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Master Degree Project in Logistics and Transport Management

Authorised Economic Operator (AEO)

Looking into the current perception and the future of the AEO program in Sweden

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Abstract

This paper revolves around the European Union's (EU's) Authorised Economic Operator (AEO) program, where operators are provided preferential treatment and simplified customs procedures with the real purpose creating a totally facilitated and secure international supply chain. The September 11 attacks uncovered how vulnerable supply chains actually were to unanticipated disruptions. Following the attacks, number of initiatives aimed at improving the security of the supply chain were introduced worldwide. While securing the supply chain, these programs can have the effect to hinder trade. In a world where customers are demanding their product to be delivered quicker and cheaper, the topic of trade facilitation has been increasingly discussed. The World Customs Organization (WCO) established the SAFE Framework guidelines in 2005, aiming to both facilitating trade and securing supply chains at the same time. The SAFE Framework provides the base for all regional AEO programs worldwide.

This paper is based on a previous research from 2011, which focused on how the AEO program impacted supply chain security and customs procedures for Swedish companies. However, this paper revolves around how companies in Sweden perceive the AEO program in terms of its current and future impacts. Due to limited research available on the topic of AEO, an exploratory research was performed providing the reader with a conceptual framework of all related aspects of the AEO program.

Interview results have revealed that the AEO certification raises security awareness within companies as well as slightly reducing the overall workload when it comes to customs procedures. Other than that, the program offers limited benefits but companies hope that being certified will aid them in the future. The paper concludes that it is essential that the AEO certification and its reputation are sufficiently valuable in order for companies to apply to become certified or even maintaining their current AEO status. Hence, governments and companies should strongly promote the AEO certification in order to exploit its suggested benefits to the fullest.

Key words: Authorised Economic Operator (AEO), Trade Facilitation, Supply Chain Security, Customs Procedures, and Competitive Advantage.

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Abbreviations

AEO	-	Authorised Economic Operator
AEO-C	-	Authorised Economic Operator - Customs Simplifications
AEO-F	-	Authorised Economic Operator - Full Certificate
AEO-S	-	Authorised Economic Operator - Security and Safety Certificate
CCC	-	Community Customs Code
CSI	-	Container Security Initiative
C-TPAT	-	Customs-Trade Partnership Against Terrorism
EU	-	European Union
SAFE	-	Framework of Standards to Secure and Facilitate Trade
SME	-	Small to Medium Enterprise
Tullverket	-	Swedish Customs Authority
QCA	-	Qualitative Comparative Analysis
UCC	-	Union Customs Code
U.S.	-	United States
WCO	-	Worlds Customs Organisation
WTO	-	World Trade Organisation

1. Background and Introduction

Being an Authorised Economic Operator (AEO) aims to offer companies and organisations the possibility to simplify their customs procedures, as well as securing their supply chain (WCO 2010).

1.1. Background

Statistics from the World Trade Organisation (WTO) shows that free trade and economic growth are closely correlated. National protectionism and other governmental subsidies tend to have an opposite effect of the economy in a longer perspective. Liberalizing trade by loosening trade regulations usually results in a positive outcome. (WTO a2015)

According to the WTO (b2015) global trade has been increasing steadily since the economic crash of 2008. Along with the increase in global trade there is also an increase in container trade (World Shipping Council 2015). The increase in world trade has made the global supply chain more complex than ever. Organizations do not have the same control over their supply chain as before. The increase in global trade means an increase in global container transportation. Transporters have become more and more dependent on the container, along with the increased supply chain complexity and its vulnerability to any outside threat has increased. (Kommerskollegium 2008; Acciaro and Serra 2013)

The terrorist attacks of September 11, 2001, exposed how terrorists and other activist groups can attack the global supply chain using containers or vessels and thereby severely affecting international trade (Thibault, Brooks, and Button 2006). The event marked radical changes in what is called supply chain security. It previously revolved around reducing the risk of cargo theft and pilferage. Where today, it revolves around policies, procedures and technology aimed to protect the supply chain assets (Kommerskollegium 2008; Closs and McGarrell 2004). As a result, a number of security and customs initiatives have been introduced worldwide. The United States led the change by introducing security programs like the “Customs-Trade Partnership Against Terrorism” (C-TPAT) as well as “100% scanning” of all imported containers. Soon after, the WCO followed by providing all member states with guideline on setting up a security program, named the “SAFE Framework”. (Kommerskollegium 2008)

Customs programs such as “100% scanning” and other initiatives were implemented to make sure the supply chain is secure but also possessed the ability to make trade more complex. On average a typical transaction passes 27-30 parties, involving a myriad of documents to be filled out along with random security inspections causing extra costs and time wasted for all parties involved. (Kommerskollegium 2008)

In a world where customers are demanding their product to be delivered quicker and cheaper, the topic of trade facilitation has been increasingly discussed. Improving trade facilitation refers to making policies and introducing measures aimed at making cross-border transactions more efficient and less costly. At the same time, it should allow customs to fulfil its objectives of customs controls in the form of revenue collection, security and community protection in an efficient manner. (Moisé, Orliac & Minor 2011; Mikuriya 2011) One of the initiatives aimed at securing the supply chain and facilitating international trade is the EU's customs certificate, called Authorised Economic Operator, or from now on only referred to as, AEO.

The concept of AEO stretches all over the supply chain (see Figure 1), and all types of actors within the supply chain have the possibility to become AEOs. AEO is thereby an integrating and holistic concept that aims to facilitate trade throughout the entire supply chain. The broad scope of the supply chain is the reason why trade-facilitating activities has to be implemented in all parts of it. (UNECE 2015) Figure 1 displays the overall supply chain interactions.

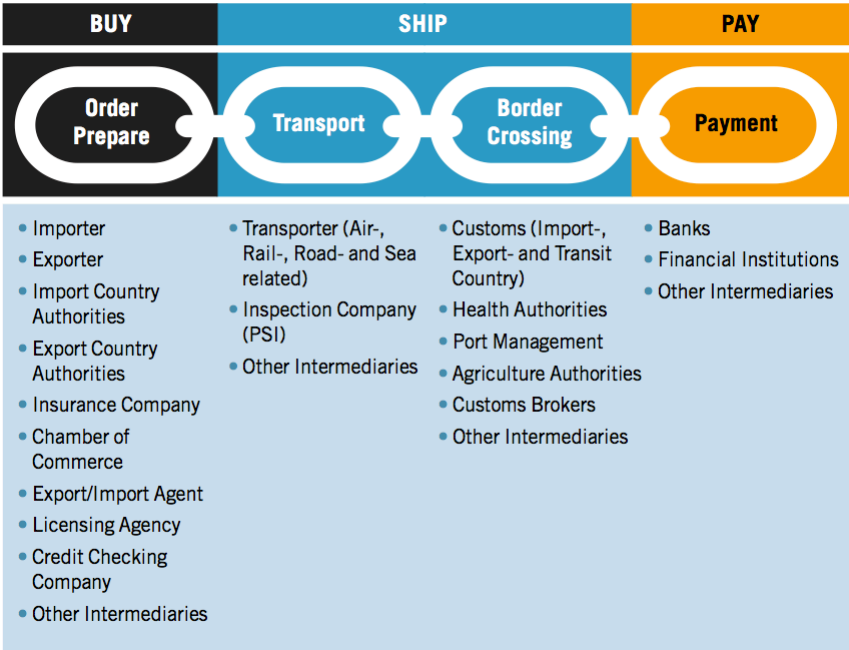


Figure 1 - The Trade Chain (Kommerskollegium a2015)

Growing global trade and increase in supply chain security risks has forced customs administrations to shift from their traditional role as revenue collectors into focusing more on securing and facilitating international trade. In 2005 the WCO adopted the Standards to Secure and Facilitate Global Trade known as the SAFE Framework. The framework is a guide for member states on how to adopt legislation, which in turn promotes secure trade, revenue collection, and better trade facilitation. Along with introducing a new approach in end-to-end management of goods across borders, in a closer partnership between businesses and customs authorities. (WCO 2012)

WCO members are 179 in total and responsible for managing over 98% of total world trade (WCO a2015).

This paper focuses on the topic of AEO certification, which originates within the SAFE Framework. According to the SAFE framework, an AEO can be considered a business entity of any kind, involved in international movement of goods which, have been approved by national customs authorities and who follow the standards of the WCO. (WCO 2012)

The EU's AEO program came into effect on January 1st 2008. The Program builds on the WCO's AEO program and was implemented to promote improved safety standards in order to respond to supply chain security threats, facilitate international trade and cross border transactions, as well as strengthening Customs-to-Business partnerships. (WCO 2012)

The concept of the EU's AEO revolves around providing reliable business entities, often called operators, with preferential status when it comes to security control and to simplify customs procedures as well as guaranteeing transparency and equal treatment of all certified AEO operators. (WCO 2012)

Along with the aforementioned benefits supposedly offered by the AEO program, it has been claimed that the real purpose was to create a totally facilitated and secure international supply chain (Just-in-Time Management 2015).

1.2. The Swedish Context

Swedish Customs Authorities have been working on improving the security of the international supply chain and in the beginning of the 21st century formed their own security program together with Swedish businesses. The programs were named Stairway and StairSec.

With Swedish Customs being a member of the WCO it introduced the AEO certificate to Swedish operators and so replacing the previous security programs. (Kommerkollegium 2008)

The benefits offered by the AEO program within Sweden, are the same as within the EU. In a Swedish study on the impact of AEO in Sweden, which this paper builds on, Swedish Customs Authorities claimed that the AEO program had improved the cooperation between Customs Authorities and the EU, and making rules more standardised. Interviewed companies on the other hand claimed, that since the introduction of AEO they spent more time on customs procedures than they did before and claimed that they were not experiencing the proposed benefits after being AEO certified (Gotheim and Fjaervoll 2011)

The views on the achieved results since the introduction of the EU's AEO program have differed. Some studies have revealed positive results while others haven't. The Swedish study, which was done four years ago, revealed slight increase in security awareness but efficiency was left either decreasing or unchanged. (Gotheim and Fjaervoll 2011)

Becoming and AEO certified operator can be capital expensive, depending on a businesses current level of security standards. Therefore it is important to research if participating in the AEO program does provide you with any benefits so an operator can take an informed decision if they should apply to become a part of the program or not. (Butter, Liu, and Tan 2010)

314 companies in Sweden have become AEO certified since the program was introduced in 2008. In the early part of 2011, the last time AEO was researched in Sweden, the numbers of companies being certified as AEOs were increasing steadily year by year (Gotheim and Fjaervoll 2011). Since then though the numbers newly certified AEOs have been going down year by year, with a slight decrease in 2011 to an all-time low of only 9 companies being certified in 2014. (European Commission a2015)

One contemplated reason for this decline could be that the market for AEO certified operator is saturated, meaning all eligible companies in Sweden hold the certificate. The other reason might be because of reducing popularity and belief in the program.

1.3. Purpose and Research Questions

The main purpose of this thesis is to investigate the current and future status of the AEO certificate in Sweden, from both an operator and a customs administration perspective. The reason why the authors have decided to perform this research is twofold. This paper should provide companies with information and the current stance of the AEO program in Sweden. Companies which are contemplating whether to apply for the certificate should be able to get a valuable insight into what it would actually mean for them to become certified. Also, this paper will give both companies and Customs Authorities to voice their concerns regarding the program, if there are any.

In order to achieve the purpose of this thesis, the authors have to answer the following research questions:

1. How is the AEO program in Sweden is fulfilling its original purpose in terms of improving security and facilitating trade?
2. Adding to this, the authors want to explore; how do AEO certified companies in Sweden perceive costs and business related benefits with being AEO certified?
3. Finally, what will be the future of the AEO program in Sweden?

1.4. Delimitations

The AEO program being discussed has been implemented in every EU country. Due to time restrictions and the scope of the phenomenon being investigated, the researchers had to limit the research area. The focus of this paper will be on operators who are either Swedish or which have offices in Sweden. And so, it can be said that this study is projecting the Swedish perspective in terms of view on the AEO program.

When researching the AEO program there are myriad of angles that can be looked at such as costs, time, efficiency, communication, government legislation and etc. All of these aspects are interesting when it comes to AEO, but it can be said that this paper's main focus is on trade facilitation and security, as well as trying to produce a practical view on AEO.

2. Conceptual Framework

The aim of this chapter is to present a conceptual framework which is used to understand the position and the research direction of this paper. Conceptual frameworks differ depending on the aim and the focus of each research. (Jabareen 2009) The interpretation of the conceptual framework within this paper originates from this definition:

“The conceptual framework is a network, or a plane, of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena. The concepts that constitute a conceptual framework support one another, articulate their respective phenomena, and establish a framework-specific philosophy.” (Jabareen 2009 pg. 51)

It contributes to the framework mainly in the two following ways: first it identifies research variables, and secondly, it clarifies relationships among the variables. (McGaghie, Bordage, and Shea 2001)

The conceptual framework can be modelled by presenting a diagram of the proposed linkages among the concepts related to the topic or problem on discussion. The concepts stand for abstract terms that are to be discussed, researched, empirically observed, and measured in any way. (Earp and Ennett 1991) Below (Figure 2), has a conceptual model or a diagram been composed by the authors, where concepts and variables are interlinked in order to provide a comprehensive understanding of the topic before it can be analysed.

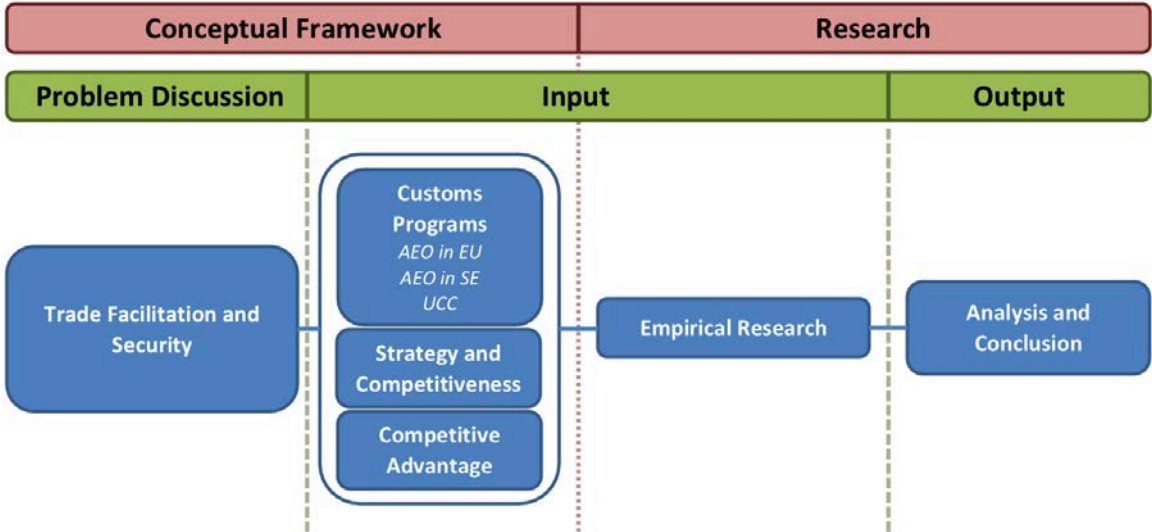


Figure 2 - Report Flowchart

The diagram lists out how each section links with each other. The topic being studied originates from the concepts of trade facilitation and security. These topics are discussed in relation to international transport and trade, followed by the customs programs already implemented in the world today. The AEO concept is presented in more detail along with a discussion on how the program has fared in Europe and in Sweden, since its introduction. The Union Customs Code (UCC) and the expected changes it will have on the AEO program are introduced. Finally, the conceptual framework provides the reader with some insight into what companies think of in terms of strategy and competitiveness, when deciding to become AEO certified.

After reading the conceptual framework, the reader should have a clear understanding on how the environment of AEO functions. It will help the reader when reading over the empirical findings as well as when the analysis is presented.

2.1. Trade Facilitation

Due to the immense increase in global trade and cross-border transactions in the last two decades, the community expressed its concern for greater co-operation between customs authorities. Other concerns include more transparency and less red tape are believed to aid cross-border transactions and related issues. Trade facilitation refers to policies and measures that encourage the reduction in cross-border barriers, which impede international trade, as well as making cross-border checks and transactions more efficient and less costly. (Moïsé, Orliac & Minor 2011).

The European Commission defines trade facilitation as:

“The simplification and harmonization of international trade procedures including import and export procedures” (European Commission b2015).

Trade facilitation affects all parts of trade chain. Figure 3 shows an overview of all possible parties involved in trade transaction. From the exporters to importers, including the transportation and payment process, the border crossings and the agencies involved.

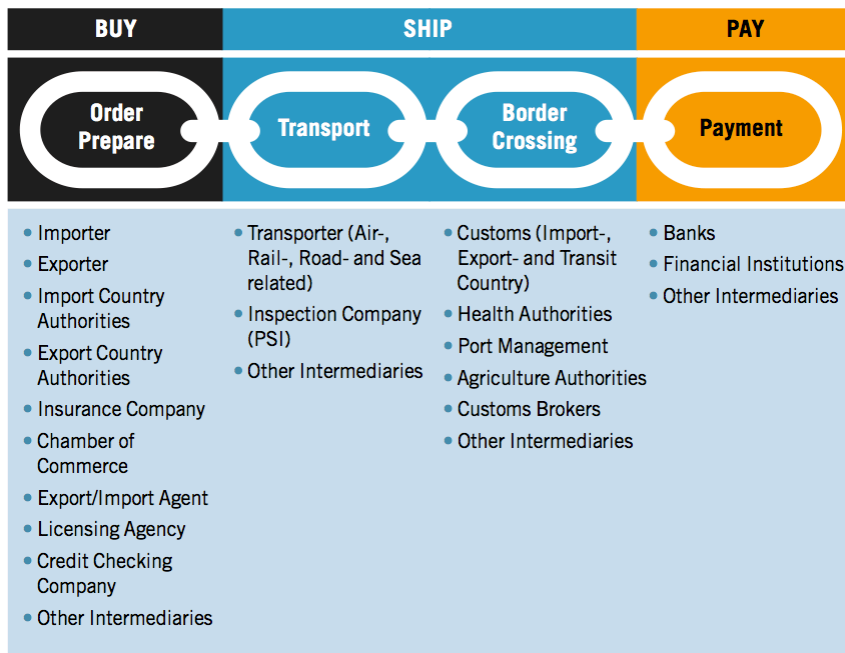


Figure 3 - The Trade Chain (Kommerskollegium a2015)

Putting a price on the overall benefits of trade facilitation can be difficult. The general view is that trade facilitation can create or improve economic wealth in a far more impacting way compared to decreasing tariffs (McClanahan 2013).

A typical transaction passes on average 27-30 parties in the trade chain. At least 40 documents are needed and almost 200 data elements are requested throughout the whole process. One OECD study estimated that the added transaction costs range from 2-15% of the total transaction value. It has been estimated that the cost of these unwanted and time wasting processes amount to 550 billion dollars yearly. (Kommerskollegium a2015)

By reducing the number of forms needed to declare goods, setting up mutual databases between customs authorities, and address corrupt border crossings which all are considered being “hidden costs” when doing business could reduce both time wasted, and costs. The OECD estimated that reducing these “hidden costs” only by 1% could boost the global economy by 40 billion dollars every year. (McClanahan 2013)

Finally, Djankov, Pham, and Freund (2010) state that reducing the time required for trade transactions can significantly boost exports. Putting this into perspective, Hoekman and Shepherd (2013) came to the conclusion that spending one day less in transit and handling could increase global trade by at least 1%.

