.8
Partners in Protection (PIP)	277	25.6	27.1
Other	119	11.0	11.6
Don't know	561	51.9	54.8
Total	**1,080**	**100**	**105.6**

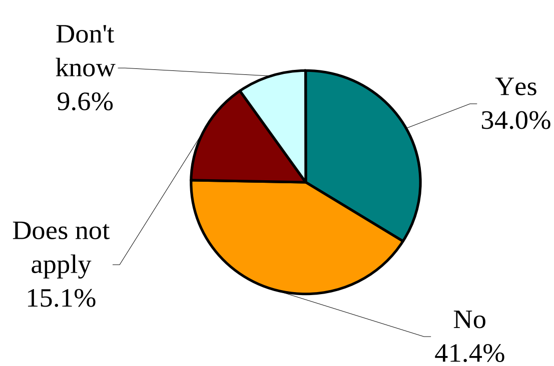
In addition to these programs, 14.5 percent of Importers reported that they implemented other programs. Of this group, 78.3 percent indicated that they implemented the Importer Self-Assessment (ISA) program and 33.3 percent implement the Pre-Import Review Program (PIP). A slightly larger percentage (16.6%) of Carriers implemented the Carrier Initiative Program (CIP) and 22.2 percent of Port Authority or Terminal Operator businesses implemented the Container Security Initiative (CSI). More than one-third (36.0%) of Highway Carriers reported that, prior to joining C-TPAT, their businesses had implemented the Line Release Program (LRP).

Overall, slightly more than one-third (34.0%) of all businesses have used high-security seals (ISO 17712) prior to implementation of C-TPAT security criteria. However, 4 out of 10 businesses had not used the high-security seals and 15.1 percent reported that the security seals did not apply to them, and 9.6 percent said that they did not know (see Figure V-28).

Importers (39.2%) and Manufacturers (38.3%) were more likely to say that they had used high-security seals (ISO 17712) prior to implementation of C-TPAT security criteria than were Carriers (22.8%) and Service Providers (29.0%). Service Providers (38.7%) were also more likely to say that the use of the high-security seals does not apply to them as compared to Manufacturers (7.5%), Importers (9.8%) and Carriers (11.9%).

The use of high-security seals (ISO 17712) prior to implementation of C-TPAT security criteria was also a function of business size. Businesses with annual revenues of more than 10 billion (41.8%) were more likely to say they have used them as compared to businesses with annual revenues of $100 million to less than $10 million (36.9%), $10 million to less than $100 million (35.4%), and less than $10 million (26.1%).

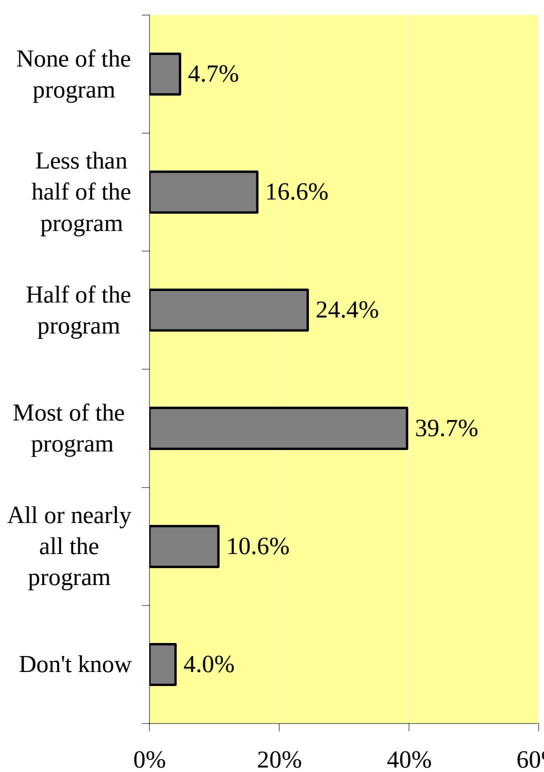
Figure V-28: Use of high-security seals (ISO 17712) prior to implementation of C-TPAT security criteria



Businesses were also asked to report the proportion of C-TPAT program criteria they had implemented at their companies before joining C-TPAT as a result of their participation in previous Customs and Border Protection programs or due to their company's risk management processes. Slightly more than three-eighths (39.7%) of the businesses had implemented most of the C-TPAT program criteria and nearly one-quarter (24.4%) had implemented half of the program before joining C-TPAT. Overall, 10.6 percent of businesses had implemented all or nearly all of the C-TPAT program criteria while 4.7 percent had implemented none of the program (see Figure V-29).

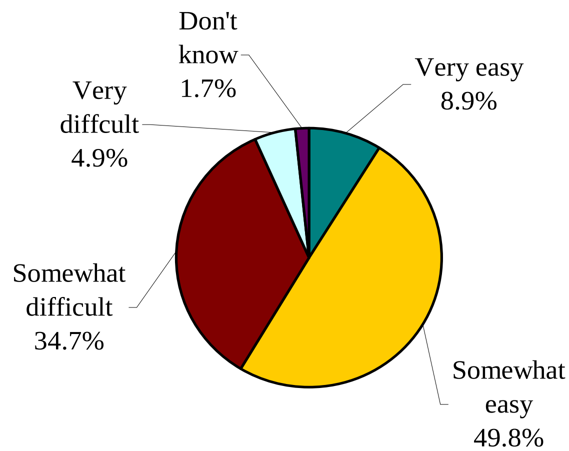
Because of their participation in previous Customs Border Protection programs or due to their company's risk management processes, half of the businesses (50.3%) had implemented most or nearly all the C-TPAT program criteria. It is thus not surprising that more than half (58.7%) of the businesses found that it was very easy (8.9%) or somewhat easy (49.8%) to implement the C-TPAT program criteria for their companies.

Figure V-29: Proportion of C-TPAT program criteria that had already been implemented before joining C-TPAT



Slightly more than one-third (34.7%) found the implementation somewhat difficult and 4.9 percent found it very difficult (see Figure V-30). The results of the survey also indicated that the ease of implementing the C-TPAT program criteria was found across all business types. Overall, 59.3 percent of Importers, 59.1 percent of Carriers, 62.0 percent service Providers, and 59.2 percent of Manufacturers found that it was somewhat or very easy to implement the C-TPAT program criteria.

Figure V-30: Ease of implementation of the C-TPAT program



In addition, 6 out of 10 (60.2%) businesses reported that they performed tests to verify the integrity of their supply chain procedures and 29.8 percent reported they had not. For 1 out of 10 businesses, employees indicated they did not know if their businesses had performed tests to very their supply chain procedures.

Of those businesses that conducted tests to verify the integrity of their supply chain procedures, nearly two-thirds (63.2%) found that security adjustments to their security programs were needed. For the remainder of the businesses (36.8%), no adjustments to their security programs were needed.

Implementation Costs for all businesses

All businesses were given a list of potential C-TPAT implementation costs and were asked whether they have incurred such costs or not. Businesses that indicated they had incurred such costs were asked to provide rough cost estimates. Of all the potential C-TPAT implementation costs, "improving or implementing physical security costs (doors, windows, electronic access, cameras, fences, gates, lighting, etc.)" received the most mentions. They were also the highest among all the potential implementation costs with an average of $38,471. Next on the list of potential costs with most mentions include "improving or implementing in-house education, training, and awareness" costs which were mentioned by 52.3 percent of all businesses. These costs averaged an amount of $9,192. The costs associated with "improving or implementing use of security personnel" received the lowest mentions with 19.7 percent of all businesses indicating that they have incurred such costs (see Table V-21). However, these costs ranked second by the average amount spent. Salaries and expenses of personnel, which averaged an amount of $32,986, were mentioned by 45.2 percent of businesses.

Table V-21: Potential implementation costs for all businesses

Potential Implementation costs	n	% incurring costs	Average cost (n)
Improving physical security	1,287	57.2	$38,471 (575)
Improving in-house awareness	1,213	52.3	$9,192 (372)
Salaries and expenses of personnel	1,349	45.2	$32,986 (463)
Improving cargo security	1,236	43.7	$18,443 (379)
Improving personnel security procedures	1250	43.2	$11,643 (297)
Improving identification system	1,246	41.7	$9,681 (331)
Improving personnel screening procedures	1,233	35.8	$7,079 (249)
Improving IT systems and databases	1,221	33.7	$24,303 (256)
Improving use of security for personnel	1,248	19.7	$35,682 (148)

Unlike business type, which had no significant impact on the potential implementation, the number of years the business has been C-TPAT certified had a significant impact on the average amount spent on some security features. Businesses that have been C-TPAT certified for a period of more than 3 years were more likely to have spent a higher amount ($52,824) on salaries and expenses of personnel hired or contracted specifically to implement and/or manage the C-PAT program compared to those certified for a period of 2 to 3 years ($30,506) and less than 2 years ($17,788).