But who is it that actually profits from the trade facilitation initiatives? Sometimes actors take a one-sided view and look at trade facilitation as only a way to speed up customs clearance, regardless of other implications and thereby only delivering benefits to the private sector. This is one way of defining it. But looking at the original intent of trade facilitation, it says it should “aim to achieve the broad objectives of Customs controls, such as revenue collection, security and community protection in an efficient manner, thereby facilitating legitimate trade” (Mikuriya 2011, pg. 10).

Grainger (2008, pg. 28) states, “trade transaction costs are a waste and should be avoided. However, the obstacles and forces inhibiting the implementation of trade facilitation are far less understood”. Most of the previous research on trade facilitation primarily focuses on its benefits. According to Grainger (2008) obstacles to trade facilitation can be; conflicting interests, institutional limitations and lack of knowledge. Some trade facilitation initiatives can easily be implemented but others require either political power or excessive capital investments, such as new IT systems, airports, ports, and road- and railway constructions. Hoekman and Shepherd (2013) point out, that despite the huge investment in capital, research has shown that the costs are most likely to be evened out in the long-term.

Being able to provide the global community with a worldwide-accepted environment for international trade is central. A system that is harmonized, simplified, standardized, and transparent is key and makes supports trade facilitation (Batista 2011). These principles are the building blocks of trade and transportation facilitation – see Figure 4 (Kommerskollegium b2015).



Figure 4 - Trade Facilitation Principles (Kommerskollegium b2015)

Harmonization refers to the aligning national laws within international conventions, regulations and practices which, helps companies prepare and know what to expect regarding time duration, information requirements, and fees for example. The simplification block stands for the elimination of unnecessary procedures, documents, administrative work, and other time consuming or costly requirements. Simplifying formats is related to standardization. The Harmonized System (HS) of tariffs is a working example of how nations can simplify its coding systems by harmonizing them as 98% of international merchandise is classified in terms of the HS. Midst of trade facilitation is international cooperation; companies agree that cooperation provides the best results. One of the most developed forms of cooperation is standardization. Standardization facilitates trade by developing internationally agreed standards, laws, and practices allowing efficient exchange of information. By making all the information accessible to all participants in the trade process, transparency is increased. The more transparent the system is the more predictable it is and therefore the risk of errors being made and facing other obstacles in the trade process is reduced. (Kommerskollegium b2015; Batista 2011; Grainger 2008; WCO b2015)

The economic community has increasingly become aware of the important impact customs has on international business, as it is customs that promotes or impedes international trade. Most borders deal with high volumes of goods passing and inspections dues to customs or security result in delays, which affect the whole supply chain and ultimately the final price of the product. (Cedilnik 2013)

The benefits of trade facilitation are clear in the minds of most people. Trade facilitation helps Customs administrations meet their duties as well as making business supply chains more fluid (Kommerskollegium 2008). However, despite the benefits that trade facilitation offers, the implementation process of trade facilitation initiatives riddled with difficulties according to Grainger (2008), who claims that most of these difficulties can be associated with conflicting interests and institutional limitations.

In relation to conflicting interest Grainger (2008) explains that customs procedures place a specific obligation on the trader. This relationship can be called enforcement and compliance. The enforcer, that being the Customs administration, has the role of maintaining a high degree of security and the complier, the trader, often views this as obstructing and time-wasting measures. Other related issues are the excessive data and documentation requirements

requested by the enforcer. There have also been complaints about lack of transparency in procedures and pre-ruling systems are said to be unclear. (Kommerskollegium c2015)

By cooperating with businesses in the form of partnerships, customs is able to maintain effective control and the interests of both parties are represented to the greatest extent. The cooperation between the participants and effective management significantly improves the overall international business activities. (Cedilnik 2013)

Widdowson and Holloway (2009) state that voluntary customs compliance programs are more likely to bring benefits and aid the movement of goods than customs programs that rely on enforced compliance.

The main institutional limitations can be split into two. First, there is the wide regulatory regime that needs to be passed either at local or national levels and the lack of single window for central processing. Second, the government's use of IT systems has been identified as a major limitation. Third party IT providers who manage to secure government contracts see no potential gain in harmonizing and standardize different systems and even if they were willing they often lack the innovative ability to do so. Many systems are said to be highly automated and unpredictable. (Grainger 2008; Kommerskollegium c2015)

2.1.1. Trade Facilitation in Sweden

Sweden's interpretation of the concept of trade facilitation is no different from other countries. The Swedish Chamber of Commerce agrees that with the rapid growth in international trade, measures should be taken to aid the facilitation of trade as far as possible (Kommerskollegium a2015). According to the World Bank's latest Doing Business Index, Sweden sits in 11th place when it comes to the ease of doing business. In terms of trading across borders, Sweden sits in 4th place and is the highest ranked EU country. The variables used for that calculation include; number of documents and time and cost of import and export. (Doing Business 2015)

2.2. Security

Trade facilitation provides benefits for businesses, the community, and governments. The resulting increase in trade due to globalization has made the global supply chain more vulnerable since it consists of many different interlinking actors and if disrupted there can be serious consequences for the global economy. (Kommerskollegium 2008) Container transport is the cornerstone of globalization and world trade, and has improved the reliability and

efficiency of the supply chain. With the increase in global container transportation, the supply chain has become more and more dependent on the container, resulting in increased vulnerability. Although, container transport has reduced the risk of cargo theft and pilferage. But while the supply chain has become more global, visibility has decreased and exposed the supply chain for other and more diverse threats. (Acciaro and Serra 2013) According to Kommerskollegium (2008), the vulnerability is twofold. First, the risk of a supply chain being broken due to a terrorist attack. Secondly, also the vulnerability of the resulting halt in production and delivery of supplies, significantly impacts world trade.

The terrorist attacks of September 11, 2001, exposed the long-standing concern that terrorist could attack the global supply chain using shipping containers or vessels and thereby severely disrupting world trade (Thibault, Brooks, and Button 2006). This was the starting point of a greater focus on container and supply chain security. Supply chain security revolves around the efforts of organizations and governments to protect and maintain the supply chain by combining supply chain management with security requirements to counter terrorism, theft, and piracy. After 9/11, actors saw the need for change from reactive actions to proactive in terms of security. The problem is though, that one can never know how good the practices are, until they have been tested. (Williams, Lueg, and LeMay 2008) Following the attack, the US closed its borders for three days. Many companies were dependent on regular import of supplies for example in their just-in-time production and the border lockdown caused them to cease production for a short time. Researchers claim that the insurance losses due to the attacks ended up amounting to 40 billion dollars. (Kommerskollegium 2008; Maiken 2002)

2.2.1. Supply Chain Security

Closs and McGarrell (2004, p. 8) define supply chain security as:

“The application of policies, procedures, and technology to protect supply chain assets (product, facilities, equipment, information, and personnel) from theft, damage, or terrorism and to prevent the introduction or unauthorized contraband, people or weapons of mass destruction into the supply chain”

In the months after the attacks, the US launched a number of programs intended to improve the security of the supply chain consisting both of legislation and voluntary cooperation between companies and the US government. These programs include the Customs Trade Partnership Against Terrorism (C-TPAT) and the Container Security Initiative (CSI). Other

countries and organizations moved swiftly and the WCO introduced the SAFE Framework in 2004, as guideline for developing regional and national security programs. The EU developed its own AEO program, based on the SAFE Framework's guidelines, and ratified it in 2008. (Kommerskollegium 2008)

Following the 9/11 attacks, the U.S. government tried to enforce that all containers coming into the U.S. should be scanned before entering. In 2007, the U.S. congress took a decision to require that all containers coming into the U.S. should be scanned before entering the ship in foreign ports. This program has not been successful and critics have stated that today only 3-4% of all incoming containers are scanned, and the cost for foreign ports will be close to 17 billion USD per year, if 100% of all containers were to be scanned. It is also claimed that the whole operation would be highly inefficient. An updated version of the initiative was supposed to commence in 2012 but has since then been delayed in congress. The bill is being pushed through congress putting the initiative back on the agenda and at set to start if passed in 2016. As the previous program it requires all containers imported into the U.S. to be scanned at the foreign port of origin. This initiative is also believed to cause significant negative impact on foreign trade and conflict with governments of foreign trading partners. (Curry 2014; Homeland Security Newswire 2014)

2.3. Customs Programs

Customs programs are a direct response to the global business community demands for improved transport and supply chain security as well as facilitating international trade. Multiple customs initiatives have been launched all over the globe. This section covers the ones that have had the most effect on the development of the AEO program.

2.3.1. The SAFE Framework

Since the SAFE Framework was developed by WCO, and more than 150 out of its around 180 member states have agreed to follow its standards, the SAFE Framework more or less sets the global standards for customs procedures. It is not compulsory for a WCO member state to agree with the SAFE framework, but most countries have accepted it as an international trade facilitator, which is thought to favour their own countries. Also how the general rules for how regional customs programs should look like are highly affected by the framework. The SAFE Framework was adopted in 2005. But to understand the overall content of the SAFE Framework, one has to go back to the regulations that were established within the U.S. after the events on 9/11. (Ireland 2009)

2.3.2. CSI and C-TPAT

The SAFE framework consists of two main pillars, where pillar 2 builds on pillar 1. Pillar 1 consists of miscellaneous customs to customs agreements and pillar 2 consists of customs to business relationships.

The content of pillar 1 is very similar to what is stipulated in the CSI, launched by the U.S. Bureau of Customs and Border Protection (CBP), which is part of the U.S. Department of Homeland Security. (Ireland 2009; U.S. Customs and Border Protection a2015) The contents of pillar 2 are on the other hand very similar to the regulations in C-TPAT, which is the other national customs security program that was launched by the CBP. (Ireland, 2009; U.S. Customs and Border Protection b2015)

Both CSI and C-TPAT are national customs and trade initiatives within the U.S. that were launched as anti terrorism programs as a direct reaction to the 9/11 attacks. Both these initiatives were implemented only months after 9/11. The overall aim of CSI is to prevent illegal weapons from being transported by terrorists in containers into the U.S. Through CSI are U.S. customs working towards identifying containers with a potential risk for the nations` security already at the exporting port, before entering a vessel with the U.S. as destination.

Potentially hazardous containers are identified by CBP officers stationed at 58 authorized ports around the world, before departure towards the U.S. (U.S. Customs and Border Protection a2015; U.S. Customs and Border Protection b2015)

C-TPAT, which is the customs to business relationship program within the U.S., had in June 2011 more than 10.000 participating companies, which together represented more than 50 % of the total imports to the U.S., counted by value. The central idea from CBP is to extend the zone for the national border security. Companies are encouraged to participate in the program through promises of smoother and quicker customs clearance procedures. (U.S. Customs and Border Protection a2015; U.S. Customs and Border Protection b2015) Somewhat simplified, it could be argued that the two pillars within the SAFE framework are globalized versions of these two U.S national regulations (Ireland 2009).

According Ohlsson (2015), there have been made great advancements in the effort of coming up with a mutual customs recognition system between the U.S. and the EU. Today the EU's AEO certificate is fully recognised by the C-TPAT, making business more efficient.

2.3.3. Authorized Economic Operator (AEO)

An AEO is defined by the WCO as:

“a party involved in the international movement of goods in whatever function that has been approved by or on behalf of a national Customs administration as complying with WCO or equivalent supply chain security standards. AEOs include inter alia manufacturers, importers, exporters, brokers, carriers, consolidators, intermediaries, ports, airports, terminal operators, integrated operators, warehouses, distributors.” (WCO 2005, pg. 3)

Ireland (2009) claims that one can view the contents of the SAFE framework as divided into four elements, where the fourth and last element concerns the formation of regional AEO programs. Within this element of the SAFE framework, it is explained how customs authorities can facilitate trade by certifying operators that are fulfilling certain supply chain security standards. The AEO related components of the SAFE framework mainly originates to the revised Kyoto Convention, which was formulated in 1999, which also is known as, WCOs International Convention on the Simplification and Harmonization of Customs Procedures, and was an update of the Kyoto convention from 1973.

2.4. AEO in EU

The definition of whom that can become an AEO is stated in the Community Customs Code (CCC) as:

“any economic operator established in the customs territory of the Community”
(European Commission 2012, pg. 11)

This means that all different types of actors involved in the international supply chain have the opportunity of becoming a certified AEO.

The regional AEO program within the EU has not been given any other name than just AEO. There are many examples of national and regional AEO programs where the name simply is AEO. (WCO 2014) This circumstance can sometimes make it a bit confusing which AEO program that really is referred to in literature and other contexts.

Becoming an AEO is a voluntary act within the EU, and no company can be forced to become an AEO (European Commission 2014).

The AEO program within the EU came into force 1st of January 2008, and is based on the AEO criteria in WCOs SAFE Framework. The program offers operators three different types of certificates. They are called AEO-C, AEO-S and AEO-F, where the letters C, S, and F are representing the specific type of license the operator holds. The fundamental requirements for businesses to apply for any of the three license types are; customs compliance, financial solvency and proper record keeping. A holder of the license type AEO-C shall be able to benefit from simplifications in the customs legislation. The main simplifications are; possibility to request specific place of check of goods, priority treatment when goods is selected for control, and fewer customs controls, which are not related to security. A holder of the license type AEO-S shall on the other hand be able to benefit from facilitations in customs procedures related to security and safety. To become AEO-S certified, the operator has to fulfil requirements of proper safety and security standards. The benefits an operator obtains from being AEO-S certified are the same as for AEO-C, with the only difference that it is only safety and security related procedures that are simplified. The final and most common type of AEO certificate within EU is the combined AEO-C and AEO-S certificate, called AEO-F. The holder of an AEO-F certificate shall be able to benefit from all customs simplifications included in the other two certification types. The requirement in order to

obtain AEO-F status is to fulfil all requirements for both AEO-C and AEO-S. (European Commission 2012)

The European Commission (2012), suggest that there are 10 main benefits of being an AEO, including both AEO-C and AEO-S benefits:

1. Easier admittance to customs simplifications (applicable for AEO-C & AEO-F)

No re-examinations are conducted on AEOs when asking for particular customs simplification documents such as, Local clearance and simplified declaration (Article 253c in CCIP) and Regular shipping service (Article 313b (3a) in CCIP). This is one of the most important benefits of becoming an AEO as it seeks to minimize customs related paperwork.

2. Prior notification (applicable for AEO-S, AEO-F)

This benefit means that customs authorities may inform an AEO about when their consignment has been selected for physical control in advance. This is a service for AEOs with the intent to help the operators to make planning for operations easier, especially in busy ports where space for containers is limited.

3. Reduced data set for entry and exit summary declarations (applicable for AEO-S, AEO-F)

AEOs may under certain circumstances allowed to use the reduced data set folder for summary declarations meaning that less information has to be provided the customs. This means less paperwork and quicker customs procedures, which in turn can lower lead times for operators.

4. Fewer physical and document-based controls

AEOs will since they during the application process for becoming an AEO, already showed good routines and etc., be favourably treated when it comes to document based controls. This means AEO consignments shall have to be controlled as often as non-AEO consignments. There can still be specific threats related to an AEOs consignment and during such events are also AEO consignments checked as frequently as non-AEO consignments.

5. Priority treatment of consignments if selected for control

In those cases AEO consignments are checked for control by customs, those consignments are to be controlled first if the other consignments taken in for control are from non-AEO's.

6. Choice of the place of controls

This benefit relates to that AEOs can request to have a customs control performed at an alternative location. This can be beneficial for an operator as it might shorter delays, lower costs thereby also lower the total costs.

7. Indirect benefits

Within this category the European Commission (2012, pg. 21) are listing several examples of potential indirect benefits:

- reduced theft and losses;
- fewer delayed shipments;
- improved planning;
- improved customer service;
- improved customer loyalty;
- improved inventory management
- improved employee commitment;
- reduced security and safety incidents;
- lower inspection costs of suppliers and increased co-operation;
- reduced crime and vandalism;
- improved security and communication between supply chain partners.

8. Recognized as a secure and safe business partner

It is likely than an AEO is considered as a trusted partner in the supply chain as the accreditation shows that it is doing everything in its power to reduce the risks of threats. AEO certified companies are allowed to display the EU's AEO logo, which can enhance the overall company reputation.

9. Improved relations with Customs

AEOs should be provided with a specific “contact point” at the customs authority to where they can turn for any AEO related matters.

10. Improved relations and acknowledgement by other government authorities

When applying for a number of other international authorizations/certificates, parts of the content of the AEO accreditation are in some cases the same. It is hence easier for AEOs to

comply with such certificates and thereby to become accredited. The European Commission (2012) is listing examples of certificates where AEOs have an advantage when applying. Some examples are: all international AEO security programs, aviation programs and a fishery products program.

Multinational companies have to apply for AEO status separately for all subsidiaries in each country they are represented in, also when subsidiaries are located in EU. But if the subsidiary only is a branch, defined as a non-separate legal person from the parent company, it is enough for the parent company to apply for becoming an AEO and the branch within EU will automatically also be certificated. (European Commission 2012)

2.4.1. AEO Research within EU

The concept of AEO is interesting, but it has yet not been widely researched. Most of the research has focused on its security part, while the customs part and the benefits accompanied by easier customs procedures have been left out by most parts. Most researchers agree that having the AEO will provide you with benefits of some kind, as previously mentioned, but still negatives can be found.

Following the introduction of AEO, companies all over Europe contemplated if it was really worth it to get the AEO certificate. With little research on the topic in its early years, it was not very clear which benefits the operators would benefit from. The operators claimed that the cost and time associated with becoming certified would not pay off in the end. (Just-in-time Management 2015) But operators and companies have become more aware of the return of investment and benefits connected to improved security, agreeing with the theme in research, which claims that security is expected to increase the facilitation of trade. (Acciaro and Serra 2008; Kommerskollegium 2008; Banomyong 2005)

As previously mentioned, limited research has been performed on the proposed benefits resulting from the AEO certificate. The authors have come across a few studies related to the topic of AEO in European and Swedish contexts. But only two of them could be said to be significant, related to the benefits associated to AEO; one study is Slovenian by Cedilnik (2013) and the other is Swedish by Gotheim and Fjaervoll (2011), which is covered later in this paper.

The Slovenian study focused on how business entities could reduce their time spent on mandatory customs control by participating in a voluntary customs program, in this case the

AEO program. Using a survey where companies and customs administrations graded the 10 proposed benefits of AEO, the author was able to make the claim that the benefits arising from having an AEO certificate have a medium to a positive effect on speeding up the movement of goods, as well as having a positive effect on operators in the context of international trade. One concern in terms of the proposed benefits of AEO was raised though. It was that the survey demonstrated that the benefit of reduced data set for both entry and exit summary declaration was relatively low, both from company and customs side. (Cedilnik 2013)

Another study by Butter et al. (2010) concluded that AEO works best when it is based on trust and reputation between the operators and the government where less physical checking reduces the administrative burden and facilitates trade. Adding to this they claimed that governments should be more involved in enhancing AEOs reputation and promoting the related benefits it has to offer.

2.5. Customs Programs in Sweden

Sweden was a relatively early adopter of an extensive customs to business framework. The Swedish customs program called Stairway was implemented in 2002 and was the result of cooperation between the Swedish Customs Authority (i.e. *Tullverket*) and the industry, which was represented by 50 companies that participated in a pilot study for the Stairway program. The development of the program took place between 1998-2002. (Kommerskollegium 2008) All Swedish companies performing trade with third party countries were involved in Stairway. All companies were given a number ranging from 1-5, indicating if their customs routines had been subject for a quality assurance or not. Figure 5 here below, displays and explains the five steps in the Stairway program.

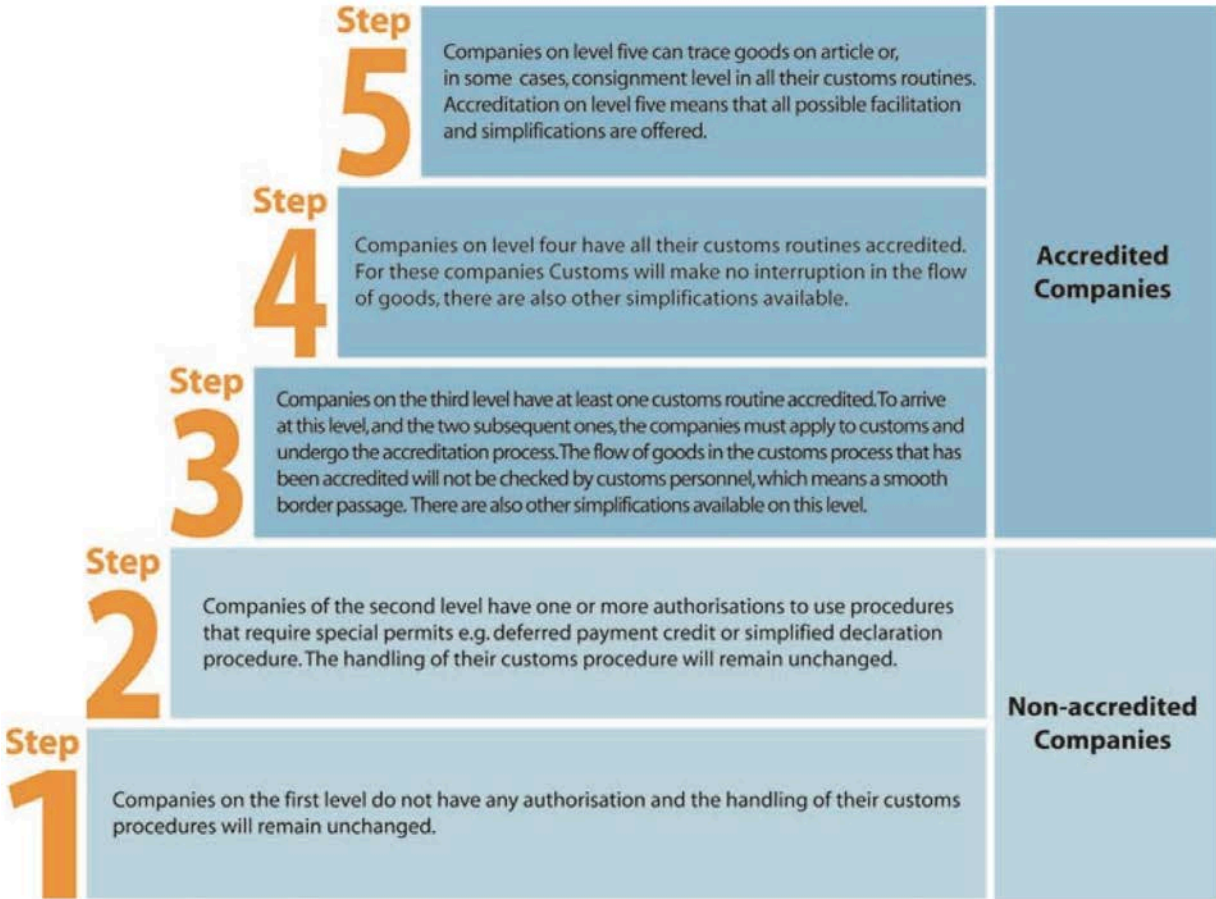


Figure 5 - The Swedish Customs Stairway Program (Kommerskollegium 2008)

After the events on 9/11, when the CSI and C-TPAT programs were developed in the U.S., the need for a complying customs security program in Sweden emerged, in order to facilitate continuous trade with the U.S. *Tullverket* therefore started a process of developing a customs security module connected to already establish Stairway program that could comply with the

American security programs. The security supplementary module to Stairway was called StairSec and was implemented in 2003. All operators that were accredited on levels 3-5 in Stairway were able to apply also for a StairSec accreditation. (Kommerskollegium 2008)

According to *Tullverket* were Stairway and StairSec together fully complying with EU's AEO program when it was implemented in 2008 (Kommerskollegium 2008). But according to Gotheims & Fjaervolls (2011) previous study of AEO's impacts on Swedish companies, a number of the companies stated that even if they before had the highest possible Stairway score (level 5), they still had to make additional efforts in order to achieve AEO status. Stairway and StairSec were fully replaced by the EU's AEO program 1 January 2011. (Gotheim & Fjaervoll 2011)

During the first years of the program many Swedish companies applied to become certified, but in the recent years the number of new applicants has declined considerably as displayed in Figure 6. There are in total 314 different companies in Sweden holding any type of AEO certificate today. Out of them are 136 holding an AEO-C certificate, 5 an AEO-S certificate, and 173 an AEO-F certificate, as displayed in Figure 7. (European Commission c2015) That is a total increase of 61 Swedish companies with any AEO certificate since beginning of 2011. (Gotheim and Fjaervoll 2011)

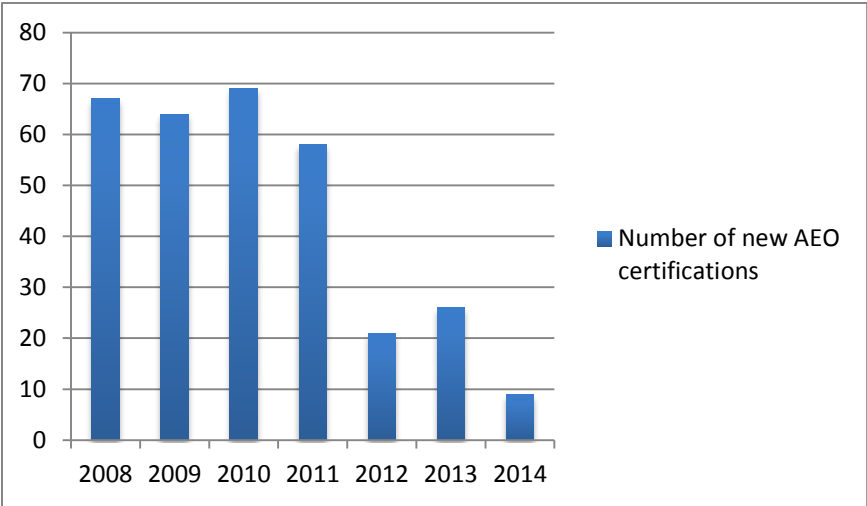


Figure 6 - Number of new AEO certifications in Sweden (European Commission c2015)

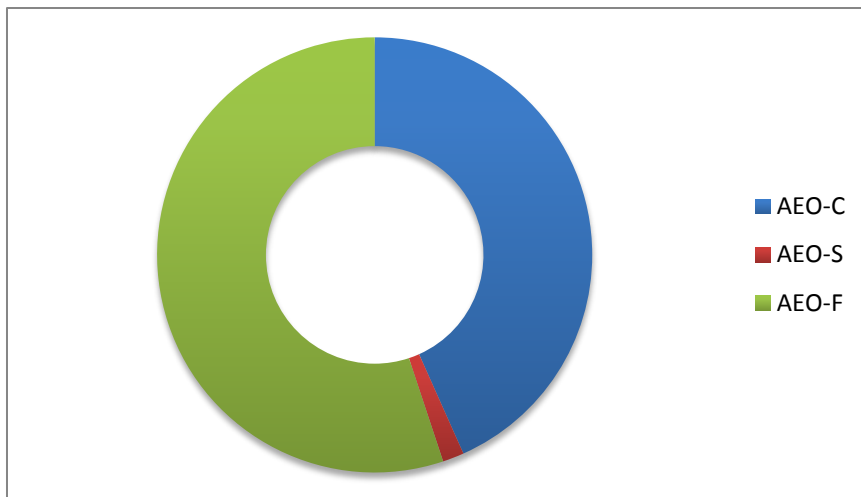


Figure 7 - Spread of types of AEO certificates in Sweden (European Commission c2015)

According to Hellsing (2015), AEO discussion in Sweden has not been as active in recent years as it was before. Mellbin (2015) and Ohlson (2015) confirm that *Tullverket* has not been as active in marketing the AEO program recent years, compared to the first years after the AEO program was launched. The reason for this is that *Tullverket* has had to focus on other major areas, but it is also likely to be related to the upcoming UCC (Mellbin 2015).

2.5.1. AEO Certification Process

The process for operators to go through when applying for an AEO certificate in Sweden involves different steps of information sharing with *Tullverket*. The first step in this process is that the operator has to officially announce its interest for applying for the certificate to *Tullverket*. *Tullverket* then has to search out if the operator complies with the requirements within 3-4 different criteria. Those 4 criteria are: solvency, not have broken any customs regulations, have an IT system that is able to communicate with *Tullverket* in an appropriate way, and finally if the operator is applying for AEO-S or AEO-F status, certain security criteria also has to be met. The operator provides information about these criteria to *Tullverket* and *Tullverket* can thereby scrutinize if the operator is fulfilling the criteria. Operators also have to provide *Tullverket* with written routines about miscellaneous internal processes. Which type of processes that has to be provided differs depending on which type of actor the operator is (carrier, manufacturer etc.). Standard is that *Tullverket* conducts at least one physical inspection on site the operator during this process. If everything can be considered to be in order after this process, a certificate will be issued. The whole process on average takes

around 3-4 months and normally involves 2 administrators at *Tullverket*. But this time is highly depending on how well developed and documented routines were before the operator applies. (Ohlson 2015)

It is important that AEOs still meet the standards for being an AEO, also after they have acquired their certificate. *Tullverket* continuously checks operators, so they are still complying with the requirements for their AEO certification. *Tullverket* aims to monitor AEOs every three years, but it can sometimes be longer between the monitoring's. When *Tullverket* suspects that a specific AEO certified company is not complying to the standards any longer, they are conducting a re-assessment, in order to confirm if the operator still complies with the AEO standards. (Mellbin 2015)

2.5.2. AEO Research within Sweden

This part focuses on previous AEO research conducted on Swedish conditions. Gotheim and Fjaervolls (2011) study on “AEOs impact on companies supply chain security and customs procedures”, provides the base for this study on AEO in Sweden. That study claims that following AEO certification, companies’ security awareness potentially increases.

As for the possibility to request that random checks are to take place at a company specified facility, all companies stated that random checks rarely happened and so it had no measurable effects on their operations. When it came to customs procedures, none of the companies experienced any benefits related to reduction in data entry elements in their customs declarations, but also claiming that the timesaving's were non-essential in relation to faster movement of goods. (Gotheim and Fjaervoll 2011)

Furthermore, their study revealed that four out of the ten interviewed companies experienced an increase in documents control following AEO certification. The rest did not notice any decrease in documents control. These results clash with the AEO guidelines, which state that there should be less physical and document based controls. Another interesting fact is that none of the companies experienced any time reduction in customs procedures, and half of the companies claimed that they actually spent more time on customs procedures after having become certified. Increase in detailed requirements on explanations and self-monitoring were believed to play a role in the increased time spent on customs procedures. Another suggested reason was that due to the fact that the AEO program was relatively new and developing at

the time, the increase in time spent on customs procedures might be because the initiative was still in a transition phase. (Gotheim and Fjaervoll 2011)

Additional findings of the Swedish study were that the operators were promised a dedicated contact person at customs to improve customs to business relationships. This only lasted for a short while until this service expired and since then the operators agree that their experience of communicating with Swedish Customs regarding AEO issues has been poor. Three companies believed that the AEO certificate gave them a competitive advantage in terms of that it showed their customers that a certain level of security was upheld within their operations. Two of these three companies claimed that the certificate also helped them from a marketing perspective. (Gotheim and Fjaervoll 2011)

None of the companies interviewed in their study could identify any improvement in external communication with their supply chain partners since they became AEO certified. However some companies claimed that their internal communication between different departments had improved since the introduction of AEO, along with the increased awareness of the impact the program has on the business costs and lead-time perspective. (Gotheim and Fjaervoll 2011)

Problems with mutual recognition between AEO and other supply chain security programs also came up in their study. One company reported that being AEO certified did not facilitate trade when dealing with the U.S. Customs, and it claimed that it was forced to adapt its manufacturing, warehousing and logistics system to comply with the C-TPAT program and so it now complies with two systems, AEO and C-TPAT. (Gotheim and Fjaervoll 2011)

Urciuoli and Ekwall (2009) agree in their research on supply chain security programs, that attention to supply chain security has increased over the years and operators are increasingly realizing the importance of supply chain security programs. But they also state that a lot of the offered customs programs, differs from each other and in many cases it is not enough to have just one if you are to ensure both the efficiency and the security of your supply chain. The authors claim that a program like the AEO might not be sufficient enough preventing any outside attack on security. Recently after the implementation of AEO, the authors claim that there is evidence that AEO makes trade and customs procedures a little more efficient, but it should be coupled with a more extensive and authoritative supply chain security program compared to the AEO has to offer. Finally, they note that the supply chain efficiency suffers a major gap when it comes to inspections requirements set by the AEO.

A few years later, and after more extensive research on the different AEO certificates, Urciuoli and Ekwall (2012) came to the conclusion that the AEO-C certificate actually has a negative effect on security and almost no impact on efficiency in terms of customs simplifications. Looking at the AEO-S, they claim that it provides improved security but instead it reduces efficiency. To them, efficiency in terms of customs simplifications is not just about customs inspections but it also relates to inventory costs, labour efficiency, and transportation costs, for example. If broader arrays of variables like these are taken into account, then it can be stated that improved security of a supply chain may positively affect the overall efficiency. For this to work, the authors recommend joining the two certificates AEO-C and AEO-S into a full certification, AEO-F. So, according to the paper, one can experience improvement in efficiency, but possibly not when it comes to customs simplifications, as the original intent of the program was.

Despite the discovered shortcomings of the AEO initiative, at least in Sweden, the companies replied that they still wanted to be a part of the program. Some companies claimed that they believed the initiative would develop for the better and others claimed that having the certificate was a prerequisite to be able to compete in international trade. (Gotheim and Fjaervoll 2011) Gotheim and Fjaervoll (2011) came to the conclusion that there was a mismatch between the goal and purpose of the AEO program and how it actually worked in reality.

2.6. AEO Research Summary Table

The research summary table (Figure 8) summarizes the most relevant findings from other research papers done on the EU's AEO program or other AEO related aspects.

Author(s)	Positives	Negatives
Acciaro and Serra (2008); Kommerskollegium (2008); Banomyong (2005)	All researchers agree that AEO should offer a return on investment	
Cedilnik (2013)	Medium to a positive effect on speeding up the movement of goods Positive effect on operators in the context of international trade	Reduction in data set entry in declarations relatively low or non-essential
Gotheim and Fjaervoll (2011)	Three out of ten companies believed that the AEO certificate gave them a competitive advantage Two of these three companies claimed that the certificate also helped them from a marketing perspective Improvement in internal communication Increased security awareness	No benefits experienced in terms of reduced data set entry Experience of increase in document control by customs Companies claim they spend more time on customs procedures than they did before Problems with mutual recognition with other security programs
Urciuoli and Ekwall (2009)	Effective when certificates are joined (= AEO-F) AEO should improve the operators overall efficiency when looked at efficiency of labour, reduction in cost, and transport costs (there is no increase in efficiency related to customs simplifications)	AEO might not be sufficient enough preventing any outside attack on security. Customs simplifications have no effect in terms of improved efficiency AEO-C certificate has a negative effect on security and almost no impact on efficiency in terms of customs simplifications. Looking at the AEO-S they claim that it provides improved security but instead it reduces efficiency.

Figure 8 - Summary of Views on the AEO

2.7. The Union Customs Code (UCC)

UCC stands for Union Customs Code and it is the updated customs regulations document for the EU. When UCC is fully implemented in May 2016, it will replace and repeal the current customs code called Community Customs Code (CCC). UCC is an update of the previously developed, but put on hold, Modernised Customs Code (MCC), which mainly was launched in order to enhance IT-solutions for customs, in order to decrease the amount of paperwork associated with customs procedures. But the deadline for implementing MCC could not be met, mainly because of all the new IT-solutions. UCC has already in October 2014 been partly adopted, but the main parts, including the implementing- and delegated acts, will come into force in May 2016. All legislation within UCC has not yet been drawn up. It is supposed to be that by May 2015, which would mean that national customs authorities and businesses would have one year to adapt to it before the final implementation. But the new IT-solution for sharing data between customs authorities and operators for less paperwork has also this time caused problems because of its complexity. It has to reach a high level of acceptance throughout the entire EU before it can work efficiently. Therefore has the implementation of this been postponed until 2020. (Doornik 2014; European Commission d2015) Even though 2020 is the new date set for the final implementation of the new IT-solution, it could be anticipated that an extension of this date will probably be necessary. Since major parts of the new regulations have not yet been agreed upon, the *Tullverket* has not been able to prepare very much at this stage for how they will be working with it. (Ohlson 2015) The IT-system for handling AEO is separated from the overall customs IT-system in the EU, and AEO will thereby not be directly affected by this new IT-system. But there will be other updates of AEO, coming with the UCC (Mellbin 2015).

The European Commission summarizes the main contents of UCC on their webpage as:

“The UCC is part of the modernisation of customs and will serve as the new framework Regulation on the rules and procedures for customs throughout the EU. The UCC and the related delegated and implementing acts shall:

- *streamline customs legislation and procedures*
- *offer greater legal certainty and uniformity to businesses*
- *increase clarity for customs officials throughout the EU*

- *simplify customs rules and procedures and facilitate more efficient customs transactions in line with modern-day needs*
- *complete the shift by Customs to a paperless and fully electronic environment*
- *reinforce swifter customs procedures for compliant and trustworthy economic operators (Authorized Economic Operators)”*

(European Commission d2015, para. 4)

The incentives for businesses to become an AEO might increase as a result of the implementation of UCC. That is not mainly because that AEOs will gain more benefits with UCC, but rather because non-AEOs will face more complicated customs procedures than what is the case today. One example of that is that the AEO-C accreditation will become a requirement for waiver of the obligation for goods to be presented for local clearance process, for which being AEO-C certified is not a requirement today. (Doornik 2014; Ohlson 2015)

Another major change with UCC in force is that only 2 different types of certificates for AEO will remain instead of 3, as it is currently. AEO-S will not be an option for operators when UCC has been fully implemented in 2016. The only way of taking advantage of the benefits associated with an AEO-S accreditation will then be to apply for the combined AEO certificate (AEO-F), where also the customs related aspects are included. (Doornik 2014) This may not mean a big difference from today though, since only 5 out of 314 AEOs in Sweden holds the AEO-S certificate (European Commission c2015).