Businesses that have been C-TPAT certified for a period of more than 3 years were also more likely to have spent a higher amount ($10,999) on improving or implementing personnel screening procedures as compared to those businesses with a C-TPAT certification of a period of less than 2 years ($7,123) and 2 to 3 years ($3,163). Average costs of improving or implementing in-house education, training, and awareness followed a similar pattern where businesses with more than 3 years C-TPAT certification spent an average amount of $14,148. Businesses that have been C-TPAT certified for a period of 2 to 3 years spent an average amount of $9,188 and those with less than 2 years certification spent an average of $4,315.

Not surprisingly, large businesses reported significantly higher average costs on all potential implementation costs than small businesses. For example, businesses with annual revenues of $10 billion or more ($67,317) reported higher average cost on personnel expenses as compared to business with annual revenues of $100 million to less than 10 billion ($39,523), $10 million to less than $100 million ($24,220), and businesses with annual revenues less than $10 million ($9,808). Table V-22 presents the implementation costs by business size. The number of businesses that provided the cost estimates is presented in parentheses.

Table V-22: Implementation costs by business size

Potential Implementation costs	Less than $10 million	$10 million to Less $100 million	$100 million to less than $10 billion	$10 billion or more
Improving physical security	$16,739 (192)	$23,160 (168)	$43,718 (103)	$98,673 (105)
Improving in-house awareness	$2,628 (108)	$4,200 (96)	$12,778 (81)	$20,588 (75)
Salaries and expenses of personnel	$9,808 (130)	$24,220 (119)	$39,523 (99)	$67,317 (104)
Improving cargo security	$6,488 (130)	$14,090 (104)	$18,577 (62)	$45,619 (77)
Improving personnel security procedures	$2,928 (107)	$10,670 (82)	$13,728 (53)	$30,743 (48)
Improving identification system	$2,871 (116)	$4,971 (97)	$9,574 (61)	$33,349 (52)
Improving personnel screening procedures	$2,093 (94)	$6,842 (69)	$13,117 (40)	$13,671 (41)
Improving IT systems and databases	$6,570 (111)	$27,160 (70)	$53,979 (31)	$44,862 (39)
Improving use of security for personnel	$7,093 (39)	$36,992 (41)	$39,419 (33)	$73,202 (29)

Implementation Costs for Importers

In addition to the list of potential cost items that were asked of all businesses, Importers were asked about additional potential cost items relevant to their sector. Nearly half (49.8%) of Importers reported that they have incurred costs related to "developing a new supplier security evaluation survey process" and "educating foreign suppliers, manufacturers, or vendors about security requirements." For each of these security features, Importers have spent an average amount of $13,000 (see Table V-23). Next on the list of implementation costs incurred by Importers were "updating existing foreign supplier, manufacturer, or vendor security evaluation survey process" and "testing the integrity of supply chain security." "Getting foreign suppliers, manufacturers, or vendors to complete security evaluation process" was the last potential implementation cost (mentioned by 41.0 percent of Importers) for which Importers have spent the least amount of money ($6,814). The results also indicated significant differences among importers in regard to "developing a new supplier, manufacturer, or vendor security evaluation survey process" and the number of years they have been C-TPAT certified. The average amount for this potential implementation cost was significantly higher with Importers that have been C-TPAT certified for a period of more than 3 years ($19,504) than with those certified for a period of 2 to 3 years ($9,461) or less than 2 years ($6,459). For the remainder of the potential costs, Importers showed no significant differences.

Table V-23: Potential implementation costs for importers

Potential implementation Costs	n	% incurring costs	Average cost (n)
Developing a new supplier, manufacturer, or vendor security evaluation survey process	578	49.8	$13,627 (149)
Educating suppliers about security	619	49.8	$13,268 (154)
Updating existing supplier security evaluation survey process	598	44.3	$12,797 (127)
Testing the integrity of supply chain security	531	41.8	$12,896 (103)
Getting suppliers to complete security evaluation survey process	585	41.0	$6,814 (107)

Summary

Across all businesses, "improving or implementing physical security costs (doors, windows, electronic access, cameras, fences, gates, lighting, etc.) received the most mentions of all the potential C-TPAT implementation costs. They were also the highest among all the potential implementation costs. For Importers, additional important costs were associated with "developing a new supplier security evaluation survey process" and "educating foreign suppliers, manufacturers, or vendors about security requirements."

Costs to Maintain the C-TPAT Program

Costs to maintain the C-TPAT program for all businesses

Other than the potential C-TPAT implementation costs that they may have incurred, businesses were asked to estimate their annual ongoing expenditures to maintain the C-TPAT program. Table V-24 presents the percentage of businesses which have incurred such maintenance costs and the average amount they spend annually on them.

Table V-24: Annual maintenance costs of ongoing expenditures to maintain the C-TPAT program

Maintenance costs	n	% incurring costs	Average cost (n)
Maintaining physical security	1,160	47.5	$13,141 (349)
Maintaining in-house education, training awareness	1,159	45.0	$4,945 (327)
Maintaining cargo security	1,132	41.4	$7,110 (296)
Salaries and expenses of personnel	1,245	36.3	$28,454 (305)
Maintaining identification system	1,155	35.8	$6,241
Maintaining IT systems and databases	1,130	34.4	$8,752 (206)
Maintaining personnel security procedures	1,185	33.1	5,437 (198)
Maintaining personnel screening procedures	1,180	33.1	$3,723 (209)
Maintaining use of security for personnel	1,167	22.4	$40,441 (124)

Of all the maintenance cost items, “maintaining the physical security” and “maintaining in-house education, training, and awareness” were the most frequently mentioned by all the businesses. These two items were mentioned respectively by 47.5 percent and 45.0 percent of all businesses. Next on the list of maintenance cost items is “maintaining cargo security” which is mentioned by 41.4 percent of businesses.

With respect to the average amount of money spent “maintaining the use of security personnel” ($40,441) and “salaries and expenses of personnel” ($28,454) were the highest costs to maintain the C-TPAT program. These two types of expenditures were mentioned respectively by 22.4 percent and 36.3 percent of businesses. Following these items were the costs associated with “maintaining the physical security” ($13,141) which include doors, windows, electronic access, cameras, fences, gates, lighting, etc.

Except for the annual expenditures “to maintain the use of security personnel” the results showed no significant differences among the types of businesses. For the annual expenditures “to maintain the use of security personnel,” Importers ($61,908) were more likely to incur higher maintenance costs than were Carriers ($14,918). Service Providers reported an average of $40,480 and Manufacturers reported $14,961 on the same maintenance item. However, the low number of Service Providers (19) and Manufacturers (16) who reported expenditures on this item limited their comparison with the other business types.

The results also indicated that annual maintenance costs of “maintaining physical security” and “maintaining IT systems and database development” varied significantly by the number of years the businesses have been C-TPAT certified. On these two items, businesses with less than 2 years of certification ($5,639 and $5,598 respectively) were likely to spend less than were those businesses with a C-TPAT certification of a period of 2 to 3 years ($26,327 and $15,617 respectively). For the rest of the maintenance items (Table V-24) there were no significant differences between the types of businesses and the number of years the businesses have been C-TPAT certified.

The size of the business also has an impact on the business’s annual maintenance costs of ongoing expenditures to maintain the C-TPAT program. Generally, these costs were significantly higher for businesses with annual revenues of $10 billion or more than for businesses with annual revenues of less than 10 million.

Annual Expenditures on Supply Chain Security

Businesses were also asked to provide rough estimates for their company's total annual expenditures on supply chain security during the last full year before they joined C-TPAT, the 2005 annual expenditures, and 2006 and 2007 projected annual expenditures on supply chain security. These questions were asked separately for Importers only and for non-Importers.

During the last full year before they joined C-TPAT, Importers' total annual expenditures on supply chain security averaged an amount of $35,006. This estimation is based on the reporting estimates provided by 44.5 percent of all Importers. The estimated annual expenditures on supply chain averaged $66,353 in 2005 and were projected to be $77,997 and $69,905 in 2006 and 2007 (see Table V-25). Compared to the last year before they began participating in C-TPAT, Importers' expenditures rose by 90 percent in 2005, 55 percent in 2006 and 50 percent in 2007. Importers' annual total expenditures on supply chain showed a substantial increase prior to joining C-TPAT. However, the 2005, 2006, and 2007 total annual expenditures increased at a decreasing rate. In addition, these expenditures showed no significant differences with respect to the number of years Importers have been C-TPAT certified.