As previously mentioned are there today 4 criteria that must be met in order to be able to achieve an AEO-status. With UCC, one additional criterion will also have to be met. This new criterion is a so-called competence criterion, meaning that operators have to meet certain requirements in terms of their competence to eligible for an AEO certification. Exactly how competence can, and will be measured within the AEO framework is today highly uncertain. *Tullverket* does not think it is likely though that any current AEO certifications in Sweden will be withdrawn as a consequence of this new requirement on the already certified companies. An interesting aspect of introducing such competence criterion is that a similar criterion actually was in place when Swedish customs was working with the Stairway and StairSec programs before AEO was introduced. Another change, without any real operational impact though, is that AEO will no longer be defined as a certificate but it will instead be defined as an authorisation. (Ohlson 2015, Mellbin 2015)

Today, one of the four criteria to fulfil for AEOs is called “compliance with customs requirements”, which include that the company or any key manager may not have violated customs requirements for the last three years, to become AEO certified. But with UCC not only customs requirements will have to be followed for the last three years; neither taxation requirements are allowed to have been violated for the last three years. (Ohlson 2015)

Today there are some Swedish national simplifications offered by *Tullverket* for AEO-certified operators. These simplifications are remains from the national Stairway customs program. But these simplifications will all disappear when UCC comes into force, meaning that many AEOs will have to spend more time and effort on certain customs procedures. It is not likely there will come any new general simplifications for all AEOs within the EU, with UCC in force. And if there will come some new general simplifications with UCC, it is today highly uncertain what they in that case would look like. (Ohlson 2015, Mellbin 2015)

Existing AEOs will have to be re-assessed if they want to retain their AEO status when UCC is fully implemented. But it is only the new contents in UCC that re-assessments will take into account. Nothing that already has been checked and approved will have to be assessed over again. (HM Revenue & Customs 2015; Ohlson 2015)

2.8. Strategy and Competitiveness

The transport sector plays a vital role in the European economy; it is a major economic sector within Europe generating 7% of the GDP and employing 12 million people (European Commission 2012). Being at a huge market where there is competition on every level, staying competitive at local, regional, national, and international levels, is one of the major tasks for every company. Companies today use different strategies and tools to gain and maintain competitiveness. One example to increase the competitiveness as a producer or as transport- or logistics provider, is to use a variety of customs procedures, which can save both money and time. If saving time and costs are one of a company’s objectives, it will need to formulate a strategy of how to reach its set objectives. (Erceg 2014)

There is no single universal definition of the term strategy but here the authors would like to make use of Mintzbergs, Lampel, Quinn and Ghoshal (2003, pg. 4) definition which describes strategy as:

“a plan, a strategy can be a ploy, or really, just a specific manoeuvre intended to outwit an opponent or competitor”.

Companies can make their own decisions on whether or not to qualify for the AEO certificate, based on its strategy. The certificate which offers the proclaimed benefits of fewer physical and document inspections, priority when selected for inspection, and improved communication with customs might improve a company's competitiveness. (The European Commission 2012; Butter et al. 2010). In order to receive the certificate, companies might also need to invest in its own facilities to match AEOs standards.

Butter et al. (2010) claim in their research on the AEO certificate in the Netherlands that the costs of these activities can range from 50k Euros for SMEs and up to 1 million Euros for large companies. Becoming an AEO does not happen instantly, and companies need to decide whether a certificate like AEO can work as a tool helping them to implement their strategy or not.

Companies working within international trade are aware that they are working in a very competitive market and the smallest advantage is able to influence the buyer when choosing a product or service. All companies purchasing logistics services demand efficient, accurate, timely, and secure services. There is a myriad of ways for logistic providers to invest their efforts in making their business faster and more efficient, and becoming AEO certified is just one of them. As said before, becoming an AEO is a voluntary act and no company can be forced to become an AEO (European Commission 2014). Companies make their own decision, on whether to become an AEO or not, based on their intended strategy. (Butter et al. 2010)

Butter et al. (2010) claim in their research, that what they call the AEO market consists of entry cost and associated benefits. They continue and state that the government must be able to differentiate successfully between AEO certified companies and those not certified if the program is to be successful. Good and already compliant companies might not be willing to join the program as they see no value in it if the government is not able to differentiate successfully and therefore not creating any competitive advantage. In their study one company said: “we are already a compliant company with a good reputation, and our current procedure is simpler than that of others anyway, why should we invest more to get the AEO certificate?” (Butter et al. 2010, pg. 16).

Butter et al. (2010) continue and speculate and display in Figure 9 that non-compliant or fraudulent companies might be interested in applying for AEO certification, as less checking might create an easier way for them to commit frauds. They could achieve the certificate by preparing a false report on their requirements.

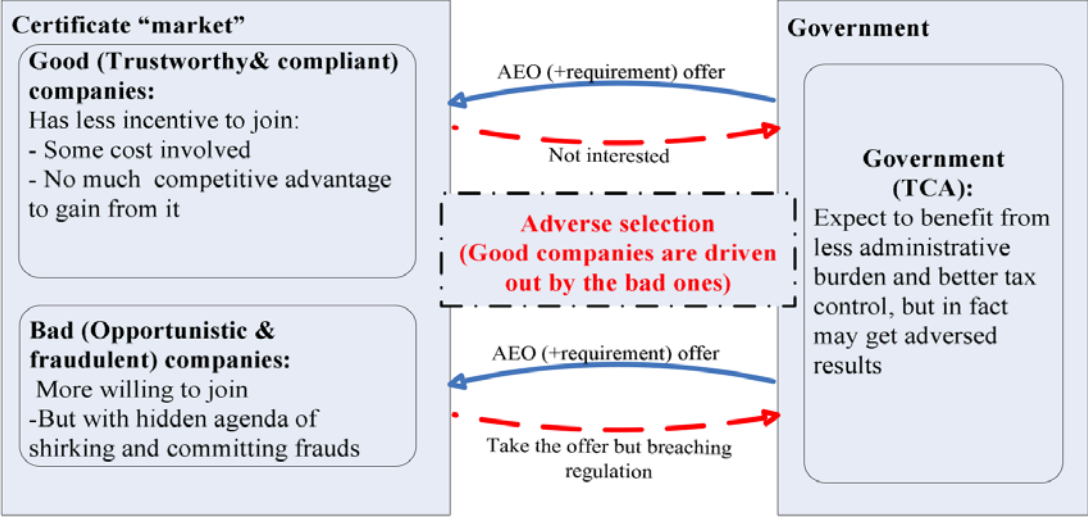


Figure 9 - Adverse selection during AEO certification procedure (Butter et al. 2010)

2.9. Competitive Advantage

Competition is at the core of a success or failure of a business. In the aggressive business world, especially in today’s economy, every advantage counts to establish your business in the top of your industry. Possessing a competitive advantage in business, means being able to create value for its customers through series of activities, which exceeds the firm’s cost of providing a product or service i.e. creating an edge over your competitors (Porter 1998). Competitive advantage can be reached through lower costs or superior benefits to the consumer. Michael Porter called these two strategies cost leadership and differentiation.

Through cost leadership a company sets out to be the low-cost producer within its industry. The cost advantage is based on the structure of the industry but in its most simple form it can be the pursuit of economies of scale, use of proprietary technology, easy access to raw materials, for example. The low-cost producer must then find and exploit all sources of its cost advantage, and if it is successful it can sustain its cost leadership and become a major actor in the industry and will thereby be able to command market prices. (Porter 1998)

In a differentiation strategy, the company seeks to make itself unique in the eyes of the customer in comparison to its market competitors. This gives a direct advantage to the

company, which is able to provide a unique product or service that none or few of its competitors is able to offer which the customers are willing to pay a premium for. With this strategy a company needs to identify the most important criteria considered by customers and the design the product or service in a way which best matches its customers needs. Offering a high quality product or service or the best solution are examples of ways to differentiate on certain criteria. (Porter 1998)

2.9.1. Security as a Competitive Advantage

Implementing security measures and facilitating security initiatives can be costly for companies. The incentives for participating companies can both be positive and negative and quantifying the benefits can be difficult. Actors can be reluctant to disclose sensitive information needed to properly measure the impact. (Acciaro and Serra 2008) It can sometimes be difficult to see whether a security initiative functions as a trade facilitating concept or a trade barrier. But at least Kommerskollegium (2008, pg. 77) is clear in its opinion and states that: “increased security leads to trade facilitation which, in turn, increases trade”.

As said before, calculating the benefits can be difficult and even worse is that the only realistic way of doing it is to calculate the cost after a security measure fails (Rice and Spayd 2005 in Kommerskollegium 2008). The cost of security can be high and the costs can be even higher if it fails. But Acciaro and Serra (2008) claim that security measures, in their case maritime security measures, can contribute to a competitive advantage. They say that companies have started looking past the expenses towards the collateral benefits. Those benefits come in shape of; higher supply chain visibility and efficiency, improved customer satisfaction, and reduction in cycle time and as a result of companies have started to experience cost reduction contributed to the collateral benefits. Banomyong (2005) agrees and claims that increased security will most likely facilitate trade. It can thereby be argued that the investment in supply chain security can be looked at as a contributor to a competitive position, rather than just costs.

3. Methodology

The purpose of this section is to describe, motivate and critically scrutinize the research methods used throughout this report. By reading this section, the reader is provided with information enabling him or her to validate the conducted research and draw own conclusions.

3.1. Research Approach

A helpful way for constructing a research framework is to decide on a research paradigm, stating that a “research paradigm is a philosophical framework that guides how scientific research should be conducted” (Collis and Hussey 2009, pg. 55). It revolves around using reason and arguments when seeking the truth on general causes and principles (Collis and Hussey 2009).

Positivism is a research paradigm that relies on the assumption that social reality is singular and objective and it cannot be influenced by the act of investigating it. In this study a positivist approach cannot be used, as it is usually associated with social reality being scientific and a singular dimension. This research will be supported by the interpretivist paradigm. The interpretivist paradigm is different from the positivist in the way that social reality is subjective and multiple. These differences mean the interpretive research can be defined as more focused on getting results through qualitative measures rather than deriving findings from statistical analysis and quantitative data as the positivist research does. (Collis and Hussey 2009; Bryman and Bell 2003)

The postmodernist paradigm has been a source of inspiration throughout this research. The postmodernist point of view means, that the reporting of research results are only expressed in one single way, where other, also valid ways, could suggest another study result. Postmodernists argue that there exists no such thing as one single correct representation of what has been researched. This means that the authors believe that this study only represents one version of the reality and which has to be read in its own specific context. (Bryman 2008)

This research is inspired by an abductive study approach, where pre stated theories are tested through the empirical findings, known as an inductive approach, combined with some deductive elements (Collis & Hussey 2009).

3.2. Research Method and Design

Scientists often make clear distinctions between qualitative and quantitative research (Bryman & Bell, 2011). The difference between these two research strategies is not just only that it is possible to quantify data or not. Also the theoretical orientation of the research is often defined depending on if the research strategy is quantitative or qualitative. Qualitative research is mainly highlighting an inductive view while quantitative research mainly highlights a deductive view. Qualitative research is exploratory in the sense it tries to get the meaning, feeling and describe the situation or the environment under study. (Bryman 2008)

A qualitative approach was chosen for this study since a quantification of the characteristics of AEO would most like not be useful. This research covers many different aspects of what AEO means to companies and customs authorities, and the many variables that affect one another. Hence, a quantitative approach would be very complex and generate low validity. In order to pursue the purpose of the study, a more reasoning based research technique was preferred.

This study has an exploratory research approach. Meaning, that a combination of conducting a literature review and obtaining empirical findings through interviews was a methodology considered to be suitable for this study (Blumberg, Cooper, and Schindler 2011). Because of the lack of previous academic literature treating the topic of AEO, the main focus has been to investigate and interpret how the AEO certificate functions and affects different actors within the international business environment. The authors do that by providing academic literature treating the topics of; trade facilitation, supply chain security, customs programs, strategy and competitiveness, and etc. Adding to this a vast number of published governmental documents and regulations, as well as the few papers written on the topic of AEO the authors provide a conceptual framework to explore the topic of AEO rather than testing a theory for example.

3.3. Data Collection

3.3.1. Secondary Data

The authors aim to provide an extensive research on the concept of AEO based on a conceptual framework, as shown before, made up from secondary theoretical and primary empirical findings by interviewing 10 Swedish companies where AEO is a part of their daily operations.

Starting with the alternative to primary data, secondary data is information gathered by others, such as researchers, academics, industry and government reports, and new articles. The data already gathered might have been collected for other purposes than to yours but there are similarities in the information and possibly results that are applicable to your research. The main advantage with secondary data is that it is easily available and it can save you both time and money. You can gather a vast amount of information in a short time, allowing you to start immediately to research and try to understand the topic on hand. Though you can gather a lot of material in short amount of time you need to be able to identify which information will help you to answer your research problem. (Blumberg, Cooper, and Schindler 2011)

The main disadvantage of secondary data is that the data sometimes wasn't collected with your specific research problem in mind and so it might not be specific enough (Blumberg, Cooper, and Schindler 2011). The secondary data used in this paper has gone through an extensive selection process of making sure it is relative to you current study and expected results. All secondary data gathered is meant to create an extensive background on the topic and to provide a conceptual framework that guides us in to the right direction when formulating possible interview questions and analysing empirical findings.

There are now six years since the AEO certification was introduced within the EU. Being an exciting topic, a lot of governmental publications on it, can easily be found on the topic where its possible benefits are discussed. Throughout the data collection process the authors noticed that academic research on AEO related subjects was rather limited and when discovered it merely touched upon the subject rather than going deeper. Only a few journals and paper were deemed relevant enough to fit in the conceptual framework. Therefore the authors believe that the value of the primary data collected is highly valuable in gaining real insight and understanding on AEO.

3.3.2. Primary Data

Primary data is data, which consists of data collected by the researcher himself and obtained from the original source and often done by experiments, surveys, interviews or focus groups. The primary data is most often collected after the topics secondary data has been analysed in order to gain some insight into the issue being researched. (Collis and Hussey 2009)

Interviews

One way of collecting target oriented primary data is by conducting interviews. Interviews have been the main way of obtaining empirical data for this research. There are three different types of interviews one can use, all of them fulfilling different purposes. The different types of interviews are: Structured interview, semi-structured interview and open interview. The interview technique used throughout this research has exclusively been semi-structured, which means a fixed set of open questions were asked during all interviews with AEOs. (Collis & Hussey 2009) A semi-structured interview technique was also used for the interview(s) with *Tullverket*.

The interview questions (see Appendix B and C) for the operators were all formulated after the theory part was finished. The conceptual part of the research was based on existing theories within different fields of research. This working process is characteristic for the already presented inductive research approach. (Collis & Hussey 2009)

Background Survey

Also a small survey including ten “questions” was distributed through e-mail (see Appendix A) to all the AEO certified interviewees before the actual interview took place. The respondents were asked to specify on a graded scale (the Likert scale) how important and how well the 10 claimed benefits from the European Commission were working for them in reality. The Likert scale is one approach for investigating attitudes among a cluster of respondents. The normal way of using the Likert scale is to have a five-point scale where 1 could mean such as; unethical, disagree or least likely, and 5 could mean such as; ethical, agree or most likely. Likert scales can also have more or less numbers of alternatives, but it is most common they all have a middle point to allow neutral answers. (Bryman & Bell 2011)

The grading scale of the survey ranged from 1-5, with a score of 1 meaning that the respondent strongly disagreed to the claimed benefit and a score of 5 meaning he agrees strongly with the claimed benefit. First respondents were asked to rate the importance of each claimed benefit, in their opinion, followed by a second round of rating of how they experience the value of each benefit in their daily operations.

There were mainly two reasons for using this survey as part of the data collection. The first reason was that it helped the authors to assign value to all of the claimed benefits through studying the importance of the benefits and the level of how well they were working in reality.

The second reason for conducting the survey was to prepare the interviewees for the interview. By letting them see and give them time in advance before the interview to think about their own perception of the claimed benefits, the authors believed that answers to the AEO related questions could be of higher quality compared to if the interviewees had to answer the questions without being prepared.

Interview Execution

An e-mail was sent out 1-2 days before the interview to all respondents containing the survey about the 10 claimed benefits of being an AEO. A majority of the respondents had considered their views and filled out the survey prior to the actual interviews. All interviews started by discussing the respondent's answers of the survey. Many of the other interview questions were answered already in the opening survey discussions, meaning that many of the stated questions did not have to be asked after the discussion of the survey.

Six out of the ten interviews with AEO certified companies took place on-site the companies. The main argument for holding on-site interviews was what the authors preferred it both in terms of having a better personal contact with the respondents, but also in order to learn about and to understand the companies better. The other four interviews were held by telephone, since those companies were located distantly from Gothenburg.

All interviews, both them held on-site and by telephone, lasted between 35-50 minutes. The interviews conducted by telephone were generally a few minutes shorter compared to those that took place on-site, indicating the respondents were more willing to open up when the interviews were performed face-to-face.

Even though all respondents were Swedish native speakers, it was preferred to perform as many of the interviews as possible in English, as one of the authors was not familiar with the Swedish language. It was considered that if both the authors were present and active during the interviews, the interviews would be more dynamic and more perspectives of the topic would be covered. But in those cases the respondents claimed their level of spoken English would hinder them from providing distinct answers and confident reasoning about the questions asked, the decision was taken to perform such interviews in Swedish with only one of the authors present. Two out of ten interviews with the AEO certified companies had to be performed in Swedish.

3.4. Sampling Method

The sampling method used for selecting organisations has been through so-called purposive sampling, which means organisations were chosen selectively based on what fitted the purpose of the research best (Bryman 2008).

Since this research is partly based on a previous study on Swedish AEO certified organisations done in 2011, the same organisations that participated in the previous study will be sampled again, with the purpose to see if attitudes towards AEO have remained the same or if they have changed over the course of last four years. As well as interviewing previously interviewed companies the authors will interview one company that was awarded with its certificate in 2014, in order to make out if there are different reasons for applying for the certificate in 2008-2009 and 2014. All interviewed companies hold an AEO-F certificate.

3.5. Data Analysis Method

The selected data analysis method for this research was the Qualitative Comparative Analysis (QCA). QCA aims to incorporate the advantages of both the quantitative (variable oriented) and qualitative (case oriented) techniques. One can use QCA to count and list variables, which are observed in a particular data set. The choice of the variables needs to be previously theoretically listed out before to actual research takes place. (Rihoux and Ragin 2009)

All interviews were recorded and transcribed afterwards. After available variables from the data set have been listed out a logical inference is then applied in order to determine which descriptive inferences or implications mentioned the real data collected supports. (Rihoux and Ragin 2009) Comparing the empirical findings collected against the previously available findings from the conceptual framework as well as the results from the previous through QCA study forms the analysis.

3.6. Validity and Reliability

Research quality mainly refers to the concepts of validity and reliability. “*Validity is the extent to which the research findings accurately reflect the phenomena under study.*” (Collis and Hussey 2009 p. 64) This definition includes the level of correctness of the gathered data (Collis and Hussey 2009). It is by reading this definition problematic to combine the postmodernist paradigm with a high validity, since postmodernists suggests that, depending on the researcher, different results can be shown, there is no such thing as an accurate result of

a specific study. It is in general argued about if validity and reliability as the concepts are fundamentally formulated are relevant for qualitative research, since they both mainly are focused on measurements and thereby requires some kind of quantitative element to be evaluated. (Bryman 2008)

All the interviewees were experts in the field of customs having the overall responsibility of customs activities within their companies. The data was gathered from people with high knowledge and awareness of the topic and the problems surrounding it positively influencing the validity of the empirical findings. Most of the interviewees had an executive role within customs handling or compliment, rather than being responsible for security subjects, which might indicate a potential error when discussing the security related aspects of AEO with them. Still all interviewees were involved in the process of fulfilling all security requirements, but their daily work focuses more on customs related issues.

Various actions have however been carried out to facilitate an as accurate research as possible. The interviewing survey and additional questions where composed after the conceptual framework was constructed in order to make sure that every related aspect would be covered in the proposed questions. The questions were also read over by a highly experienced customs advisor at Volvo Cars, in order to make sure all the questions where relevant to the topic. The survey and questions were formulated the most neutral way possible in order to prevent any previous bias from former research to distort the current study. For all interviews, the same guideline was used in all the interviews to increase the validity of the gather empirical data.

The level of reliability in a report mainly refers to if the results of the specific report are repeatable. Considering this definition, this tool for measuring the quality of the results is not always perfectly valid for a qualitative report. Qualitative findings can normally not be considered to be consistent if the same research would take place again. (Bryman and Bell 2011; Collis and Hussey 2009) One interviewee may for instance induce personal opinions into his reflections during an interview. Hence is reliability normally a better measure of quality in quantitative studies, based on consistent data. The level of reliability in this report can because of its qualitative approach thus be considered as relatively low, or at least difficult to measure.

4. Analysis

The following section presents the analysis which aims to answer the proposed research questions. The analysis is based on the conceptual framework presented before as well as on the survey and interviews conducted by the authors. The empirical findings from the interviews can be found in its whole in Appendix D. The responses from both the survey and the interviews with both customs and the companies were compared against the claimed benefits of the AEO program, previous study, and the conceptual framework by using QCA.

Appendix D displays the most important findings from the interviews. Such findings were split into separate sections, which either covers the claimed benefits of becoming an AEO or a certain part of the conceptual framework. Following an introduction of each company and why they became AEO certified, the sections were split as follows:

AEO impacts on:

- Security
- Customs procedures
- Costs
- Trade
- Relationship with Customs
- Future

The analysis is split into the same sections as in Appendix D, each covering different aspects of the AEO program and related aspects. Going through each section by displaying, comparing and analysing the conceptual framework and the empirical findings lays out the foundation for the papers conclusions.

4.1. List of participating companies

The summary table (Figure 10) presents a list of all interviewed companies. As the interviews were done anonymously, they have been given alphabetical names. The table explains in what kind of business the companies operate in, the respondent's position, as well as stating which Stairway level the companies were in when becoming AEO certified.

Company	Type of Company	Respondents Position	Stairway Lvl
A	Electronic retailer	Logistics process leader and Customs specialist	5
B	Port authority	Customs responsible	4
C	Aerospace components manufacturer	External logistics and Customs specialists	3
D	Shipping and logistics	Line manager	None
E	Fashion retailer	Inbound logistics manager	5
F	Forwarder	Head of customs	3-4
G	Coating and chemical manufacturer	Price freight manager	5
H	Agent for technical products	Cross-border forwarding Manager	None
I	Fashion retailer	Forwarding and customs	5
J	Forwarder	Office manager	None
*X	Defense material and service provider		None

Figure 10 - Summary table of interviewed companies

*Company X was a part of the previous study but as it was no longer AEO certified it decided not to participate in the study. Despite not participating, Company X gave the authors a quick response on why it had dropped its AEO license, which will be covered later.

4.2. Stairway

Seven out of the 10 interviewed companies had previously been accredited with a score ranging from 3-5 in the Stairway program. Meaning that already before becoming AEO certified, they fulfilled certain security and customs requirements, and thereby were already experiencing certain advantages. Many of the requirements and advantages within Stairway were similar to the requirements and advantages within the AEO program. It is important to keep in mind that when researching how companies experience the AEO program, that a majority of the companies previously were accredited members of the Stairway program while some companies had not been in any similar customs program before becoming certified. As a consequence, their opinions might differ based on their previous setup. This is an important circumstance to bear in mind when analysing the answers from these companies, as the study aims to investigate how companies perceive their AEO certification.

4.3. Survey

The main purpose of the survey was to get the discussion going during the interviews, as well as helping the authors to focus on specific areas during the interviews. Figure 11 presents the survey and displays the average rating the companies placed on each benefit. The survey demonstrates what they perceived as benefits and what they did not. Thus it was found that some companies placed more emphasis on customs procedures compared to others that placed more emphasis on security and the indirect benefits. To understand why companies placed different emphasis on different benefits could be related to the company's industry, size, market, previous experience, and more.

Suggested AEO Benefits	*Importance rating (1-5)	**Current experience (1-5)
1. Fewer physical and document-based controls	4.5	3.2
2. Priority treatment of consignments if selected for control	4.6	3.3
3. Choice of the place of controls	4.1	3.1
4. Easier admittance to customs simplifications	4.4	3.8
5. Reduced data set for entry and exit summary declarations	3.5	3.5
6. Prior notification (when consignment has been selected for physical control)	4.4	3.3
7. Improved relations and acknowledgement by other government authorities	4.2	3.1
8. Improved relations with customs	4.8	3.6
9. Being recognized as a secure and safe business partner	5	3.6
10. Indirect benefits (reduction in costs, marketing, competitive advantage and etc.)	3.7	3.5

Figure 11 - Survey results

*The first column ask the respondent to rate the importance of each suggested benefit for the organization (with 1 being very low importance – 3 neutral – 5 very high importance).

**The second column ask the respondent to rate your organizations current experience in relation to each suggested benefit (with 1 being very bad experience – 3 neutral – 5 very good experience)

These 10 claimed benefits are not applicable for all types of operators. The benefits that are applicable to specific companies mainly depend on the type of actor in the supply chain the company is. A manufacturer is obviously not working with customs procedures in the same way as a freight forwarder is. Also, the size of a specific company matters for which benefits that are applicable. A smaller company may for instances have outsourced all their customs related work to a third party, and can thereby impossibly experience some of the claimed benefits. Many of the responding companies have never had or only had very few physical

inspections, meaning that the claimed benefits related to customs checks were difficult to evaluate and have an opinion of, for the respondents.

4.4. Reasons for Becoming AEOs

Staying competitive is one of the major tasks for every company (Erceg 2014). How businesses go about staying competitive depends on their chosen strategy, their “ploy to outmanoeuvre its competitors” as Mintzberg et al. (2003, pg. 4) put it. There are different reasons for why companies decide to become AEO certified and others do not. It is also important to keep in mind that the AEO program is voluntary, meaning no company can be forced to become AEO certified.

The empirical findings from this study show that the reasons why companies decided to become AEO certified differ. For most of the companies, becoming AEO certified was a natural step to take, as the AEO program is the successor of the previous Stairway system. According to the respondents, the Stairway system had been successful in its role of facilitating customs procedures before being replaced by the EUs AEO program. For Swedish operators, the AEO program was meant to combine the suggested benefits of the Stairway and the StairSec system. Thus, if an operator wanted to work with similar systems like Stairway and StairSec, the EUs AEO program was the only viable option for them.

Company B decided to become AEO certified upon request from its customers. It was important for some of its customers that they became certified, as they wanted to establish a fully secure trade lane, as Company B acts as a port authority. Company B and three other companies (E, I, and H) were also advised by *Tullverket* to become AEO certified if they were to apply successfully for setting up bonded warehouses. Despite this, *Tullverket* claim that there is no requirement to be AEO certified in order to operate a bonded warehouse. Operators of bonded warehouses only have to fulfil certain criteria that happen to be similar to some of them for becoming AEO certified, but there is no need for an AEO certificate for that purpose. (Mellbin 2015) Only one company, Company J, decided to become AEO certified for the means of obtain a competitive advantage over its competitors. It claimed that not many similar sized companies possessed the certificate, and having the AEO certification will thereby likely earn them more future business compared to not having the certificate.

It is worth noting to mention that when the AEO program was being advocated to companies in its early years, a high importance was placed to the fact that every AEO operator should

have its own dedicated contact person at *Tullverket*. According to many of the companies having a dedicated contact person, was one of the main reasons why they decided to become certified. As the program matured the dedicated contacts were removed resulting in mixed feelings for the interviewed companies about the dedication of *Tullverket*.

During the interviews and when going through the given replies, it became rather clear that the interviewed companies focused more on the effects that the AEO program has on customs procedures and handling, rather than the part concerning security. One example of this is that not a single respondent even mentioned the StairSec program during any of the interviews, which was the security amendment to Stairway. It was also generally considered that fulfilling the AEO security requirements was more of a nuisance rather than something else.

4.5. AEO Impacts On:

4.5.1. Security

The increase in container trade has made the global supply chain more vulnerable than before. As the size of the supply chain grows, the more vulnerable the supply chain is to any disruptions, such as theft or terrorist attacks, possibly causing serious consequences for the global economy. (Kommerskollegium 2008) Securing the supply chain revolves around the efforts taken by organizations and government to protect and maintain the supply chain by combining supply chain management with security requirements to counter terrorism, theft, and piracy for example. (Williams, Lueg, and LeMay 2008).

The SAFE framework explains how customs authorities can facilitate trade by certifying operators that are fulfilling certain supply chain security standards. Almost all regional or national AEO programs around the world build on the basics of this, meaning that the AEO program is focused on facilitating trade through improved supply chain security. (Ireland 2009) To become AEO certified, companies must meet the requirement set by the AEO program and be certified by a Customs Administration complying to the WCO's standards or equivalent supply chain security standards (WCO 2005). This way, the certified company is entitled to enjoy the suggested benefits of being AEO certified.

During the interviews, security was never discussed as an important aspect per se, mainly since the companies claimed that they have not had any major concerns with supply chain security. Many of the interviewed companies also said that their previous security

requirements before becoming AEO certified were quite high and only had to make small adjustments to fulfil the AEO security requirements. It is worth noting, that most of the companies were already members of the Swedish Stairway program before becoming AEO certified, meaning that they were already complying with all supply chain security standards set by *Tullverket*.

Some of the respondents confirmed that they thought their supply chain overall, had become more secure due to the company's AEO certification. Company A claimed, for instance, that their supply chain had become more secure as the certification forces them to constantly update and maintain its security routines, which also improved the overall security awareness in the company. Most of the companies did not have to make any radical changes or updates to their supply chain to fulfil the security requirements. But many agreed with Company A, that going through all security routines during the application process, as well as maintaining security standards raised the awareness of supply chain security within the companies. These results agree with the previous study conducted by Gotheim and Fjaervoll (2011), in which it was claimed that the enforced security requirements of the AEO program had raised the security thinking and awareness within the companies.

Despite applying for the AEO to enjoy mainly the simplified customs procedures the security aspect plays an important role in a business context for a majority of the respondents. Many respondents stated that they put a high value on the positive security image effect that the AEO accreditation brought for them. The specific wording "quality stamp" was used by many of the respondents to describe this function of the AEO certificate. Limiting this benefit is that respondents' representing all different types of actors, claimed the AEO is not widely recognised throughout their industries.

Official documents, both regulating AEO globally from WCO and regionally from EU, describing what AEO aims to do for improving the security, mainly focus on how to prevent thefts, protect supply chains from terrorist attacks, etc. The findings in this study show though, that operators do not see this as major issues for them. This could potentially be explained by that most of the companies already had high security standards before being certified and have thereby been relatively well protected all the time, hence avoided such threats. But not all interviewed companies had extensive security systems and routines before becoming AEOs. No company claimed to be facing or have faced any major security concerns. What the authors can make out is that security cannot be considered as a priority for many of the

companies. In addition, the results show that all responding companies agree to the claimed benefit by the European Commission about being recognised as a secure and safe business partner, is very important to them.

4.5.2. Customs Procedures

The immense increase in global trade and cross-border transactions in the last two decades has called for greater co-operation between Customs Authorities as well as between Customs Authorities and companies (Moisé, Orliac & Minor 2011). Hidden costs and unwanted time-wasting activities; such as: unnecessary paperwork, going through intermediaries, extensive data entry, etc., can amount to billions in costs for the global business community (Kommerskollegium a2015). Setting up programs that promote harmonized, simplified, standardized, and transparent customs procedures is vital to support and promote trade facilitation (Batista 2011). According to Djankov et al. (2010), reducing the time required for trade transactions and unnecessary activities can facilitate trade and significantly boost exports. By providing preferential treatment and simplified customs procedures, it has been claimed that the real purpose of the AEO program is to create a totally facilitated and secure international supply chain (Just-in-Time Management 2015).

Companies desire lead-time reducing activities such as simplification, harmonization, and standardisation, which are aimed towards facilitating trade (Kommerskollegium 2008). Additionally, as indicated before, most of the companies applied to become AEO operators in order to be able to enjoy the suggested benefits of simpler and easier customs procedures which, according to the suggested benefits, AEO certified companies can expect to be entitled to. When the AEO customs simplifications were introduced, three companies (E, H and I) were disappointed that some of the previous national customs simplifications from the Stairway era were removed. The companies highly valued many of the Stairway simplifications and were disappointed to see them go. But as the AEO program was replacing the Stairway system, the companies saw no other option than to become AEO certified if they wanted to make use of at least some customs simplifications. But it seemed as the most of the companies were hoping for a more radical change in relation to the simplifications, as they can be considered as one of the major motivations for becoming certified. However, many of the companies were happy with the current AEO simplifications, claiming that having them is better than not having any at all. Some companies indicated though, that the AEO program has resulted in a slight increase in workload within customs handling. But others (A, C, F and

G) said that having the AEO certificate has made their job a little easier. Moreover, without having these simplifications, they would have more paperwork and longer lead-times for example, arguing that increased workload has possibly contributed to increase in quality of their customs procedures, agreeing with Gotheim and Fjaervolls (2011) study. With this being said though, the authors cannot contribute any significant changes, positive or negative, related to the suggested benefits of easier admittance to customs simplifications.

The previous study undertaken by Gotheim and Fjaervoll (2011) claimed that the suggested benefit of reduced data entry for exit and summary declarations was rather limited with the declarations being either filled out electronically or handled by a third party. In this relation, there has been no change. Companies still agree in this study that the experienced benefits of reduced data entry for exit and summary declarations, is rather limited and maybe should not even be promoted as one by the European Commission.

When it comes to customs controls, Butter et al. (2010) state that the government must be able to differentiate successfully between AEO certified companies and those not certified, if the program is to be successful. Butter et al. (2010) concludes that AEO works best when it is based on trust and reputation between the operators and the government where less physical checking reduces the administrative burden and facilitates trade.

Regarding physical and document-based controls, it is complicated to make out if being an AEO has a direct effect in terms of fewer controls. Most of the companies said that they have either never had any controls or only very few. But this was also the case before when the Stairway was in place. Only two companies (H and J) commented, and said that they experienced a measurable change in the area of controls. Company H commented that following becoming certified it faced more document-based controls as compared to before becoming certified. Company H claimed that because it was certified it was easier for *Tullverket* to scrutinize it compared to companies who were not AEO certified. This used to be the case for Company H, but today the company claims that the document-based controls are fewer compared to as before. For Company J, *Tullverket* had shown up for physical controls a number of times, before becoming AEO certified, causing costly delays. After becoming AEO certified, Company J has had no physical controls.

The results from the interviews regarding physical custom controls showed that very few companies have even had them, also before becoming AEO certified, with only Company J as

an exception. They all place high importance on fewer controls, but when it comes to the actual controls their experience was rather limited as the responses indicate. Despite the rather neutral score in terms of current experience the authors can say that this is rather more positive than negative. Meaning it is better to have neutral experience and no controls rather than a lot of controls and good experience.

Priority treatment and prior notification of physical controls if they were to happen are very important for all companies, as physical controls can affect the supply chain significantly in terms lead-time. Choice of place of the control was relatively important for most of the companies. It is also worth mentioning that one company (Company C) was not aware that physical controls could be carried out at their own facilities.

Only one company said that it would like to see more physical controls being conducted by *Tullverket*, claiming that more controls increase the security of the supply chain. This was Company B, a port authority and a customs warehouse operator. The reasons for Company B to see more physical controls, could be because it was the only company interviewed who did not have a direct interest in short lead times.

After discussing the claimed benefits of increased supply chain security and more efficient customs procedures as stated by the European Commission, the authors can state that the possibility to enjoy more efficient customs procedures is more important to the interviewed companies than the benefits associated with increased supply chain security. This does not mean though, that the interviewed companies do not value increased supply chain security. The interviewed companies felt that their supply chain was already secure enough before they became AEO certified. Therefore it can be stated, that many of the companies became AEOs in order to enjoy the customs and trade facilitation related advantages, rather than the security related benefits, except for the benefit of being considered safe and secure business partner, which scored a 5 in the survey.

The previous study conducted by Gotheim and Fjaervoll (2011) showed that 5 out of 10 interviewed companies spent more time on customs procedures after becoming certified, and no company claimed spending less time on customs procedures. The study posited that increased information sharing with *Tullverket* and self-monitoring, were the main reasons for the increased workload. But they also added that the increased workload could be contributed

to the fact that the AEO program was rather new and companies might still be in a transitional phase.

During the interviews conducted for this study, there was little talk of increased workload related to being an AEO. When it was suggested, it was rarely measurable. Today, four companies actually claimed that the AEO program has made their work easier and customs procedures are more efficient. They claim that less paperwork and routines have contributed to the efficiency of their customs procedures and a reduction in lead-times when applicable.

4.5.3. Costs

Becoming AEO certified does not come for free, and there are certain entry costs involved. The process for operators to go through when applying for an AEO certificate in Sweden involves different steps of information sharing with *Tullverket*. Fulfilling all set requirements such as security, IT systems, and documenting processes can be very time consuming and costly, both in terms of manpower and funds needed. The application process is normally 3-4 months, but in some cases it can take even longer, it all depends on how developed and how well documented the operator's routines were from before. A Dutch research on the AEO certificate showed that the costs of fulfilling these activities can range from 50k Euros for small- to medium sized enterprises and up to 1 million Euros for large companies. (Ohlson 2015; Butter et al. 2010) Acciaro and Serra (2008) claim though that there is evidence that security can contribute to competitive advantage and companies have started to overlook the visible expenses and instead focus on the collateral benefits.

All responding companies experienced that many working hours had to be spent when they applied for the certificate. This was normally nothing they measured as a cost. But they all anticipated that many hours of work was spent when initially applying for the certificate. It is of interest to note that Company H considered the application process to be too time consuming for the permanent staff to take on, and they therefore decided to hire an external consultant as a project leader for its AEO application process. Company D and J were the only two companies that mentioned that they incurred some costs more than the working hours spent on complying. Both of them had to set up new alarm systems and Company J also had to install new doors at their office facilities. Worth mentioning is that both companies were the two smallest companies covered by the study, which may indicate that the larger companies already had very highly secured facilities. Considering that many criteria have to be fulfilled and many procedures have to be followed in order to become AEO certified, it is a

bit surprising that not a single interviewed company had to do any other investments except for those minor ones already mentioned.

Those companies that had been audited for renewal of their certificates by *Tullverket*, claimed that they spent many working hours when the audits took place. But none of these said they had to make any changes in order to keep their certificates after the renewals.

None of the respondents were able to provide any numbers or even estimations of the total cost for them to become certified, which is understandable as their main cost mainly related to the workload. Since the main cost for all the companies seemed to revolve around the working hours spent on it, the numbers ranging from 50k - 1 million Euros, for becoming AEO certified as the Dutch research by Butter et al. (2010) concludes, does not seem to have been the case for any of the interviewed Swedish companies in this study. It is understandable if companies would incur large costs if they have to make major investments at their facilities for instance. When that is not the case, it is not likely that the cost for becoming AEO certified will be more than the working hours spend on documenting processes, etc. Based on the empirical findings, the lower part of Butters et al.'s (2010) range for the associated costs can be sensible but no more than that when applied to Swedish AEOs.

4.5.4. Business and Trade

The global market is very competitive, and the smallest advantage might be able to influence the buyer when selecting a product or service. Competition is at the core of a success or failure of businesses. Having a competitive advantage in business, means being able to create value for its customers which the competitors have a hard time matching (Porter 1998). Becoming AEO certified can be perceived as one of the ways for companies to invest their efforts in trying to make their supply chain more secure, faster, efficient, and more competitive. As said before, Acciaro and Serra (2008) claim that security measures can help a company to gain competitive advantage. Those benefits come in the shape of higher supply chain visibility and efficiency, improved customer satisfaction, and reduction in cycle time. Being considered as a safe and secure business partner is getting more and more importance and could therefore be a determining factor when companies decide who they want to partner up with. (Butter et al. 2010; Kommerskollegium 2008)

Security was important for many of the companies in a marketing context, as many viewed the AEO certification as a quality stamp for businesses. Most companies stated that when

trying to do business with other Swedish multinational companies, being an AEO was often a requirement. It was repeated among some of the respondents that having the AEO certification works as a quality mark in the same way as different ISO-certifications do. Most of the respondents claimed, on the other hand, that they do not promote the fact that they are AEO certified. This can probably be explained by the fact that the AEO certificate in general was not considered to be well recognised within their industries. The transport providers (i.e. freight forwarders and transporters) were the only type of companies that said the AEO certificate was widely recognised within their industry. But often their customers still did not know what it was. As the certificate is not recognised or even unknown for business partners and customers, there is obviously limited reason for businesses to promote that they are certified.