Table V-25: Importers' total annual expenditures on supply chain security

Labels	Total annual expenditures on Supply Chain Security	
	Mean	**Median**
Last full year before joining C-TPAT	$35,006 (424)	$2,000
2005 (Estimate)	$66,353 (445)	$10,000
2006 (Projected)	$77,997 (455)	$10,000
2007 (Projected	$69,905 (457)	$10,000

While business size has no significant impact on total annual expenditures on supply chain security the last full year before they began participating in C-TPAT, Importers showed significant differences on the projected 2007 annual expenditures. Businesses with annual revenues of $100 million or more reported significantly higher projected 2007 expenditures than businesses with annual revenues of $100 million or less. For the 2005 estimates and 2006 projected expenditures, businesses with annual revenues of $10 billion or more reported significantly higher amounts than businesses with annual revenues of $10 million to less than $100 million.

For Non-Importers, total annual expenditures on supply chain security follow a similar pattern as that of Importers. However, the 2007 projected expenditures ($100,025) were higher than the 2006 projected expenditures ($61,964).

Table V-26 presents the estimated total annual expenditures on supply chain security for Non-Importers. The 2005 expenditures rose by 21 percent from the last full year expenditures before joining C-TPAT. From 2005, the projected expenditures decreased by 11 percent before increasing by 61 percent with the 2007 projected estimates.

Except for the total annual expenditures on supply chain security incurred during the last full year before joining C-TPAT, non-Importers showed no significant differences with regards to the estimated and projected expenditures and business type. For the expenditures during the last full year before joining C-TPAT, non-Importers which have been C-TPAT certified for a period of more than 3 years ($106,337) were likely to incur higher annual expenditures on supply chain security than were those non-Importers with 2 to 3 years of certification ($28,351) or less than 2 years (31,031). Business size also impacted these annual expenditures. Businesses with annual revenues of $100 million to less than $10 billion were more likely to report significantly higher costs than businesses with annual revenues of less than $10 million.

Table V-26: Non-Importers total annual expenditures on supply chain security

Labels	Total annual expenditures on Supply Chain Security	
	Mean	**Median**
Last full year before joining C-TPAT	$57,406 (467)	$3,000
2005 (Estimate)	$69,474 (491)	$6,500
2006 (Projected)	$61,964 (501)	$8,718
2007 (Projected	$100,025 (508)	$8,241

Summary

In addition to the potential implementation costs, businesses also rated the costs to maintain the C-TPAT program. Of these maintenance costs, “maintaining the physical security” and “maintaining in-house education, training, and awareness” received the most mentions. However, “maintaining the use of security personnel” and “salaries and experiences of personnel” were the highest maintenance costs.

Tangible Benefits of the C-TPAT Program

All businesses were asked to rate how some potential factors were impacted as a result of their participation in C-TPAT. For each type of potential factor, businesses could indicate whether, as a result of their C-TPAT participation, the factor has increased, stayed the same, or decreased. They were also given the option to say that they did not know or that the factor did not apply to their business.

Tangible Benefits for all Businesses

For all businesses, the major impact of their C-TPAT participation has been in the field of workforce security, time to release cargo by CBP, time in CBP inspection lines, and predictability in moving goods. More than one third (34.8%) of all businesses said that the security of their workforce has increased because of their participation in C-TPAT. While half (50.4%) of all businesses said the time to release cargo by CBP has stayed the same, 26.4 percent of businesses reported that, because of their participation in C-TPAT, that time has been decreased. A slightly lower percentage (24.8%) of businesses said that their participation in C-TPAT has decreased the time in CBP inspection lines. As a result of their participation in C-TPAT, businesses have also seen a positive impact on their ability to predict moving goods. Nearly one-quarter (24.4%) of all businesses indicated that C-TPAT has increased the predictability in moving goods (see Table V-27).

While businesses showed no significant differences with respect to the number of years they have been C-TPAT certified, the impact of C-TPAT on potential factors varied by business type. Not surprisingly, Manufactures (30.7%), Importers (30.3%), and Carriers (28.2%) were more likely to say that their participation in C-TPAT has decreased the time to release cargo by CBP than were Service Providers (10.5%). Manufacturers (28.7%), Importers (26.9%), and Carriers (31.4%) were also more likely to say that their C-TPAT participation has decreased the time in CBP inspection lines than were Service Providers (9.1%).

Even though all business have reported that C-TPAT has increased the security of their workforce, the percentage of businesses indicating an increase was significantly higher with Carriers (39.4%), Manufacturers (34.7%), and Importers (33.8%) than with Service Providers (32.8%).

Table V-27: Impact of C-TPAT participation (all businesses)

Potential Factors for All Business Types	**Increased**	**Stayed the Same**	**Decreased**	**Unknown**	**Does not apply**	**Number Responding**
	(%)	(%)	(%)	(%)	(%)	#
Time to release cargo by CBP	11.6	50.4	26.4	8.9	2.7	1,487
Time in CBP inspection lines	7.8	43.7	24.8	16.1	7.6	1,481
Predictability of moving goods	24.4	51.2	6.8	10.5	7.1	1,482
Opportunities for cost avoidance	16.8	49.7	6.2	19.7	7.6	1,473
Cargo theft and pilferage	4.7	49.5	15.6	14.8	15.4	1,477
Asset utilization	10.7	53.0	3.0	17.8	15.5	1,476
Security for workforce	34.8	43.6	1.4	11.2	9.0	1,478
Penalties	3.0	47.8	13.8	16.4	19.0	1,481
Insurance rates	2.8	61.2	5.4	17.9	12.7	**1,476**

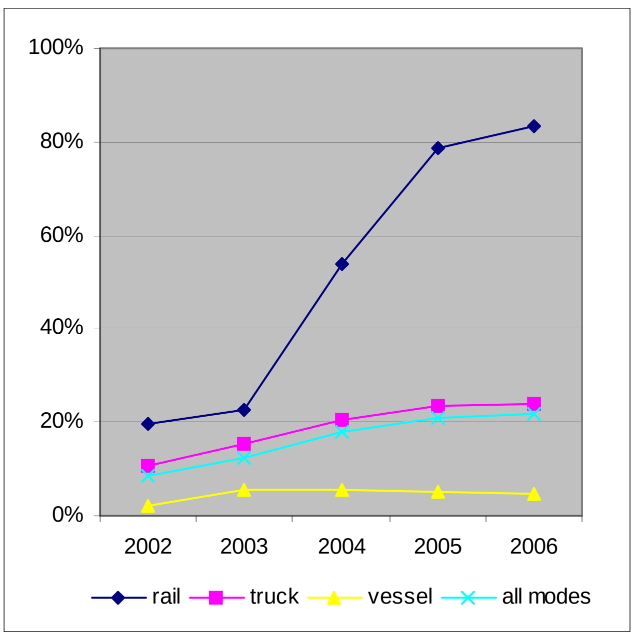
In addition, businesses with annual revenues of $10 million to less than $100 million (37.1%) and $100 million to less than $10 billion (33.9%) were more likely to report an increase of the predictability in moving goods and services across borders than businesses with annual revenues of less than $10 million (25.4%) or $10 billion or more (25.4%)

Examination Rates

Examination rates provided by U.S. Customs and Border Protection show a four-year increase in examination rates for all modes. The examination rates for rail increased from 19.7% in 2002 to 83.3% in 2006. Truck experienced an increase from 10.5% to 23.9% during the same period. Examination rates for vessel increased from 2.3% to 5.5% in 2003 and then declined to 4.9 in 2006. All modes had an increase in examination rates from 8.7% in 2002 to 21.6% in 2006. See Figure V-31 for a graphical presentation of examination rates.

The experience with cargo release and time in inspection lines reported by C-PAT partners in the previous section of this report is clearly better than the increase in examination rates reported for the supply chain industry as a whole.

Figure V-31 Examination rates FY 2002 to 2006



Tangible Benefits for Importers

In addition, Importers were asked how their participation in C-TPAT has impacted their CBP inspections, lead time, ability to predict lead time, ability to monitor and track orders within the supply chain, supply chain visibility, and disruptions to the supply chain. The ratings for these potential factors are presented in Table V-28.

Overall, more one third (35.4%) of Importers reported that their participation in C-TPAT has decreased their number of U.S. Customs and Border Protection (CBP) inspections. In a follow-up question, these businesses indicated that their number of CBP inspections decreased by more than half (51.7%). Businesses which experienced an increase reported that their number of CBP inspections increased by 40.9 percent. In addition, 29.4 percent of Importers said that their participation in C-TPAT has increased their supply chain visibility and nearly one-quarter (24.3%) indicated that their participation in C-TPAT has increased their ability to predict lead time. Participation in C-TPAT has also increased Importers' ability to track orders (22.2%). However, for the majority of Importers (60.9%), the ability to track orders has stayed the same even after they joined C-TPAT. Nearly 3 out 10 Importers (28.9%) reported that their participation in C-TPAT has decreased the disruptions in their supply chain (see Table V-28).