Just one company, Company J, claimed that their AEO certificate provides them with competitive advantage. On the opposite, Company F considered that the certificate did not provide them with a competitive advantage, since a certification was more or less a requirement in their market. To not be certified when all competitors are, could possibly make customers aware of AEO suspicious and question why one specific company is not certified. The respondent from Company F explained: “You take the risk of being questioned if you happen to lack the certification”. Company D, which also acts as a transport provider, agreed with Company F but for the opposite reasons and argued how they thought that their uncertified competitors were still able to attract new customers. Thus, Company D considered this to be a proof of how the AEO certification does not provide them with any competitive advantage.

That all ten interviewed companies were still certified, is one indicator of that the general opinion is that the benefits of being AEO certified outweighs the costs and efforts of being one. However Company H said that if they would have to renew their certificate at some point, they would consider dropping it if they then expected the efforts in order to renew it to be too extensive, as it does not enjoy any major benefits of being certified. Also other respondents said that the benefits for AEOs are not very extensive and that they had thereby considered from time to time dropping it. Nevertheless, they always decided to keep it, as the efforts for maintaining it are minor. The great exemption from the previously mentioned reasoning around why it has been worth keeping the certificate is Company X, which was the only company in this study not interviewed. Company X was part of the study by Gotheim and Fjaervoll (2011) four years ago and was the only company out of ten that did not agree to

take part in this study. It was also the only company that had dropped its license since 2011. The only information provided was that they had announced *Tullverket* in the summer of 2013, that they wanted have their AEO certificate revoked as it did not experience any benefits from having it.

The findings show that companies generally do not consider the AEO certificate to provide them with competitive advantage in the market. Deciding to become certified was more or less inflicted by the fact that the AEO program was taking over the Stairway. Three companies said that setting up a bonded warehouse required them to become certified and so it cannot be said that for them, becoming certified was not a strategically based decision in terms of beating of competition. One company, Company J, applied to become AEO certified on the grounds of attaining competitive advantage as not many of their competitors were certified. Most companies were not able to identify any indirect benefits that are suggested that AEO operators could experience, though saying they might possibly be experiencing some benefits (score of 3.6) but nothing that could be measured in any way. Whenever benefits were mentioned during the interviews they only revolved around customs procedures and security.

The suggested benefit of “improved relations and acknowledgement by other government authorities” scored a low rating in the survey when looking at current experience, scoring a 3.1. Only two companies could share their experience in terms of improved relations and acknowledgement by other government authorities. Company J said that being AEO certified helped when applying to become a member of the International Air Transport Association (IATA). Another company (Company H) had hoped that being an AEO would help them when applying for the US Known Shippers Program, but they found themselves repeating some of the requirements since they applied for the AEO certification.

Other findings from the interviews indicated that the benefits of being an AEO from a business and marketing standpoint were overall relatively small, but they were in most cases overweighting the efforts of becoming certified and complying. Therefore most of the companies in the study had decided to keep their certificates, while hoping that the importance of being an AEO certified business will increase in the future.

4.6. Relationship with Customs

The economic community has increasingly become aware of the importance the impact customs has on international business (Cedilnik 2013). The AEO program is a voluntary program and no company can be forced to become one, but according to Widdowson (2009) voluntary programs are more likely to bring benefits and aid the movement of goods through cooperation, rather than relying on enforced compliance customs programs. Maintaining a good relationship with Customs Authorities and companies is vital to make supply chains more fluid.

Building trust and cooperating with businesses in the form of partnerships, customs is able to maintain effective control and the interests of both parties are represented to the greatest extent. The cooperation between the participants and effective management should significantly improve overall international business activities. (Kommerskollegium 2008; Cedilnik 2013)

When discussing their relationship with *Tullverket*, it quickly became evident that all interviewed companies had a good working relationship with the authority. All companies still had some comments on their relationship as is normal. When answering the survey, companies placed a high importance (4.8) on improving relations with customs, getting the second highest score out of ten questions. But when rating the current experience the score was only positively moderate, a 3.6. The reasons of having these results can be attributed to that all companies claimed to have good working relationship with *Tullverket* already before becoming AEO certified; saying that they have not experienced any major improvement in their relationship that could be associated with the AEO program.

All companies claimed that they were in good collaboration with *Tullverket* in most areas. Numbers of companies though, were disappointed with having their own dedicated contact person removed few years after the AEO program was launched. Many of them pointed out that having a dedicated contact person at *Tullverket* was one of the main reasons of becoming certified, such as companies H and I. These outcomes fit well with Gotheim and Fjaervolls (2011) findings. The reason why the contact persons were removed are said to be budget constraints. Other contributing reasons to why the contact person was removed are, centralization of information through one electronic source as well as some companies had become too reliant on their contact person when sourcing for easily obtainable information. (Mellbin 2015) With many of the companies being unhappy with the removal on the

dedicated contact one company, Company I, added that communication and getting information from *Tullverket* takes longer without the dedicated contact person. Company A, strongly disagreed though. Company A said that it is very active in looking for answers to any customs related questions. When contacting *Tullverket* with customs related enquiries it claims that most often they are connected with the right customs specialists when looking for answers. They even claimed that this way of communicating with *Tullverket* is working better than with a dedicated contact person.

The companies were generally satisfied with all the help that they received from *Tullverket*, when they were in the process of applying for the AEO certification. Communication and cooperation on all ends were good according to all companies. Many of them were also satisfied with having *Tullverket* coming to their offices and helping the staff when needed.

When it comes to information sharing and informing companies about new regulations and procedures, companies felt that *Tullverket* has performed an adequate job. Most of them attend *Tulldagen* and read through *Tullnytt*, but still they feel that *Tullverket* needs to be a little more proactive. Some companies said they felt like they needed to extract the information from customs and even one company (Company C) claimed that in some cases they hear about new upcoming legislations from other companies first rather than from *Tullverket*.

Overall, the findings on the relationship between *Tullverket* and the interviewed companies are quite positive. According to a majority of the companies, their relationship with *Tullverket* was good before the AEO program was launched. Thus, it is difficult to make out whether the AEO program contributes positively to the relationship or not. However, it can be said that it had no major negative effects. Looking at the high importance the companies place on the suggested benefit of improved relations with customs, score of 4.8, and the current experience of a 3.6, it can be stated that companies feel that there is a gap between the suggested benefit and their current experience. The removal of the dedicated contact person and the slightly indicated lack of reactivity by *Tullverket*, can partly explain this gap. Considering the fact that the respondents overall were satisfied with their communications and relationship with *Tullverket*, it was a bit surprising that the score on the current experience was not higher, as they rated the importance as highly for this claimed benefit. The reason for this could be that the relationship between the companies and *Tullverket* before they became AEO certified was

relatively good, and that the AEO certificate did not result in any major improvements to the already good relationship.

4.7. Future

The UCC, an updated customs regulations document for the EU will be fully implemented in the next year and will repeal the current customs code, CCC. The UCC will serve as the new framework regulation on the rules and procedures for customs throughout the EU. Since major parts of the new regulation have not yet been agreed upon, the Swedish Customs Administration has not been able to prepare that much at this stage for the UCC, and it is not completely sure how it will be working. (Ohlson 2015)

However, the UCC should offer greater clarity, legal certainty, streamlined customs procedures, simplified customs rules, and complete the shift by within the EU to a paperless and fully electronic environment. All legislation within the UCC has not yet been drawn up as all amendments need to reach a high level of acceptance throughout the EU before the UCC can work efficiently. The main parts of the UCC will be enforced in May 2016, but full implementation, including overall IT system changes, has been postponed until 2020 (Doornik 2014; European Commission d2015).

The proposed changes should work as an incentive for companies to become AEOs as non-AEOs will face more complicated customs procedures than what is the case today (Doornik 2014) The full implementation of the UCC means that all Swedish national customs simplifications will be removed, with *Tullverket* commenting, that they do not expect any major simplifications connected to the UCC to be added in the future (Mellbin 2015).

The level of awareness of the UCC in general, and how it will affect the AEO program in particular, differed a lot between the respondents. Companies C, D, and H, were the only companies that were uninformed about all contents of the UCC, where Company D had not even heard of the new upcoming customs regulations within EU. Out of the remaining respondents, which were aware of at least some contents of the UCC, all of them are expecting that the UCC will be beneficial for AEOs.

Both in general, and in relation to the UCC, the overall expectation was that the concept of AEO will be more focused on security and stricter procedures rather than on trade facilitation in the future, even though none of the companies claimed they became AEO certified for

security reasons. When the question regarding the future focus for AEO was asked, only the respondent at Company J expected more emphasis in the future to be about trade facilitation. Some respondents were neutral on what they expected about the future focus, but the majority thought that such focus would be on increased supply chain security and stricter procedures, potentially resulting in more workload for the companies. Company A addressed a fear for that the customs related workload will increase as a consequence when the UCC is in place, as its regulations are more comprehensive than ones today. Also, many other respondents expressed how complicated they thought the implementation of the new common IT-system will be. The new IT-system was at the same time something many respondents wanted to have in place as soon as possible, for more efficient customs processes. Thereby the expectation by most companies was, including Company A, that the new IT-system, when it is fully implemented, it will make customs processes and procedures more efficient.

Company E feels that the AEO program has been going backwards in the recent years. Also other respondents said that they did not feel *Tullverket* has focused on AEO lately, or at least not as much as before. *Tullverket* admits that it has not been focusing their efforts on promoting the AEO program in the last two years or so compared to how they used to. For example, there was much more talk of AEO related topics at Tulldagen two years ago than compared to last Tulldagen event. One idea of why this is the case could be because of the current AEO program is not being well enough attended to, since *Tullverket* is maybe waiting for the upcoming changes in relation to the UCC.

Even though all the national Swedish simplifications will disappear with the UCC in place, none of the respondents mentioned how this would affect them during the interviews. The most likely reason for that is probably since they were not aware of the fact that the national simplifications will disappear. If they were aware, they would most likely have mentioned this as something negative with the UCC, since customs simplifications were one of the main reasons for many of the companies to apply to become AEO certified.

5. Conclusion

This final part of the report aims to bring qualitative answers, and to draw further conclusions related to the stated research questions.

5.1. Original Purpose of the AEO Program

During the last decade, the global business community has come to realize how important supply chain security and trade facilitation is for global trade. The 9/11 attacks uncovered how vulnerable supply chains actually were to unanticipated disruptions. Following the attacks, numbers of initiatives aimed at improving the security of the supply chain were introduced worldwide. While securing the supply chain, these programs can have the effect to hinder trade. In a world where customers are demanding their product to be delivered quicker and cheaper, the topic of trade facilitation has been increasingly discussed. Introducing the AEO program, where operators are provided preferential treatment and simplified customs procedures with the real purpose creating a totally facilitated and secure international supply chain.

1. A) How is the AEO program in Sweden fulfilling its original purpose in terms of improving security and facilitating trade?

Based upon the empirical findings, it can be concluded that interviewed companies focused more on the effects and the possible benefits that the AEO program could bring in terms of customs procedures and handling, rather than the benefits associated with improved supply chain security. One reason for why the companies leaned in that direction was that most of them were members of the Stairway and StairSec program before becoming AEO certified, meaning that many of the companies considered their supply chain to be very secure already. And so in that way they were hoping to be able to enjoy the benefits associated with improved trade facilitation rather than improving their already secure supply chain. When asking the question, “is the AEO fulfilling its original purpose?”, for this research, there are many aspects to consider. The empirical findings reveal that with the current AEO simplifications in place, respondents have provided responses saying that the AEO program has had a positive effect on reduction in time and work spent on customs procedures. Looking at document-based and physical controls, the companies have had limited experience in that relation. Most of them have had limited controls since becoming AEO certified, but they also

had few controls when they previously were a part of Stairway. But from this it can be said that being AEO certified should result in limited controls. No company said that being an AEO had resulted in more physical controls. One company said that before becoming AEO certified, it faced number of controls, but since it became certified it has had none. Looking at these empirical findings, it can be said that the AEO program is fulfilling its purpose in terms of facilitating trade in many ways.

When it comes to confirming if the purpose of the AEO program to improve the security is fulfilled or not, it is a bit more complicated than discussing the trade facilitation aspect. As none of the ten claimed benefits by the European Commission, of being AEO certified, is related to improved security, and neither the respondents during the interviews said that improved security was a high priority for them, it is difficult to tell if improved security is a result of the AEO program or not. Also the fact that a majority of the companies previously had been accredited in Stairway makes it difficult to tell if security has improved. One aspect that can be confirmed regarding improved security was though, that some of the interviewed companies said their internal security awareness had improved after they became certified. Also the official security guidelines and requirements set forward by the EU in order to become AEO certified helped many of the companies to update their internal security guidelines, thereby contributing to increased supply chain security.

However, during the interviews the authors got the sense that the AEO certified companies were expecting to get something more than what they were already experiencing from the AEO program. What they were actually expecting they could not clearly specify. Looking at the suggested benefits of being AEO certified, one also need to keep in mind that the EU's AEO program is voluntary and national Customs Authorities decide for themselves how extensively they will follow the AEO guidelines. Sometimes actors take a one-sided view and look at the AEO program as only delivering benefits to the private sector, as mentioned by *Tullverket*. Explaining better and working harder towards that both companies and Customs Authorities should aim to achieve the broad objectives of a program such as the AEO program can help to create an improved win-win situation for both parties involved.

2. How do AEO certified companies in Sweden perceive costs and business related benefits associated with being AEO certified?

In their research, Butter et al. (2010) claimed that securing all facilities and fulfilling all AEO requirements in order to become AEO certified can be capital expensive, with costs ranging from 50k Euros for small- to medium sized enterprises and up to 1 million Euros for large companies. Based on the findings from this study the authors cannot confirm Butters et al. (2010) results, as none of the companies claim that becoming AEO certified was capital expensive. On the other hand, most companies mentioned a considerable increase in workload for its staff during the application process. According to the findings, the authors conclude that becoming AEO certified in Sweden is not capital expensive, but companies can expect to spend a considerable amount of effort on becoming certified. With all the work spent on becoming certified, most of the companies claimed that it has been worth it, saying that the benefits brought by being AEO certified outweigh the cost and efforts to become one.

The findings of the research show that for most of the companies, becoming AEO certified was a natural step to take if they were to continue to be a part of a customs initiative similar to the previous Swedish Stairway program. The findings show that only three companies (E, I, and J) out of the ten interviewed made a strategically based decision to become AEO certified. Two companies (E and I) became certified to facilitate their setup of a bonded warehouse. Only one company (Company J) became AEO certified as it felt that the AEO certification would provide them with a competitive advantage in the future. Majority of the companies valued their AEO accreditation as they said it provided them a certain quality stamp, stating that being considered as a safe and secure business partner is very important. Despite this, most of the companies did not promote their accreditation extensively in any kind of marketing or when acquiring new business partners. *Tullverket* has admitted that it could have been more active in its effort to promote the benefits of the AEO program, with the authors concluding that this might be one of the reasons why the AEO program is not as recognised today as it could have been. But the recent trend has been that global and multinational companies have started to require their business partners to be AEO certified. The authors conclude that this trend clearly shows that companies as well as *Tullverket* need to put more effort into promoting the importance and the benefits of being AEO certified.

3. What will be the future of the AEO program in Sweden?

Many respondents had a belief in that the AEO program will develop in a positive way, mainly expecting that it will become more and more recognised in future, further improving some of the benefits. A future belief of improved recognition of the AEO program was one of the main reasons why some of the companies in the study had decided to maintain their certificate even though they had not experienced any significant benefits so far. It can be concluded for the findings from the study that the interviewed companies were still hoping for further improvements in terms of the benefits that the AEO program has to offer, thereby agreeing with Gotheim and Fjaervolls previous study from 2011.

When asked about what the future would look like for AEO certified companies as well as what they thought would be the general focus of the customs initiative in the future, many of the companies expected more focus to be on security and stricter procedures rather than on initiatives aimed at facilitating trade. In this sense, the companies could be right. With the mutual recognition between the U.S. C-TPAT and the EU's AEO program, future UCC legislation will presumably be highly influenced by U.S. standards, causing guidelines and procedures to become stricter and even more security focused than they are today.

But the companies do hope that the future development will point towards more simplifications and trade facilitating initiatives, rather than their expected focus on increase in supply chain security. If the focus on security becomes too extensive it might actually contradict trade facilitation, as it may result in more paperwork for the operators. This opinion is something the legislators on EU level need to consider when further developing the AEO program in order to at least maintain or preferably improve the attractiveness of the program.

Even though the AEO program is considerably recognised in Sweden today, *Tullverket* has confirmed that its focus on promoting and discussing the AEO program in the recent years has dwindled. The stated reason for this is that *Tullverket* have had to focus on other major areas, but it is also likely to be related to the upcoming UCC. As the UCC will imply changes to the AEO program, which may mean that existing AEOs will have to update their certificates. This means that companies applying now for becoming AEOs would have to apply twice within a relatively short time span. That would mean more work for both *Tullverket* and for the applying companies. It will be interesting to see how the AEO program will develop in general after the UCC in place, but also to see how *Tullverket* will decide to continue to work

with it. Since *Tullverkets* opinion is that the market for AEOs in Sweden is not saturated, *Tullverket* will have incentive again for continuing promoting the program after 2016.

One circumstance that might challenge the development of the AEO program after the UCC is in place is that the national simplifications will be withdrawn at the same time as no new simplifications have been suggested at this stage. If no new simplifications will be presented before the UCC is in place, there is an overhanging risk that certified operators will complain about what benefits their AEO certification really brings to them, possibly resulting in companies dropping their certifications. The operators are according to the findings in this study not aware of the simplifications being withdrawn with the upcoming UCC. When realising this, many of the current AEOs will possibly become hugely disappointed. It is therefore very important that the EU agrees upon some simplifications for AEOs before the UCC is in place. Otherwise, there is an overhanging risk that the AEO program will lose in its reputation.

5.2. Contributions and Further Research

This study aimed to answer if the AEO program in Sweden was fulfilling its original purpose. The conceptual framework along with the empirical findings should offer both *Tullverket* and Customs Authorities on EU level, valuable insights into how companies in Sweden perceive their AEO accreditation in relation to; trade facilitation, security, costs, business and trade, along with the suggested benefits of the AEO program.

Second, this research should help companies which either already possesses the AEO certification or companies considering applying to become certified, to assess if they find the program to be fulfilling the claimed benefits as suggested by the EU. Due to the lack of readily available research material from studies on the topic of AEO in the EU, this study can be used as a theoretical foundation for further research.

Due to the lack of current research on the topic of the EU's AEO program, there is a variety of aspects that can still be further researched. This research took on an exploratory view of the perception of AEO in Sweden where the effects of the AEO program were studied. Most of the interviewed companies were previously members of the Swedish Stairway customs program. For further research, the authors recommend a study to be conducted on similar sized non-AEOs which have never been part of the Stairway or similar programs. The results

from such research could be compared to this study, and the true effects of becoming AEO certified could possibly become even clearer.

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Appendix A - Survey e-mail

Dear Respondent,

We are very grateful that you have agreed to participate in our study regarding the “views on the AEO certificate in Sweden”.

Below is the short survey we would like you to look over and fill out if you have the time. There is no need to send us the result, as we will discuss them during the interview.

In the attachment you can find further explanation of each benefit if needed.