Reduction of the number of CBP inspections varied by the number of year the business has been C-TPAT certified. Importers that have been C-TPAT certified for a period of more than 3 years were more likely to say that their number of inspections have decreased (42.8%) because of the C-TPAT participation than were those Importers which have been C-TPAT certified for a period of 2 to 3 years (33.8%) or less than 2 years (27.1%). For the remainder of the factors, Importers showed no significant differences with respect to the period of time they have been C-TPAT certified.

Table V-28: Impact as a result of C-TPAT participation (Importers)

Potential Factors for Importers	Increased	Stayed the Same	Decreased	Unknown	Does not apply	Number Responding
	(%)	(%)	(%)	(%)	(%)	n
Number of CBP inspections	6.6	44.1	35.4	12.9	1.0	814
Lead time	8.1	60.0	18.6	11.0	2.3	812
Ability to predict lead time	24.3	56.8	4.2	11.9	2.8	810
Ability to track orders	22.2	60.9	2.2	8.6	6.1	805
Supply chain visibility	29.4	56.4	.7	8.9	4.6	809
Disruptions in supply chain	4.5	51.8	28.9	10.0	4.9	803

With regard to size, larger businesses (annual revenues of $10 billion or more) were less likely to experience decreased in CBP inspections (34.1%) than smaller businesses (ranging from 39.8% to 52.0%). Decrease in lead time was also a function of business size. The percentage of businesses reporting a decrease in lead time was significantly higher for businesses with annual revenues of less than $100 million (28.3%) than for businesses with annual revenues of $100 million to less $10 billion (22.6%) and for businesses with annual revenues of $10 billion or more (12.8%). The potential factors "ability to track orders" and "ability to predict lead time" follow the same pattern.

Tangible Benefits for Non-Importers

Non-Importers were also asked how their participation in C-TPAT has impacted their number of customers and their sales revenues. While 68.7 percent of non-Importers said that their number of customers has stayed the same, 17.0 percent reported that their participation in C-TPAT has increased their number of customers. About the same proportion of non-Importers (17.4%) also indicated their participation in C-TPAT has increased their sales revenues (see Table V-29).

As with Importers, impact of C-TPAT participation on non-Importers' number of customers varied by the number of years the business has been C-TPAT certified. Non-Importers with a certification period of more than 3 years were more likely to report that their C-TPAT participation has increased their number of customers (24.8%) as compared to those non-Importers with a certification period of 2 to 3 years (12.7%) or less than 2 years (12.1%). On sales revenues, non-Importers showed no significant differences.

In addition, impact of C-TPAT participation on the number of customers and sales revenues varied by business type. The percentages of businesses that reported an increase in their number of customers and sales revenues were significantly higher with Service Providers (20.0% and 18.2% respectively) and Carriers (18.3% and 19.9% respectively) than with Manufacturers (6.1% and 8.8% respectively).

Overall, since becoming C-TPAT certified, non-Importers who reported an increase have gained 35.2 percent new customers. Non-Importers who reported an increase in sales indicated that their company's sales have increased by 24.1 percent. In addition, non-Importers said that their participation in C-TPAT program has reduced their cargo theft and pilferage by more than one-third percent (33.8%).

With respect to business size, businesses with annual revenues of more than $10 billion (30.0%) and businesses with annual revenues of $10 million to less than $100 million (21.2%) were more likely to experience an increase in the number of customers than were businesses with annual revenues of $100 million to less than $10 billion (14.1%) and businesses with annual revenues of less than $10 million (15.7%).

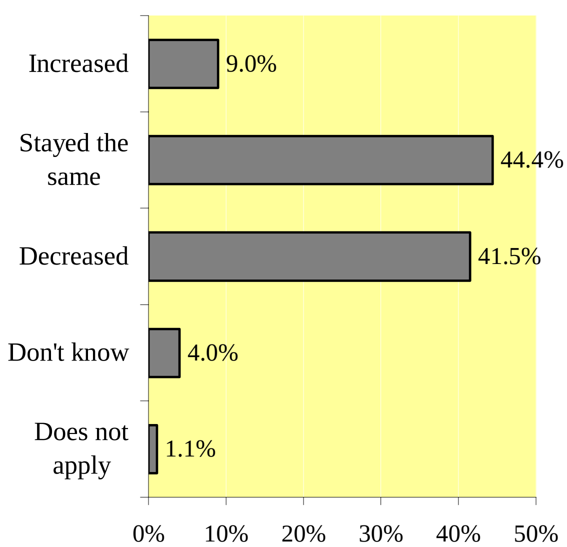
Table V-29: Impact as a result of C-TPAT participation (Non-Importers)

Potential Factors for Non-Importers	Increased	Stayed the Same	Decreased	Unknown	Does not apply	Number Responding
	(%)	(%)	(%)	(%)	(%)	n
Number of customers	17.0	68.7	2.2	6.3	5.9	696
Sales revenue	17.4	63.0	3.9	8.2	7.5	694

Tangible Benefits for Highway Carriers

Highway Carriers, which include U.S/Canada and U.S/Mexico highway carriers, were asked, in a separate question, to rate the impact of their C-TPAT participation on wait times at the borders. As illustrated in Figure V-32, 41.5 percent of Highway Carriers reported that their participation in C-TPAT has decreased their wait times at the borders while 44.4 percent said those wait times have stayed the same. A marginal percentage of Highway Carriers did not rate the impact of C-TPAT on wait times or indicated the factor does not apply to their businesses. Highway Carriers showed no significant differences with respect to the number of years they have been C-TPAT certified or whether they are U.S/Canada or U.S/Mexico Highway Carriers.

Figure V-32: Impact of C-TPAT on wait times for Highway Carriers



Additional Tangible Benefits for Importers and Carriers

Importers and Carriers were asked some additional questions to assess the average cost of each border delay due to U.S. Customs and Border Protection. Slightly more than one-quarter (25.9%) of Importers and Carriers could assign a cost to each border delay. As illustrated in Table V-30, the average cost of each border delay is higher for Air and Rail than with Sea and Land.

Table V-30: Average cost of each border delay

Mode	Average cost of each border delay	
	Mean	**Median**
Air	$31,120 (124)	$725
Rail	$25,308 (42)	$658
Sea	$13,863 (119)	$1,000
Land	$9,235 (136)	$209

Cost Saving from Implementing C-TPAT Measures: All Businesses

As part of the measurable operational benefits, businesses were also asked to estimate the amount of cost savings they obtained by implementing the C-TPAT measures. For all businesses, "Improving or implementing the use of security personnel" and improving or implementing IT systems and database development" generated the biggest cost savings (see Table V-31). Of all the measures, "improving or implementing personnel screening procedures" generated the lowest cost savings. The amount of cost savings on "Improving or implementing IT systems and database development" was significantly higher for Importers ($7,326) than for non-Importers ($3,463). For the remaining implementation measures, there were no significant differences between Importers and non-Importers.

Table V-31: Cost savings from implementing C-TPAT measures for all businesses

Implementation Measures	**Average Cost Savings (n)**
Improving or implementing use of security personnel	$24,496 (45)
Improving or implementing IT systems and database development	$23,277 (63)
Salaries and expenses of personnel to implement or manage C-TPAT program	$19,010 (119)
Improving or implementing physical security	$17,140 (174)
Improving or implementing cargo security	$10,476 (105)
Improving or implementing in-house education, training, and awareness	$9,973 (134)
Improving or implementing identification system	$5,391 (76)
Improving or implementing personnel security procedures	$5,188 (103)
Improving or implementing personnel screening procedures	$3,862 (73)

Cost Saving from Implementing C-TPAT Measures: Importers

Importers were also asked to estimate the amount of cost savings they obtained by implementing the C-TPAT measures. For importers, "testing the integrity of supply chain security" was identified as the implementation measure generating the biggest average cost saving ($56,690). Next on the list was "Updating existing supplier, manufacturer, or vendor security evaluation process" with an average cost savings of $25,815 (see Table V-32). Of all the implementation measures, "developing a new supplier security evaluation survey process" had the lowest cost savings. On these items, Importers showed no significant differences with respect to the number of years they have been C-TPAT certified.

Table V-32: Cost savings from implementing C-TPAT measures for Importers

Implementation Measures	Average Cost Savings (n)
Testing the integrity of supply chain security	$56,690 (41)
Updating existing supplier, manufacturer, or vendor security evaluation survey process	$25,815 (37)
Getting foreign suppliers, manufacturers, or vendors to complete your company's security evaluation survey process	$25,465 (29)
Educating foreign suppliers, manufacturers, or vendors about security requirements	$17,291 (60)
Developing a new supplier security evaluation survey process	$16,619 (37)

Additional Benefits Businesses would like to see added to the C-TPAT program.

In an open-ended question format, businesses were asked to describe the additional benefits they would to see added to the C-TPAT program. These responses were coded in a multiple mention format. Table V-33 presents the tabulated results. Of the proposed additional benefits, "less delays/quicker moving shipments through customs/borders" received the most mentions. Businesses would like also to see "other actual benefits, recognition, and differentiation from non-C-TPAT members", "improved communications", and "more training, awareness, conferences, and education" about the C-TPAT program.

Table V-33 Additional benefits businesses would like to see added to the C-TPAT program

Additional benefits	n	% of responses	% of cases (n=469)
Less delay/quicker moving shipments through customs/borders	100	19.2	21.3
Want to see other actual benefits/recognition/differentiation from non C-TPAT members	88	16.9	18.8
More training, awareness, conferences, and education about the C-TPAT program	62	11.9	13.2
Improved communications	59	11.3	12.6
Lower costs or lower taxes if C-TPAT certified	45	8.6	9.6
Less exams, inspections, fines, or penalties if C-TPAT certified	42	8.1	9.0
Security related issues	29	5.6	6.2
No additional benefits – the program is currently fine	25	4.8	5.3
No additional benefits needed – it's too early to tell	15	2.9	3.2
Other	56	10.7	11.9
Total	**521**	**100**	**111.1**

Summary

Overall, the major C-TPAT impact on business has been in improvements in the field of workforce security, decrease time to release cargo by CBP, time in CBP inspection lines, and increased predictability in moving goods. Importers identified an additional impact related to decrease in disruptions to the supply chain. For the majority of non-Importers, C-TPAT had a limited impact on their number of customers and sales revenues. For Highway Carriers, the major C-TPAT impact has been the decrease of their wait times at the borders.

Intangible Benefits of the C-TPAT Program

This section of the report presents the intangible benefits of the C-TPAT program. Businesses were given a list of potential intangible benefits of participating in C-TPAT and were asked to rate the relative importance or unimportance of each of the benefits to their company. These benefits were divided into two groups; benefits that were asked of all businesses and benefits that were asked of Importers only.

The potential benefits were rated on a 4 point scale where 4 means "extremely important" and 1 "extremely unimportant." Rather than rating the items, respondents could indicate that the item was not a potential benefit or did not apply to their situation.

Potential Benefits for all Businesses

Of all the potential benefits, "enhances security in supply chain" had the highest mean rating. Businesses considered this item to be the most important potential benefit for participant in C-TAPT. Overall, 93.0 percent of all businesses considered it to be very important (69.5%) or somewhat important (23.5%). On the four point scale, this potential benefit scored a mean rating of 3.68.

Next on the list of most important potential benefits are "demonstrates corporate citizenship" (mean rating of 3.57), "improves risk management procedures and systems" (mean rating of 3.55), and "enhances standards with in the industry" (mean rating of 3.50). Nine out of ten businesses rated these potential benefits as very important or somewhat important. "Protecting company's brand image" was also considered as an important potential benefit with a mean rating of 3.50 on the four point scale. Half (50.5%) of all businesses reported that it was "extremely important" to protect the company's brand image. "Access to C-TPAT members' status through SVI" was the least rated potential benefit with a mean rating of 3.19. However, 79.5 percent of all business rated it as very important (36.2%) or somewhat important (43.3%) (see Table V-34).

With respect to C-TPAT certification, businesses which have been certified for a period of more than 3 years (3.5) were more likely to give a higher mean rating to the potential benefit "makes company competitive" than were those businesses with a certification period of less then 2 years (3.3). Businesses with a 2 to 3 C-TPAT certification period gave a mean rating of 3.4 to the same potential benefit. For the rest of the potential benefits, businesses indicated no significant differences with respect to the number of years they have been C-TPAT certified.

The ratings of potential benefits also varied by business type. For example, the potential benefit "makes company competitive" was more important to Carriers (mean rating 3.5) than to Manufacturers (mean rating 3.2). Ratings of the benefit "promotes patriotism" were also significantly higher with Importers (3.4) than with Carriers (3.1). Importers (3.6) also gave higher mean ratings to "demonstrates good corporate citizenship" compared to Carriers (3.5) and Service Providers (3.5). "The incorporation of sound security practices and procedures into existing logistical management methods and processes" also received higher mean ratings from Importers (3.5) than from Service Providers (3.4).

Except for the potential benefit related to protecting the company's brand image, business size had no impact on how the companies rated the remaining of the potential benefits. With regard to protecting the company's brand image, businesses with annual revenues of less than $10 million (3.5) reported a significantly higher mean rating than businesses with annual revenues of $100 million to less than $10 billion (3.4). Businesses with annual revenues of $10 million or more gave a mean rating of 3.5.

Table V-34: Potential benefits for all businesses

Potential Benefits	Extremely important	Somewhat important	Somewhat unimportant	Extremely unimportant	Mean	Not a potential benefit	Does not apply	Number Responding
	4	3	2	1				
	(%)	(%)	(%)	(%)		(%)	(%)	n
Protects company's brand image	50.5	31.9	3.8	1.5	3.50	8.5	3.8	1,490
Makes company competitive	45.9	29.6	6.0	1.9	3.43	12.3	4.4	1,493
Enhances marketing opportunities	41.3	33.8	7.2	1.9	3.36	10.6	5.1	1,493
Protects your industry	57.1	27.7	4.6	1.5	3.54	6.9	2.1	1,487
Facilitates globalization	39.1	34.4	8.2	2.0	3.32	10.5	5.9	1,481
Promotes patriotism	42.4	28.0	9.4	3.3	3.32	10.4	6.5	1,485
Demonstrates corporate citizenship	60.3	29.3	3.8	1.3	3.57	3.5	1.9	1,488
Enhances security in supply chain	69.5	23.5	2.3	0.9	3.68	2.7	1.0	1,490
Improves risk management procedures and systems	58.3	30.9	3.5	1.5	3.55	4.2	1.7	1,490
Enhances standards within the industry	53.0	32.5	4.9	1.1	3.50	6.1	2.4	1,484
Access to C-TPAT members' status through SVI	36.2	43.3	11.9	3.0	3.19	3.9	1.7	1,477
Sound security practices	53.5	37.4	3.9	1.2	3.49	2.9	1.2	1,477

Potential Benefits for Importers

As with the previous sections, Importers were asked to rate a set of potential benefits that are specific to their sector. On the same scale used with all the businesses, Importers rated the relative importance of "assignment of a C-TPAT supply chain security specialist to help your company validate and enhance security throughout your supply chain" and "self-policing and self-monitoring of security activities through the Importer Self-Assessment program." These two potential benefits were respectively rated at 3.42 and 3.43 with more than 80 percent of Importers rating them as very important or somewhat important (see Table V-35). On these two potential benefits, Importers showed no significant differences with respect to size or number of years that they have been C-TPAT certified.

Table V-35: Potential benefits for Importers

Potential Benefits	Extremely important 4	Somewhat important 3	Somewhat unimportant 2	Extremely unimportant 1	Mean	Not a potential benefit	Does not apply	Number Responding
	(%)	(%)	(%)	(%)		(%)	(%)	n
Help from C-TPAT security specialists	49.6	36.0	7.1	1.4	3.42	3.2	2.7	695
Self-policing of security activities	45.4	36.6	5.3	1.0	3.43	3.6	8.1	692

Summary

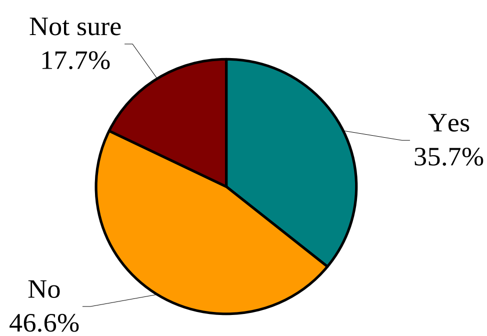
Businesses gave high ratings to potential intangible benefits from the C-TPAT program. These benefits included “enhancing security in supply chain”, “demonstrating corporate citizenship” and, “improving risk management procedures and systems”. For Importers, the most important potential benefits included “assignment of a C-TPAT supply chain security specialist to help your company validate and enhance security throughout your supply chain” and “self-policing and self-monitoring of security activities through the Importer Self-Assessment program.”

Risk Management

Since risk management principles are the basis for C-TPAT to enroll compliant low-risk companies which are directly responsible for importing, transporting, and coordinating commercial import cargo into the United States, survey participants were asked about their company's ability to assess and manage supply chain risk.