The purpose of the survey is to get a better understanding of your basic thoughts on the AEO certificate. All respondents replies presented in the final paper will be anonymous.

Looking forward to the interview!

Best regards,

Oliver Tegneman and Sindri Tryggvason

The European Commission lists out 10 proclaimed or suggested benefits that organizations are expected to experience due to their AEO status.

The purpose of this small survey is to find out the:

- Actual value of each suggested benefit
- As well as the actual realization of each suggested benefit

*The first column asks you to rate the **importance** of each suggested benefit for your organization (with 1 being very low importance – 3 neutral – 5 very high importance).

The second column ask you to rate your organizations **current experience in relation to each suggested benefit (with 1 being very bad experience – 3 neutral – 5 very good experience)

Suggested AEO Benefits	*Importance rating (1-5)	**Current experience (1-5)
1. Fewer physical and document-based controls		
2. Priority treatment of consignments if selected for control		
3. Choice of the place of controls		
4. Easier admittance to customs simplifications		
5. Reduced data set for entry and exit summary declarations		
6. Prior notification (when consignment has been selected for physical control)		
7. Improved relations and acknowledgement by other government authorities		
8. Improved relations with customs		
9. Being recognized as a secure and safe business partner		
10. Indirect benefits (reduction in costs, marketing, competitive advantage and etc.)		

Appendix B - Interview guideline (English)

About the respondent

Can you shortly describe the company and its main activities?

What is your job title and brief job description?

How long have you been working with AEO?

Discussion about the survey (main part of the interview through which many of the questions listed below were answered)

General

On what grounds did your company decide to apply for the AEO certificate?

Why does your company have the AEO certificate today?

Security

Do you think that your supply chain is more secure due to the AEO, and if so, in which way?

Do you select contractors or business partners based on if they are AEO certified or not?

Customs procedures

How many times have you been selected for random customs controls, before and after becoming AEO certified?

Do you think that the AEO certificate has made your job easier?

Cost

Did your company incur high cost when applying for becoming an AEO?

Are you currently spending any money complying to the AEO?

Do you think that the benefits of becoming an AEO have outweighed the costs and efforts of becoming and being one, and why so?

Business and Trade

In your opinion, how recognized is the AEO certificate across your industry?

Do you feel that AEO has facilitated trade for your company?

Do you think that the AEO certificate has any impact on the efficiency on your supply chain?

Does the AEO accreditation provide you with a competitive advantage?

Do you, or how do you, use it in marketing related activities or when trying to acquire new customers?

Have you ever thought of dropping your AEO certificate?

Relationship with Customs

Do you think that you are supplied with enough information from the Swedish Customs Authorities?

Future

What do you know about UCC?

Yes->

What do you know about its contents?

How did you hear about it (from whom?)

What are your thoughts?

Do you think the changes will be positive/negative?

Nothing-> We explain in brief what it is.

What do you think is the future of the AEO certificate?

What do you think the AEO program will look like in 10 years?

Appendix C - Interview guideline (Swedish)

Om respondenten

Kan du kortfattat beskriva företaget och dess huvudsakliga affärsområden?

Vilken är din arbetstitel och vilka är dina huvudsakliga arbetsuppgifter och ansvarsområden?

Hur länge har du arbetat med AEO?

Diskussion om undersökningen (detta utgör huvuddelen av intervjun, där många av de efterföljande frågorna besvarades)

Generellt

På vilka grunder valde ert företag att ansöka om AEO-certifieringen?

Varför är ert företag idag AEO-certifierat?

Säkerhet

Tror du att er försörjningskedja är säkrare på grund av AEO, om ja, i så fall på vilket sätt?

Beslutar ni om underleverantörer eller affärspartners baserat på om de är AEO-certifierade eller inte?

Tullförfaranden

Hur många gånger har ni blivit slumpmässigt kontrollerade i tullkontroller, före respektive efter ni blev AEO-certifierade?

Anser du att AEO-certifieringen har förenklat ditt och/eller andras jobb?

Kostnader

Upplevde ni höga kostnader i samband med certifieringsprocessen för AEO?

Innebär det idag någon kostnad för er att upprätthålla AEO-certifieringen?

Anser du att fördelarna med att bli AEO certifierad överväger kostnaderna och övriga ansträngningar för att bli certifierade, och varför/varför inte?

Kommersiellt

Hur etablerad är AEO-certifieringen inom er bransch?

Anser du att AEO-certifieringen har underlättat handel för företaget?

Tror du att AEO-certifieringen har någon påverkan på effektiviteten i försörjningskedjan?

Ger AEO-certifieringen er någon konkurrensfördel?

Använder ni, eller hur använder ni, AEO-certifieringen i marknadsföringsrelaterade aktiviteter?

Har ni någonsin övervägt att göra er av med AEO-certifieringen?

Relation med tullmyndigheten

Anser du att ni får den information ni behöver ifrån *Tullverket*?

Framtiden

Känner du till, och vad vet du i så fall om UCC?

Ja→ Vad vet du om dess innehåll?

Varifrån fick du information om det?

Vilka är dina tankar om det?

Tror du att förändringarna kommer att vara positiva/negativa?

Ingenting→ Vi förklarar kortfattat va det är för något.

Hur tror du framtiden ser ut för AEO-certifieringen?

Hur tror du att AEO programmet kommer att se ut och fungera om 10 år?

Appendix D – Interview summaries

Company A

Company A is an electronic retailer with stores spread over Scandinavia. The interviewed personnel work for the company's logistics and warehouse division, which is reliable for the Swedish region.

Respondent's position: *two persons were interviewed, a Logistics Process Leader and a Customs Specialist.*

AEO impacts

Company A has been AEO certified since the program was introduced in 2008. Previously being a level 5 rated operator in the Stairway program, made the transition to become an AEO relatively simple.

Security

To them AEO works as a self-assessment tool when it comes to updating security and customs related procedures, as its Logistics and Customs division is highly proactive. In that sense, Company A considers its supply chain to be more secure as a result of becoming AEO certified.

Customs procedures

Being able to get a prior notification when consignments are selected for control was highly important to the company. Traceability means everything to the Logistics division and knowing where your consignments are all the time is very important. The prior notification allows Company A to adjust their tracking when it comes to customs controls. Another interesting fact is that Company A has experienced a considerable decrease in physical controls since becoming AEO certified. From 2008 it has only had one physical customs control.

Company A agrees with the claimed benefits of reduction in data entry and customs simplifications.

Costs

The Company spent considerable amount of time and money to comply with the system, though mainly on the technical side as their facilities were already very secure.

Trade

Company A thinks that even though the certificate is not highly recognised within its industry, being AEO certified is very important.

Company A does not use its AEO certification when it comes any marketing purposes in order to acquire new customers or suppliers. It is also not that important for Company A that their suppliers hold an AEO certificate. The reason why, is that all contracts made are including a security policy inspired by the AEO which all carriers must comply to.

When asked, Company A had a hard time identifying precisely if AEO provides them with a competitive advantage. They do not monitor any key indicators that can tell them if the introduction AEO guidelines have had positive or negative effects on the organization. They did say though, that they would probably incur more costs and delays related to customs procedures if they did not have the AEO.

The company's business strategy revolves around low pricing. Having mentioned the previous benefits, less time spent on customs related activities and expected decrease in costs related to AEO guideline, the respondents agreed that those benefits compliment the company's competitive advantage, in terms of keeping prices low.

Company A believes that the AEO certificate facilitates and makes their trade more efficient. The respondents also admit that AEO has made their job easier, due to the customs simplifications associated with the AEO.

Relationship with customs

Company A values its relationship with *Tullverket* highly. When asked to rate the relationship they gave it full mark - or very good. The respondents keep a daily dialogue with *Tullverket* and they say that they have close working relationships with many of the customs officials.

Company A says it is very active in looking for answer to any customs related questions. When contacting *Tullverket* with customs related enquiries it claims that most often they are connected with the right customs specialists when looking for answers. They even claimed

that this way of communicating with *Tullverket* is working better than with a dedicated contact person.

Future

Respondents at Company A admit that AEO has made their job easier, due to the customs simplifications associated with the AEO. They are however worried that the proposed changes and additions to the AEO will make the program more focused on security rather than trade facilitation. What they mean is that they are afraid that the current simplifications resulting from the current AEO program will be lost in the reforms. They predict that the AEO program of the future will revolve more around enforcing customs and document controls that they believe will result in increased workload and even more paperwork.

Company A predicts that they will need more staff in the future to deal with AEO related activities as it believe that complying the UCC will be more comprehensive than following the current AEO program. They do so through that they will not feel the full effects of UCC until in 2020.

Company B

Company B is a port authority, located at the Swedish east coast. The port authority offers a variety of infrastructure for different types of cargo and vessels.

Respondent's position: *Customs responsible - Responsible for making sure what they are disclosing from the port is customs cleared.*

AEO impacts

Company B was before they acquired their AEO-certificate in late 2008, a level 4 member in the Stairway program.

Most of the 10 benefits claimed by the European Commission are targeting companies that are transporting their goods over national borders, which means that operators, such as port authorities, may not experience some of the claimed benefits. Examples of benefits that Company B had not experienced due to their position in the supply chain were: Priority treatment of consignments if selected for control, Easier admittance to customs simplifications, Reduced data set for entry and exit summary declarations, etc.

Security

The security part of the AEO certificate is very similar to the security standards the Swedish Sjöfartsverket requires from all Swedish ports, thus were Company B almost already complying with all those parts of the AEO certificate even before applying.

Customs procedures

The AEO certification has not facilitated Company B in any way more than that fewer controls are conducted. On the other hand would they like to see more controls to increase the security. This is thereby something they see as a negative consequence of being AEO certified.

Costs

Becoming AEO certified did not incur any high costs or required any extensive workload for Company B, since most of that job was already made when becoming a level 4 operator in Stairway. And also since they already had to comply with the high security standards required by Sjöfartsverket, were also most of the safety and security parts fulfilled beforehand. There are no major costs associated with complying with the AEO requirements today.

Trade

The main reason for them to become AEO certified was because their AEO certified customers needed that the port, through which they transported their goods, also had to be AEO certified, in order to create an entirely AEO certified transport chain (simplified procedure). They thereby saw the AEO certification as a way of retaining and attracting AEO certified customers. That is still today the main reason for why they have stayed AEO certified. Apart from this reason the company does not see any major reason for being certified. They have questioned why they really are certified, but since they do not see any negative consequences of being certified, they have not had any reason for dropping the certificate.

Company B is not using their AEO certificate in any marketing related context, except for that they say on their webpage that they are AEO certified. This is probably mainly because many customers do not even know what AEO is.

Relationship with customs

Company B was satisfied with the updates and the treatment it gets from *Tullverket*. Even though they would wish for some more discussion and information about AEO related issues.

Future

Company B is not sure about how the UCC will affect customs procedures in general. The respondent felt uncertain about the implications of UCC will have, even though he had been participating in a discussion group evolving around the contents and implications of UCC. One of the things Company B wanted to have answers to was what will happen with the regulations for operating a customs warehouse, as they are doing, but the respondent still did not have got any information about what will happen with that. Company B anticipate the implementation of the new IT system will be very tricky and will cause confusion in the beginning. More specific about how the AEO-certified companies will be affected by UCC were they not very familiar with, mainly because the details are still not set in the UCC. Company B sees a problem if the Swedish national customs simplifications will disappear when UCC comes into force in 2016. They see a problem with that AEO is enforced differently between the different EU member states, which is causing troubles when operators from different member states have different requirements for complying with the regulations.

Company C

Company C is a wholly owned subsidiary of another major global company within development and manufacturing. It develops and manufactures components for aircraft, gas turbines and rocket engines with high technology content in cooperation with the world's leading producers.

Respondent's position: *three persons were interviewed, a Manager of external logistics and two Customs Specialists.*

AEO impacts

Company C has been AEO certified since the program was introduced in 2008 and was previously a level 3 operator in the Stairway system. On its own initiative in 2008, Company A set up to update its customs processes system. After consulting with *Tullverket* Company A was advised to apply for the AEO certificate if they were to receive any further consultation in relation to its update of customs processes.

Security

Company C claims that since the introduction of AEO the security awareness within the company has risen. The company cannot state whether its supply chain is more secure or not in relation to the AEO.

Customs procedures

According to Company C all the claimed benefits of the AEO certificate are important to them. With that being said, their current experience in terms of physical customs controls is neutral as their experience with for example "fewer physical controls" and "choice of controls" is very limited. Company C was not aware of that it could choose the place of controls. Company C has only once been selected for random physical control since becoming an AEO.

Company C claims its experience in terms of easier admittance to customs simplifications has been very positive since the introduction of AEO standards. The company had a lot of help from *Tullverket* when the customs processes were redesigned along when they applied to the AEO.

Costs

Applying for AEO certification proved to be an extensive three-month process for Company C, involving large amount of paperwork to be processed and sent to customs. The only costs suffered when applying for the AEO certification were related to high workloads. Company C did not suffer high costs when updating the security of its facilities, as the facilities were very secure before.

Trade

Company C values its AEO certification to a great extent but they cannot make out if the certification is widely recognised within their industry. The certification is mentioned when contracts are being negotiated and its main logistics providers are international 3PLs who are AEO certified. Company C does not mention the AEO certificate in any of their marketing efforts and there is no AEO related information on its public website.

When asked if Company C could identify any indirect benefits related to being an AEO, it was hard to point out any in particular. The company had not experienced any thefts, losses, or major delays before the AEO was introduced. The company has KPIs that could tell them if having the AEO reduces its costs in any way. As the company already had well-established processes before becoming an AEO, it is hard to identify any major positive changes that can be contributed by holding the certificate. With that being said, Company C does not think that the AEO certificate provides it with any significant competitive advantage.

Company C has a neutral stance on when asked if the AEO facilitates trade for the company in any way.

Company C states, that for them it was worth it to become AEO certified. The company backs this up by stating that the company is very happy with the customs processes and simplifications offered by the AEO, as well as the increased employee commitment towards security. The respondents also agree that the AEO certification has made their job a little easier compared to before.

The company has never thought about dropping its AEO certificate, as they believe it provides them a good value.

Relationship with customs

Company C is very happy with their relationship with *Tullverket*. Following its AEO certification, *Tullverket* helped the company greatly when the company set up its new customs processes.

The company believes though that the information exchange with *Tullverket* could be somewhat more proactive. The company has on few occasions received information on upcoming updates on customs regulations from other companies before the actual information came from *Tullverket* itself.

Future

Company C is aware of the upcoming changes resulting from the UCC, but it doesn't know what type consequences it will have on their daily operations.

When asked about the future development of the AEO program, Company C hopes that the IT system will be improved, and that transactions become more automatic than today. It also hopes that communication with *Tullverket* will be easier because today a large part of its communication with *Tullverket* goes through fax. Company C hopes that the simplifications will still be there in the future as it believes if they are removed it will result in a greater workload for the company.

Company D

Company D is Swedish subsidiary of a global shipping and logistics company and provides door-to-door transport solutions for its customers.

Respondent's position: *Line Manager*.

AEO impacts

Company D has been AEO certified since in March 2010. The company was previously a member of the Stairway. Its European headquarters required that all subsidiaries were to become certified, as their view was that having the AEO certification would provide them with an edge when competing for contracts.

Security

One of the main reasons why Company D decided to become AEO certified was that it had hoped that it would be considered a more secure and safe business partner. The experience has been that since Company D received its certification, only two companies have inquired that if Company D was certified.

Customs procedures

Company D is not importing or exporting goods on their own and mainly act as a logistics provider. In that way Company D does not experience any improved changes or benefits when it comes to customs simplifications and reduced data entry connected to customs declarations, as its business partners will have sorted that out beforehand.

The claimed benefits of prior treatment, priority treatment, and choice of controls when selected for physical customs control are really important for Company D. The reason for this is that the company has scheduled routes. So if a container is selected for control it might not get on the vessel in time before it departs and that can severely disrupt the flow of the transport chain. The company has no experience of these claimed benefits though; it has never been selected for these kinds of controls.

Costs

Company D experienced costs related to applying for the AEO in terms of setting up alarm systems and access card systems at their office facilities, as well a considerable increase in workload during the application process. Company D states it spent a great deal of time on setting up their processes in order to meet AEO standards.

Related to the work spent on fulfilling AEO requirement the single real improvement the AEO certification has brought the company is that it has aided the company's internal operations. All the work related to constructing working guidelines and routines is still readily available and its helps new employees integrate more quickly. Generally staffs were more knowledgeable about procedures.

Trade

When asked about how recognised the AEO certificate is across its industry, Company D replied by saying that all companies are aware of the certificate but not all of them have it. Company D continued and said that many companies have a hard time seeing what benefits

the certificate has to offer and also that many companies are put off by the amount of work and cost it takes you to gain the AEO certification. They see the fact that its non AEO-certified competitors are still able to attract many customers, as the AEO-certification is not providing any competitive advantage.

Company D mentions its AEO certification in terms of marketing and when acquiring new customers. They are for instance displaying the AEO logo on their website and in the signatures of all E-mails. Company D feels that the AEO provides some kind of a quality stamp on their business. With that being said, the company feels that potential customers consider the AEO certification when sourcing new business partners but that ultimate decisions are usually based on the going rates rather than based on how qualified the company is.

When asked if the AEO certification has facilitated trade for the company, its stance was very neutral, meaning it does not see a difference compared to before the AEO. The answer was the same when asked about the overall efficiency of the supply chain.

Company D finds the AEO certificate to be very broad in the sense that it is hard to fit all sizes and kinds of companies into one profile. Placing the same demands when it comes to complying to the AEO standards on differently sized companies can be criticized. In many cases it depends on what type of business you are and what types of benefits your experience.

When asked if becoming AEO certified has been worth it for the company the answer was no, as they had not experienced the suggested benefits. But the company was happy with how its internal processes and operations had improved following the certification.

Despite not experiencing many of the suggested benefits, Company D has never seriously thought of dropping its AEO certificate as it considers it to be a mark of good quality.

Relationship with customs

Company D is really happy with their relationship with *Tullverket*. It finds *Tullverket* to be very informative and they feel that they are very active in helping the company when needed. Company D reads all newsletters from *Tullverket* and it does think that they are very informative most of the times. They are not frequently in contact with *Tullverket* though since they are hiring an external customs consultancy firm for most of their operational customs procedures.

When Company D was in the process of applying for the AEO in 2009 and when updating its license in 2014 they say *Tullverket* was very helpful throughout the whole process.

Future

Company D had not heard or been informed about the upcoming changes provided by the UCC.

Company D thinks the importance of securing shipments in the future will be highly important to its customers and for international trade in general. According to Company D, being a certified AEO operator in the future will encourage customers to do business with them rather than a logistics provider who is not certified.

Company E

Company E is one of the leading fashion chains in Northern Europe with stores in The Nordic countries, the Baltic States, Russia, Central Europe and the Middle East. The company does not produce its own products but instead it works with factories in a variety of other countries.

Respondent's position: *Inbound Logistics Manager*.

AEO impact

Company E has been AEO certified since early 2009 as well as being a previous level 5 operator in the Stairway system, making the transition into AEO relatively easy. One of the main reasons for Company E to decide to become AEO certified was because it wanted to simplify its customs procedures as well as turning their warehouse into a bonded warehouse. *Tullverket* pointed out to the company that if they were to become AEO certified then the company should be able to enjoy simplified customs procedures.

Security

Due to the size of the company and its goods volume, the company has always had strict security requirements before becoming AEO certified. Minimal investment was needed to fulfil the AEO security requirements. The company said though that going through all the security requirements and routines raised the security awareness and thinking within the

company. Other than that, Company E does not feel that the security of its supply chain has increased due to the AEO.

Company E places no special emphasis on whether their logistics operators are certified or not, but usually they are globally recognised and do have the AEO certification.