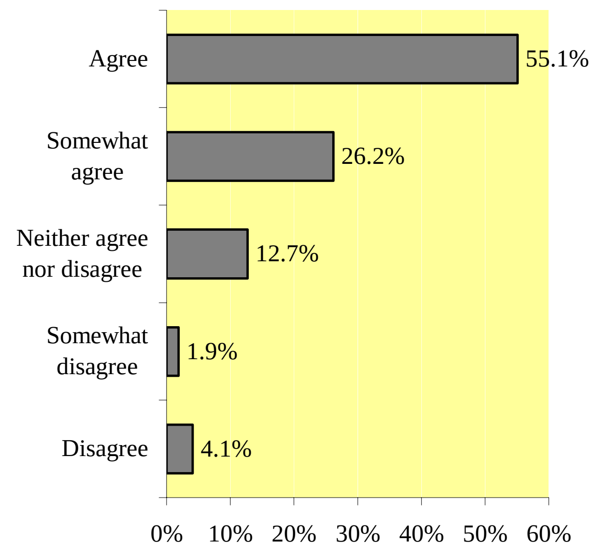
Overall, more than one-third (35.7%) of all businesses reported that they had a formal system in place for assessing and managing supply risk before joining C-TPAT and nearly half (46.6%) of businesses did not have one in place. For about 17.7 percent of businesses, employees were not sure whether their companies had a formal system in place (see Figure V-33). Businesses showed no significant differences by type or by the length of period they have been C-TPAT certified. However, larger businesses were more likely to say that they had a formal system in place before joining C-TPAT. The percentage of businesses reporting that they had a formal system in place was significantly higher for Businesses with annual revenues of $10 billion or more (39.9%) and $100 million to less than $10 billion (38.3%) than for businesses with annual revenues of $10 million to less than $100 million (30.4%) and less than $10 million (33.6%).

Figure V-33: Company had a formal system in place for assessing and managing supply risk before joining C-TPAT



For the businesses that had a formal system in place for assessing and managing supply risk, 81.3 percent agreed (55.1%) or somewhat agreed (26.2%) that their businesses' ability to assess and manage supply risk has been strengthened as a result of joining C-TPAT. Overall, Importers (85.5%) were more likely to say their companies' ability to assess and manage supply risk has strengthened as a result of joining C-TPAT than were Service Providers (72.4%). For Carriers, 78.1 percent agreed with the statement and 80.4 percent of the Manufacturers agreed. On this item, businesses showed no significant differences with respect to their size.

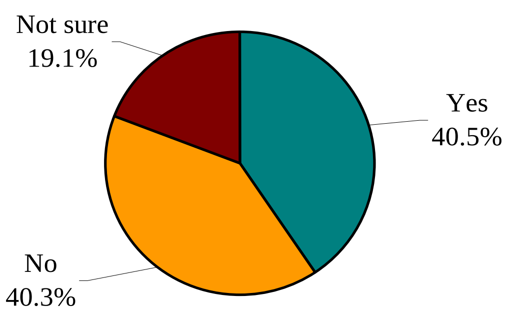
Figure V-34: Company's ability to assess and manage supply risk strengthened as a result of joining C-TPAT



Businesses were also asked if their companies had formal supply continuity and contingency plans in place before joining C-TPAT. Businesses were almost evenly split in their responses. About 40.5 percent of businesses indicated that their companies had formal supply continuity and contingency plans before joining C-TPAT and 40.3 percent had not. About one-fifth (19.1%) of businesses indicated that they were not sure (see Figure V-35). By business type, Manufacturers (58.9%) and Importers (43.0%) were more likely to say that they had such plans than were Carriers (36.9%) and Service Providers (29.5%).

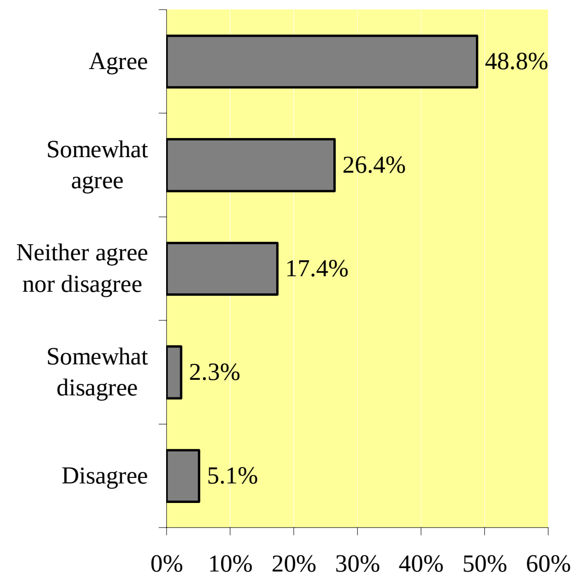
With respect to size, larger businesses were more likely to say that they had supply continuity and contingency plans in place before joining C-TPAT. The percentage of businesses reporting that they had such plans was significantly higher for Businesses with annual revenues of $10 billion or more (51.4%) and $100 million to less than $10 billion (48.6%) than for businesses with annual revenues of $10 million to less than $100 million (37.3%) and less than $10 million (30.5%).

Figure V-35: Company had formal supply continuity and contingency plans before joining C-TPAT



Businesses that indicated that they had formal supply continuity and contingency plans in place before joining C-TPAT were asked a follow-up question to evaluate whether or not their plans had been strengthened as a result of joining C-TPAT. Overall, three-quarters (75.2%) of businesses that had formal plans reported that, as a result of joining C-TPAT, their supply continuity and contingency plans have been strengthened. About 7.4 percent of businesses disagree (5.1%) or somewhat disagree (2.3) with the statement. (see Figure V-36) On this follow-up question, businesses showed no significant differences with respect to business type, size, or C-TPAT certification period.

Figure V-36: Company's supply continuity and contingency plans strengthened as a result of joining C-TPAT



Summary

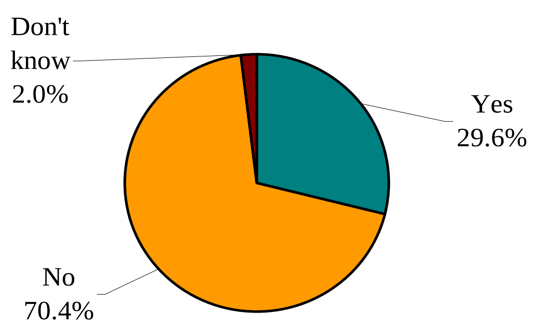
Overall, a minority of all businesses had formal supply continuity and contingency plans or a formal system in place for assessing supply risk before joining C-TPAT. Of those businesses, more than three-quarters reported that their plans have been strengthened as a result of joining C-TPAT.

Overall Experience

In the last section of the survey, businesses were given the opportunity to describe their overall experiences with C-TPAT and to identify those factors that may lead to leaving the program.

When asked whether or not their businesses were required to produce ongoing justification for participating in C-TPAT, 29.6 percent responded in the affirmative. Seven out of 10 businesses (70.4 %) reported that their companies were not required to produce ongoing justification and 2.0 percent said they did not know. (see Figure V-37) With respect to business type, Carriers (40.4%) were more likely to require ongoing justification for participating in C-TPAT than were Importers (26.5%), Manufacturers (26.7%), and Service Providers (28.2%).

Figure V-37: Company is required to produce ongoing justification for participating in C-TPAT



Benefits versus Costs

In the earlier part of the survey, businesses were asked to separately evaluate the tangible benefits, intangible benefits, and the costs associated with their participation in C-TPAT. In this final section of the survey, businesses were given the opportunity to compare the benefits and the costs:

How would you describe your company's overall experience with C-TPAT thus far?

1. **The benefits outweigh the costs**
2. **The benefits and the costs are about the same**
3. **The costs outweigh the benefits**
4. **It's too early to tell**

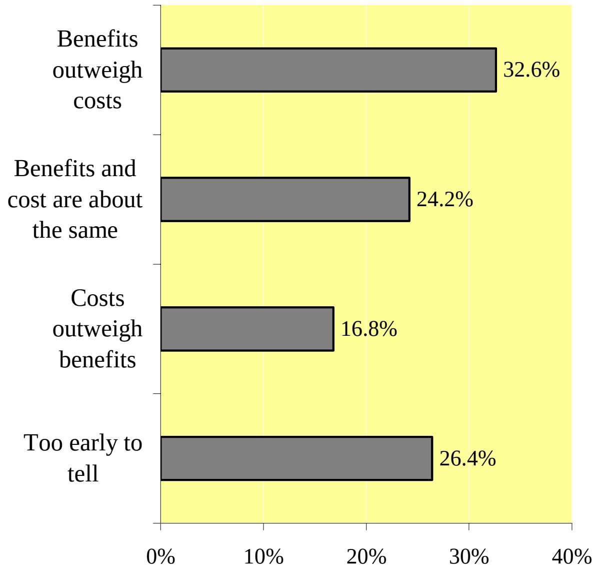
Overall, about one-third (32.6%) of all businesses reported that the C-TPAT benefits outweighed the costs, indicating that their participation in C-TPAT is worth the investment. About one quarter of businesses (24.2%) reported a break-even point, indicating that the benefits and costs were about the same. More than one-quarter of the businesses reported that it was too early to tell and 16.8 percent indicated that the costs outweighed the benefits (see Figure V-38).

The companies' overall experience with C-TPAT varied by business type and by the number of years the business has been C-TPAT certified. Businesses which have been certified for a period of more than 3 years (37.7%) were more likely to say that the benefits outweigh the costs than were businesses with a certification period of 2 to 3 years (28.3%) and less than 2 years (30.6%). Not surprisingly, businesses which have been certified for a period of less than 2 years (30.8%) were more likely to say that "it's too early to tell" as compared to those businesses which have been certified for a period of 2 to 3 years (28.5%) and 3 years or more (21.1%).

Businesses that indicated the potential impact for joining C-TPAT on costs was not a concern for their management (42.5%) were more likely to say that C-TPAT benefits outweigh the costs than businesses that indicated the potential impact on costs was a major concern (27.3%). One third (33.8%) of businesses that said the potential impact on costs was minor concern for their management said C-TPAT benefits outweigh the costs. Not surprisingly, businesses that indicated the potential impact on cost was a major concern (26.8%) were more likely to say that the C-TPAT costs outweigh the benefits as compared to those businesses that reported a minor concern (12.6%), not a concern (6.6%), or did not know (10.5%). In addition, businesses that did not know about whether or not their management was concerned about the potential impact for joining C-TPAT on cost (50.9%) were more likely to report that it was "too early to tell" as compared to those businesses which indicated a major concern (23.6%), a minor concern (26.8%), and not a concern (26.7%).

Considering that more than one-quarter (27.3%) of businesses, that indicated the potential impact for joining C-TPAT was a major concern to their management, said that the C-TPAT benefits outweigh costs — an important positive outcome for C-TPAT.

Figure V-38: Company's overall experience with C-TPAT thus far



With respect to business type, the percentage of businesses that indicated benefits outweighed the cost was significantly higher with Manufacturers (35.7%) and Importers (36.1%) than with Service Providers (29.2%) and Carriers (25.3%). Furthermore, businesses that were not required to produce ongoing justification for participation in C-TPAT (35.3%) were more likely to say that the benefits outweighed the costs than those that were not required to do so (29.7%).

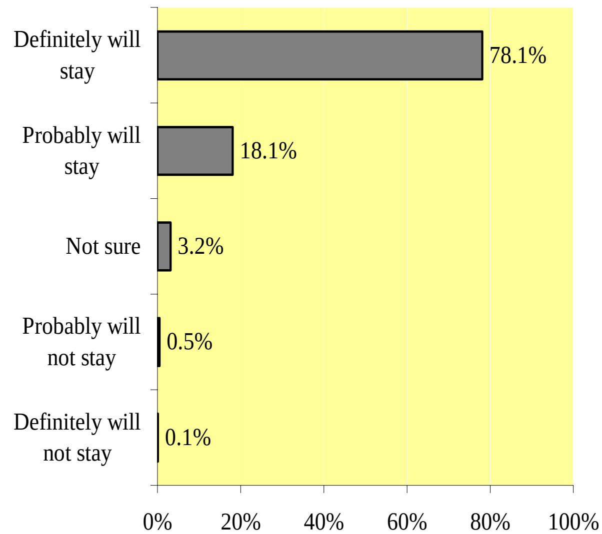
In addition, businesses were asked about the likelihood of them staying in the C-TPAT program.

What is the likelihood of your company staying in the program?

1. **Definitely will stay in the program**
2. **Probably will stay in the program**
3. **Not sure**
4. **Probably will not stay in the program**
5. **Definitely will not stay in the program**

The vast majority of businesses (96.2) indicated they would definitely (78.1%) or probably (18.1%) stay in the program. A marginal percentage (0.6%) of businesses reported that they would definitely (0.1%) or probably (0.5%) leave the program (see Figure V-39). Analysis of the results also showed that decisions to stay in the program did not vary by business type, size, or by the period of time the company has been C-TPAT certified.

Figure V-39: Likelihood of company staying in the Program



Factors that May Lead to Leaving the Program

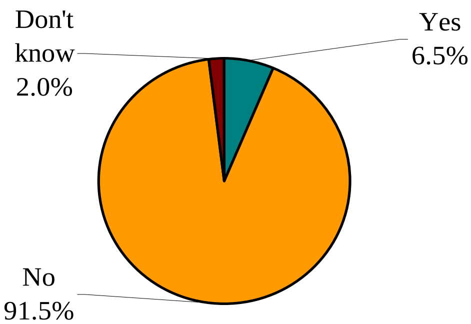
Businesses were also asked if they have ever considered leaving the C-TPAT program. Those businesses which responded to the affirmative were asked to identify the list of factors that may have led to such a decision.

Has your company ever considered leaving the C-TPAT program?

1. **Yes**
2. **No**
3. **Don't know**

Overall, 9 out of 10 or 91.5% of businesses said that they have never considered leaving the C-TPAT program and 6.5 percent said they did. The remainder of the businesses (2.0%) said they did not know (see Figure V-40). On this question, businesses showed no significant differences by type, size, or by length of C-TPAT certification period.

Figure V-40: Has your company ever considered leaving the C-TPAT program?



Among the factors that may have led to considering leaving the C-TPAT program, the factor "increase in requirements, costs, and workload" received the most mentions (see Table V-36). This factor was mentioned by the vast majority (87.6%) of the businesses which have considered leaving the program. Other factors include "lack of foreign suppliers willing to participate" (40.2%) and "third party issues, costs" (38.1%). The factors "major security breach" (2.1%) and "competing program(s) in a key source country or within federal government (9.3) received the lowest mentions.

In regards to business type, Importers (91.7%) were more likely to mention "increase in requirements, costs, and workload" than were Service Providers (82.6%), Carriers (83.3%), and Manufacturers (87.5%). However, Service Providers (60.9%) were more likely to mention the factor about "third party issues and costs" than Manufacturers (12.5%), Importers (29.2%), and Carriers (44.4%).

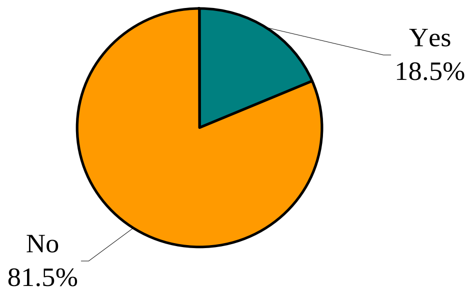
Table V-36: Some factors that led to considering leaving C-TPAT program

Factors that led to considering leaving C-TPAT program	n	% of responses	% of cases (n=97)
Increase in requirements, costs, workload	85	33.1	87.6
Lack of foreign suppliers willing to participate	39	15.2	40.2
Third party issues, costs	37	14.4	38.1
Lack of harmonization among programs	34	13.2	35.1
Increase in liability	23	8.9	23.7
Competing program(s) in a key source country or within federal government	9	3.5	9.3
Major security breach	2	0.8	2.1
Other	28	10.9	28.9
Total	**257**	**100**	**264.9**

Contact with C-TPAT

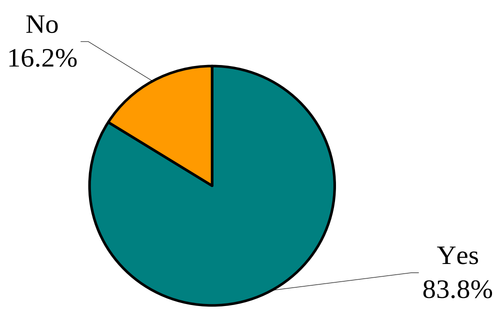
Overall, 9 out of 10 (92.6%) businesses have contacted the C-TPAT program and 7.5% have not. Of those businesses that have contacted C-TPAT, 81.5 percent said that they have not experienced difficulties in obtaining responses to their questions or concerns and less than one-fifth (18.5%) said they had (see Figure V-41). While businesses differed on many aspects of the survey instrument, they showed no significant differences in their experiences in contacting C-TPAT.

Figure V-41: Contact with C-TPAT and difficulties in obtaining responses to questions or concerns



In addition, 83.8 percent of businesses which have contacted C-TPAT also indicated that C-TPAT responses to their questions or concerns were provided in a timely fashion. However, 16.2 percent responded that C-TPAT responses to their questions were not so provided (see Figure V-42).

Figure V-42: C-TPAT Responses were Timely



Businesses that contacted C-TPAT and had experienced difficulties in obtaining responses to their questions were asked, in an open-ended question format, to describe the nature of the difficulty they experienced. These open-ended responses were coded in a multiple mention formation and presented in Table V-37. Slightly more than one third (35.6%) of the businesses mentioned that they received no response (mail or email), callback, or had difficulty reaching someone when they called C-TPAT. Other difficulties included "having a specific difficulty with the program or technical difficulty, or difficulty accessing data" (18.8%) and "delay in getting a response or waiting a long time to receive information" (17.2%). See Table V-37 for a full description of the nature of the difficulties mentioned.

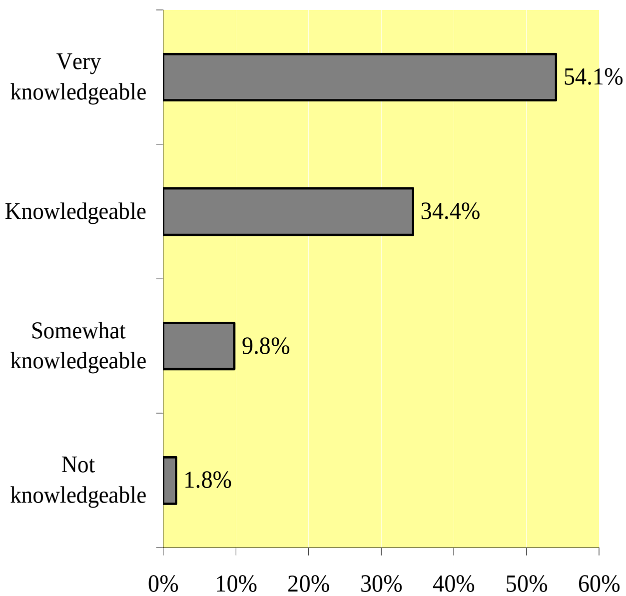
Table V-37: Nature of difficulty experienced with C-TPAT

Nature of difficulty experienced	n	% of responses	% of cases (n=239)
Received no response (phone or email), no callback, or had difficulty reaching someone	85	32.1	35.6
Having a specific difficulty with the program or technical difficulty or difficulty accessing data	45	17.0	18.8
Delay in getting a response/waiting a long time to receive information	41	15.5	17.2
Having trouble with something and having difficulty finding the proper help	28	10.6	11.7
General difficulties, general inquiries or other problems	26	9.9	10.9
Had difficulty understanding questions or had difficulty interpreting sections	22	8.3	9.2
Received different answers from different people, or multiple answers on one question	14	5.3	5.9
Experienced difficulty with initial contact but no difficulty encountered afterwards	4	1.5	1.7
Total	**265**	**100**	**110.9**

The Supply Chain Security Training Specialist

Businesses also had a positive evaluation of their Supply Chain Security Training Specialist (SCSS). As illustrated in Figure V-43, an overwhelming majority (98.3%) of businesses reported that their Supply Chain Security Specialist was very knowledgeable (54.1%), knowledgeable (34.4%), or somewhat knowledgeable (9.8%). A marginal percentage of businesses indicated their SCSS was not knowledgeable. Interestingly, this appreciation of the knowledgeable of the Supply Chain Security Specialist was across all businesses regardless of their type, size, or the number of years they have been C-TPAT certified.

Figure V-43: Level of knowledge of Supply Chain Security Specialist (SCSS)



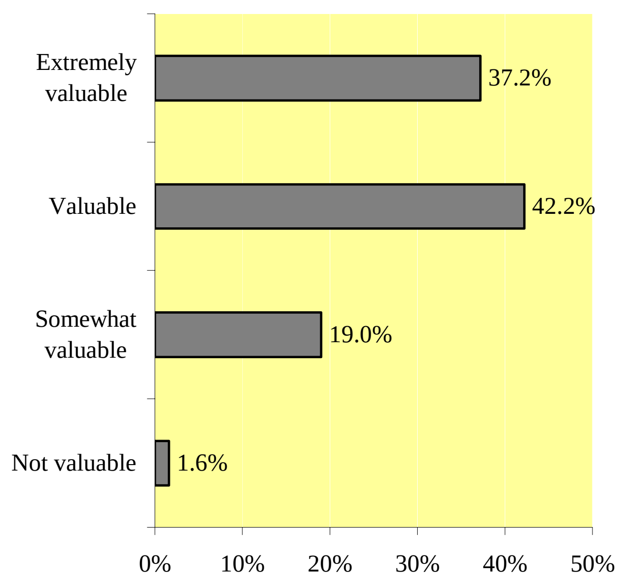
C-TPAT Security Training Conference

Somewhat less than one-third (29.3%) of all businesses have ever participated in the C-TPAT Supply Chain Security Training conferences. About seven out of ten (70.7%) indicated they have never participated in any Supply Chain Security conferences.

The percentage of businesses participating in a conference was significantly higher with Manufacturers (42.9%) than with Importers (29.2%), Carriers (27.3%), and Service Providers (26.3%). Not surprisingly, businesses which have been C-TPAT certified for a period of more than 3 years (38.4%) were more likely to have participated in a C-TPAT Supply Chain Security Training conferences than were those businesses with a C-TPAT certification period of 2 to 3 years (24.0%) and less than 2 years (24.0%). Businesses with annual revenues of $10 billion or more (41.2%) were also more likely to say they have participated in C-TPAT security training conference than businesses with annual revenues of less than $10 million (23.3%) and businesses with annual revenues of $10 million to less than $100 million (25.4%).

When asked to rate the value of the C-TPAT Supply Chain Security Training conferences, 98.4 percent of the conferences participants said that the conferences were valuable. More than one third (37.2%) of the participants rated the conferences to be extremely valuable and 42.2 percent rated them as valuable. About 1 in 5 participants rated the conferences as being somewhat valuable. The remaining (1.6%) participants rated the conferences as being not valuable (see Figure V-44). As with the evaluation of their experiences with C-TPAT and knowledge level of their Supply Chain Security Specialist (SCSS), businesses showed no significant differences in rating the value of the C-TPAT Supply Chain Security Training conferences.

Figure V-44: Value of the C-TPAT Supply Chain Security Training conferences



Furthermore, half (50.2%) of the businesses would like to have the C-TPAT Supply Chain Security conferences presented once each year. Slightly more than one third would like to have them twice a year and 15.8 percent would like to have them presented every other year. Service Providers (41.3%) were more likely to prefer to have the conference twice a year than were Carriers (26.0%), Manufacturers (30.8%) and Importers (35.0%). The percentage of businesses indicating the once-a-year preference was significantly higher with Carriers (55.7%) and Importers (50.0%) than with Manufacturers (48.1%)

and Service Providers (45.5%). However, businesses with annual revenues of $10 billion or more (36.2%) and $100 million to less than $10 billion (36.9%) were more likely to say they would like to have the conferences twice a year than businesses with annual revenues of $10 million to less than $100 million (32.9%) and less than $10 million (29.9%).

Areas of Weakness

When asked to describe the greatest areas of weakness in an open-ended question format, businesses 28.8 percent reported that “there were no actual benefits, or the benefits were hard to measure”. Next on the list of weaknesses were the “lack of communication” and the “high costs (financial and time) of implementing C-TPAT.” See Table V-38 for a complete list of the coded weaknesses.

Summary

Overall, about one-third of all businesses reported that the C-TPAT benefits outweighed the costs. While most of them indicated that they are not required to produce ongoing justification for participating in C-TPAT, the overwhelming majority of businesses has never considered leaving the C-TPAT program (91.5%) and would definitely (78.1%) or probably (18.1%) stay in the program. These results represent a highly positive view of the C-TPAT program overall, with benefits weighed against the costs. Businesses also gave positive ratings to their Supply Chain Security Training Specialist (SCSS). The conference participants said that the Supply Chain Security Training conferences were valuable, and 3 out 10 businesses had participated in these events.

Table V-38: Greatest areas of weakness in the C-TPAT program

Nature of difficulty experienced	n	% of responses	% of cases (n=239)
There are no actual benefits, or the benefits are hard to measure	288	26.4	28.8
Communication is lacking or difficult to achieve	146	13.4	14.6
The costs (financial and time) of implementing C-TPAT are high	92	8.4	9.2
Validation/certification is too long	88	8.1	8.8
There is a lack of participation; the program is voluntary but should be mandatory/required	74	6.8	7.4
Problems, incompatibilities with foreign nations and the program	68	6.2	6.8
Clarity issues: there is some part of the program or process that is unclear	68	6.2	6.8
There is a lack of training, information, awareness, and/or education of the program	65	6.0	6.5
Suggestions to improve program	53	4.9	5.3
Comments/problems about security related issues	48	4.4	4.8
Other	101	9.3	10.1
Total	**1,091**	**100**	**109.1**