Customs procedures

As said before, one of the main reasons Company E wanted to become AEO certified was so that it could simplify its customs procedures. Switching from the Stairway to AEO meant that Company E would not lose any of their previous simplifications. In that way, the company is happy with the claimed benefits in terms of customs procedures saying that they are better of having compared not having them. The AEO certificate has also raised the awareness within the company in terms of employees think more and know more about customs in their daily routine.

Company E has had three in house customs document audits but it has never been selected for physical controls. Being able to decide the place of controls is important to the company as it would rather want them to be done at the borders instead of at their facilities as that could disrupt the company's internal flow of goods.

Cost

Company E did not incur any significant costs when it came to complying the security requirements set forth by the AEO. However, Company E said that when they were in the process of applying a lot of time and manpower was spent on fulfilling all the paperwork requested by *Tullverket*.

Trade

The AEO certificate is widely recognised within Company Es industry and the company feels that by having the certificate it is recognised as a safe business partner. The company says it even manages in some cases to maintain a fully certified trade lane, meaning that all actors involved moving the product from A to Z are AEO certified. The AEO has had a minor positive effect on the company's supply chain in the sense that the required AEO routines make all related processes more reliable.

The respondent is not aware of if the AEO certificate is mentioned or used in any marketing or when acquiring new business partners.

When asked if the respondent felt that the AEO has facilitated trade for Company E, the response was neutral. The reply was that the AEO used to facilitate trade in a way, but not anymore, and that the effects of the AEO program were going backwards.

Company E experiences problems when doing business outside Sweden as it feels that having the AEO does not make cross-border business simpler as the AEO suggests.

The company does not feel that the AEO certificate is providing it with any competitive advantage and indirect benefits are very limited and difficult to identify.

Despite the time and manpower spent on achieving the AEO certificate, Company E feels it was worth it in the end. The company says the benefits are not as clear as they used to be but they still outweigh the costs of becoming certified.

Relationship with Customs

Company E has always had a good relationship with *Tullverket*. However the company feels that with budget cuts at *Tullverket* they receive less attention from *Tullverket* than they would want. The company values *Tulldagen*, and often it receives valuable information during *Tulldagen* as well as being able to exchange information with other companies.

The company thinks though that *Tullverket* could be more proactive when it comes to introducing or notifying companies about new legislations or procedures.

When contacting *Tullverket* the company is usually happy with the information received but when there is any doubt regarding an issue, *Tullverket* never seems to be able to give the company a definite answer and so the company never knows the true outcome until at the border for example.

Future

The respondent was fully aware of the upcoming UCC amendment and its impact on the AEO program. However the precise changes are not yet fully formed, so it is hard for them to expect what the final outcome of the UCC will be. The respondent was taking part in a discussion group about the implications of UCC and felt that since the European Commission

still had not decided on many important parts of the contents, it is a bit worrying since it is only one year to go until the new regulations will be in force. The respondent was especially concerned about how their bonded warehouse type E should be affected since it is decided that this type of warehouse will disappear but it is not finalised what will replace it. The respondents was also concerned that many other AEOs that are not participating in such discussion groups will have even shorter time to adapt before UCC is in force.

Company E thinks that with the UCC, the benefits of being an AEO will slightly improve and the difference between being certified or not, will be clearer. Some customs procedures will be more complicated for non-AEOs for example. And so, Company E is of the opinion that being an AEO in the future will be even more important than it is today.

The respondent also mentioned that the future focus of the UCC would probably be more on improving supply chain or transport security rather than trying to facilitate trade. Company E has a positive outlook towards AEO and the upcoming changes.

Company F

Company F is an international forwarding corporation, offering a wide variety of logistics solutions.

Respondent's position: *Head of Customs*.

AEO impacts

Company F acquired their AEO certificate in 2009, before that a member of Stairway on level 4. Because of its position in the supply chain, combined with its big size, is the company working very seriously on customs related issues. The person interviewed had for instance previously been working many years for *Tullverket*. The main reason for applying and still today keeping their AEO-certificate was because it is more or less standard among forwarders and transport providers to be AEO-certified. If one actor is not certified, customers are being suspicious and probably asking why you are not certified when most of your competitors are.

Security

Their AEO-certification is not believed to facilitate a safer supply chain, mainly since there are so many different actors involved in a whole supply chain. On the other hand is Company

Fs perception that the AEO-certificate is a good safety stamp that shows that a certified company is working seriously with safety issues.

Company F does not base procurements of suppliers or similar, on if they are AEO-certified or not. But instead they have all their sub-contractors sign a security disclaimer regulated by the company's global headquarter.

Customs procedures

Overall the AEO-certificate has lowered the customs related workload for them. That perception mainly originates from the simplifications associated with the AEO-certificate. Without the simplifications would Company F face longer lead times compared to how it is today. And since Company F is acting a logistics provider are the simplifications very valuable. Although, some of the national simplifications have been revoked during the last couple of years meaning that the simplifications are not as good any longer, as they were used to be. Thereby they think the efficiency of the supply chain was better before but it is still somewhat facilitated by the still remaining simplifications.

Costs

The costs related to become AEO-certified were not very big for Company F because they already had most of the requested routines set up from the time when they were classified in the Stairway program. The only actual cost for them was the time the personnel had to spend on documenting procedures and processes. They do not claim they have any costs today related to maintaining their AEO-certification.

Trade

Company F are not using their AEO-certification for most of their marketing related activities, as they do not see it as a competitive advantage since it is more or less standard among freight forwarders to be certified. But they are still very keen to inform customers that they are certified because otherwise there is a risk the customers could be suspicious and wonder why they do not appear to be certified.

Relationship with Customs

Company F see it as a small benefit of being prioritised as an AEO-certified company when calling Tullsvär, when asking for help at *Tullverket*, but apart from that can they not see any

improved relationship with *Tullverket* for AEOs. Although, the relationship is overall very good, but they do not think it is particularly because they are AEO-certified. *Tullverket* provides them with the information they need, mainly through their webpage and by the newsletter *Tullnytt*.

Future

The respondent was well aware of UCC and what its contents look like so far, and some of the implications it will have on the AEO-certification in the future. The respondent also participated in different customs networks discussing the implications of UCC. Being a member of one of those groups even provided the company with direct updates from EU about the progress regarding UCC. Company F's expectation is that the changes in UCC overall will have positive impacts on the AEO-certification. The new requirement for having specific competences in order to be able to hold an AEO-certificate are they thinking is very good. The respondent claimed that for instance many companies, including AEO-certified companies, are today not having sufficient knowledge about what their customs procedures really mean to them, and therefore is this new requirement very important. Also that there seems to be some new simplifications which will be valid throughout the whole union is good news that the UCC brings for the future.

The respondent thought that the AEO-certification will achieve a higher level of acceptance and recognition in the future.

Company G

Company G is a leading global paints and coatings company and a major producer of specialty surface chemicals.

Respondent's position: *Price Freight Manager*.

AEO impacts

Company G has been AEO certified since 2010. Before becoming certified, the company was a level 5 rated operator in the Stairway program. The person interviewed had only been working with AEO related matters for one and a half years. The respondent had done research on his own how the experience with AEO was before he started working at Company G. The reason why Company G applied originally for the AEO certificate is that the company claimed it was a natural step to the next level for its business if it were to be able to simplify its customs procedures.

Security

Due to the business Company G is in, that is chemicals and paints, its facilities need to be very secure and when applying for the AEO the company did not need to put much effort into securing its facilities, as they already were very secure.

Company G does not specifically select its contractors based on if they are AEO certified but they have all of them sign contracts where they confirm that they will follow Company Gs security standards.

Customs procedures

Company G highly values all the suggested benefits relating to customs procedures but it has not experienced them when it comes to physical controls and the choice of controls. Being notified prior when consignments will be selected for control is very important so that Company Gs supply chain would not be delayed. Company G has not had any physical controls since becoming AEO certified.

The company is also happy with the reduced data set on summary declarations but they are all done electronically and so there was no dramatic improvement in that area. The respondent says however that the AEO has reduced the workload on her division and that his job is a slightly easier because of the AEO, in terms of workload.

Costs

The monetary expenses of improving security standards in order to become certified are thought of as being very limited for the company. However, the man-hours and the paperwork spent on fulfilling *Tullverkets* requirements in order to become certified were quite vast. In March 2015, Company G had to renew its AEO application, like every AEO company needs to do. It took one person more than half a week to prepare all forms and documents to be inspected by *Tullverket*.

Trade

The respondent at Company G suggested that not all companies who are in the same line of business as Company G have AEO certification. The respondent was not aware if the companies sales division use the AEO certification in any of its sales or marketing efforts. The respondent also believed that being an AEO did not provide the company with any

competitive advantage over its competitors, saying that a lot of the times buyers look towards quality certifications but many times it is the price of the product, which is the deciding factor.

Company G feels that AEO is able to facilitate trade to some extent due to the simplified customs procedures.

Company G feels that becoming an AEO has been worth it, it involved a lot of work becoming one and it feels that the customs related benefits outweigh all the costs of becoming one.

The company has never thought of dropping its certificate, as they do believe that it is better for them having the certificate compared to not having it.

Relationship with Customs

Company G is relatively happy with its relationship with *Tullverket*. They do not have to contact them very often, but when they do, they usually receive the right information. However, whenever there are doubts over how to categorise a product for example, the company feels that *Tullverket* does not always give them proper answers. The company also feels that *Tullverket* could be a little more proactive when it comes to informing the company about new regulations and procedures.

Originally when applying for the AEO, the company was promised a dedicated contact person at *Tullverket* which weighed in heavily when deciding whether to become certified or not. Later, the contact person was removed due to budget constraints, which Company G thought was unfortunate. The company feels though that it receives better service because of their AEO status.

Company G attends Tulldagen as well and thinks it can be very informative.

Future

Company G was fully aware of the upcoming changes following the introduction of the UCC in 2016. *Tullverket* briefed all companies at Tulldagen, still all the information is a little unclear both to *Tullverket* and Company G. It was said that establishing all UCC changes would take time and cost money for all parties involved. The company hopes that with the UCC, global recognition will improve and that it will not have to apply for different types of

licences all over the world. Company G hopes that the proposed changes will have a positive effect.

Company H

Company H is a general agent for world leading manufacturers of high quality technical products.

Respondents position: *Cross-Border Forwarding Manager.*

AEO impacts

When deciding to become certified, Company H was mainly considering the suggested benefits of having the customs simplifications as well as it felt that their customers in the future would require them to be certified. Also, they were contemplating on whether they should operate a bonded warehouse. Running a bonded warehouse is not possible without being AEO certified.

Security

The size of the operations that Company H is running meant that the company already had very secure facilities. Company H believes that becoming AEO certified has improved the supply chain security as it gave them the opportunity to go over all their routines and processes.

Customs procedures

As said before, the chance of simplifying customs procedures through customs simplifications and reduced paperwork were one of the main reasons why Company H decided to become certified. However, following the certification some of the previous simplifications were removed and Company H felt that it faced more document-based controls compared to before. The reason why is that it thinks that being a part of the AEO program means it is easier for *Tullverket* to scrutinize them rather than companies who are not member of the program. In the recent years though, the company says that the document-based controls have returned to a normal state and have no complaints.

The company has had no physical controls but places high importance on priority treatment, prior notification, and place of the controls if they were to happen.

Costs

Company H did not experience any major cost involved in its effort of becoming AEO certified. The company facilities were very secure before they applied. Only measurable cost were in terms of increased workload during the application process. Company H also hired an outside consultant to make sure all requirements were met.

Trade

Company I does not think that the AEO certification has provided the company any competitive advantage over its competitors.

The company does not market itself as being AEO certified. The company experiences no significant changes when asked if the AEO certificated facilitates trade or if it impacts the efficiency of the supply chain in any positive way, saying that the certificate might affect the efficiency in a positive way but they have no way of measuring it.

Company I believes that the work effort put in to become certified has paid of, claiming that they know all their processes better than before.

The company has never thought of dropping its certificate as they do believe that they believe it is better for them having the certificate compared to not having it. However, if the company would have to renew its licence and it would be costly, then the company would think twice about dropping the licence before going ahead with the renewal.

Relationship with customs

The overall communications with *Tullverket* is relatively good, and the official information channels Tullnytt and also Tulldagen, are appreciated by Company H. Although, the information concerning AEO related news and updates was very limited on Tulldagen 2015, which they thought was unfortunate.

Company H was very disappointed when their personal contact person at *Tullverket* was removed, just shortly after they became certified. The respondents experience was that AEOs are not provided with any better och quicker treatment when contacting *Tullverket* for any customs related inquiries.

Future

The respondent had heard of, but was not aware of the contents of the UCC. He was neither aware of the overall contents or of the AEO related parts of UCC. The respondent did not expect that many new companies will apply for becoming AEO certified in the future, if not any new simplifications will be presented for AEOs.

Company I

Company I is one of Scandinavia's leading fashion retailers with close to 400 stores in Sweden, Norway, Finland and Poland.

Respondents position: *Forwarder / Customs Responsible.*

AEO Impacts

Company I has been a certified AEO member since 2010. The reason why Company I became AEO certified, was because that it was the most natural step for them to take if the AEO was going to replace the previous Stairway. The company had a really good previous experience with the Stairway system, where they scored level 5, and hoped that the AEO program would continue the good work done previously.

Another main reason why Company I decided to become AEO certified was because it was the only way they could operate a bonded warehouse.

Security

The size of the operations that Company I is running and previous Stairway requirements meant that the company already had very secure facilities. However, going through all the security requirements and routines, making sure that all staff members were aware and knew how to act raised the security awareness within the company. Staff is today more attentive to any suspicious behaviour and reports it immediately to their supervisors.

The company pays no specific attention to if their business partners are AEO certified or not. The rates offered are more of a deciding factor rather than being AEO certified when it comes to choosing business partners. The company usually does business with large organizations that they expect to be AEO certified, if they are not, they have them to sign a contract where they agree to abide to the company's security standards.

It cannot be said that the company's supply chain is any more secure than before becoming AEO certified.

Customs procedures

With the previous Stairway system Company I had many customs simplifications in place. When it became AEO certified many of these simplifications were taken away which *Tullverket* deemed unnecessary or did not fit with the AEO program. This was unfortunate for the company, as it had hoped that the AEO would make their customs procedures more efficient. Company I does not think that it has experienced any significant benefits in terms of easier admittance to customs simplification, its more the opposite and they would like to have more simplifications in place.

The company has had three physical customs controls after becoming AEO certified. During these checks and their limited experience with those the company feels it is quite happy with those checks have been handled. They feel that customs contacted them relatively quick when asking to inspect and all procedures were done in a satisfactory manner.

Costs

The company did not have to spend any significant amounts of money to fulfill the security requirements set forward by the AEO program. The company does say however that it spent a lot of time preparing all the paperwork to fulfill all AEO requirements and so the company experienced significant extra costs in terms of increased work hours during the application process. Every three years the company needs to renew all AEO information and the person responsible spends a lot of time on this work for a few weeks every three years.

Trade

Company I does not think that the AEO certification has provided the company any competitive advantage over its competitors. The program is well recognised throughout the industry, so if the company experiences any benefits its competitors are also likely to experience them.

The company does not market itself as being AEO certified. The company experiences no significant or measurable changes when asked if the AEO certification facilitates trade or if it impacts the efficiency of the supply chain in any positive way.

Company I believes that the work effort put into becoming certified has paid off, claiming that they now know all their processes better than before. When asked if the AEO had made

the respondent's job easier the reply was that it made it easier to explain security and customs procedures within the company. But enforcing the AEO guidelines also took a lot of work.

Company I has never thought of dropping its AEO certificate.

Relationship with Customs

The respondents experience was that the communications with customs had been closer and better before and in the beginning of when they became AEO certified. Before, when they had an assigned person at *Tullverket* that was well informed about the company's specific processes, it was easier for them to get the help they wanted when they had questions. Today, it takes longer time to get in contact with the right person at *Tullverket* when they have customs related questions.

Even though the company's relationship with the customs was better a few years ago, the collaboration and communications with *Tullverket* are still relatively good.

Future

The respondent was aware of the upcoming new regulations within the UCC, but was not very informed about the actual content nor how they would be affected by it in future. The limited information the respondent had about UCC had come solely from *Tullverkets* different communication channels.

From the information received, the respondent thought that it would require a lot of work to comply with the UCC. Being a member of the EU, Sweden might have to raise its standards to meet the standards of a country like Germany for example. According to the respondent, German customs procedures are stricter than here in Sweden. The future focus of the UCC might lean a little more towards transport security rather than trade facilitation, which might result in increased workload.

Company J

Company J is a family-owned forwarder who used to specialize in export of paper products but in the aftermath of the economic crash, the company has focused more and more on import and export of goods such as clothing and moving project cargoes.

Respondent's position: *Office Manager - responsible for insourcing and implementing a new customs handling system within the company.*

AEO impact

The main reason why Company J decided to apply for AEO certificate was because it believed it would provide the company with a competitive advantage. Company J was not a previous member of the Stairway. The company did not know that much about the AEO program until a few years ago. After researching its market and competitors, the company found out not that many competitors of similar size were AEO certified, and so Company J wanted to differentiate themselves from its competitors.

Another reason why the company wanted to become AEO certified was because one and a half year ago had taken a decision to handle its own customs procedures, which previously had been outsourced. Since they had not been involved in customs procedures before they were not part of the Stairway program.

Security

Company J says it has not experienced any major improvement in terms of the security of its supply chain following becoming AEO certified. However it believes that the company will experience improvement in the security of its supply chain in the future, as the AEO program develops.

They would like to do business with AEO certified actors as far as possible, but it is often not realistic to have this requirement, depending on type of actor and the geographical location of the company. They are thereby not selecting contractors or partners based on if they are AEO certified, but it is considered.

The security awareness within the company has increased since becoming AEO certified.

Customs procedures

All lead-time reducing activities are important for Company J. The European Commission suggests that AEO certified companies should experience fewer controls, choice of controls, easier and simplified customs simplifications. These benefits were very appealing to Company J and were one of the deciding factors when the company decided to become certified.

Routines are easier to follow, as every process is readily available in text as a result of the AEO guidelines. Customs processes are smoother due to that and new employees are integrated more quickly.

When it comes to document based customs procedures the company says it is not experiencing any major benefits helping the reduced lead times. But when it comes to physical controls the company is very positive. Before becoming AEO certified *Tullverket* had shown up for physical controls a number of times causing costly delays. Since becoming AEO certified, Company J has had no physical controls.

Costs

Company J incurred little costs in its effort to become certified. The only physical costs the company experienced were related to changing alarms and doors. The total process of becoming certified took the company 18 months in total, estimating it would have taken them 2 months full-time.

Trade

Company J feels that the AEO program is not that recognised within its industry, claiming that few small and medium-sized companies have it. This was one of the main reasons as said before why Company J decided to become AEO certified - to differentiate itself.

Not being that recognised by its competitors, Company J feels that the AEO certification provides them with a competitive advantage. Claiming that the response is that they say that larger clients have started to ask for the certification, i.e. the certificate helps Company J beat off their competition when negotiating contracts.

Company J actively promotes its certification when acquiring new contracts or business partners. The company has noticed the importance of being AEO certified when doing

business with Asian companies. Company J feels that the AEO acts as a quality stamp, and should help them in their future business.

Being AEO certified has also helped the company when it comes to applying for other types of certificates. It helped the company greatly when applying for the International Air Transport Association code (IATA) and they expect it will help them when implementing ISO standards.

Employees feel that the AEO certificate has made their job easier than compared to before, meaning it has reduced a lot of unnecessary work and hassle. Company J still feels that it is too early to say if the AEO certificate has had a positive effect on the company's efficiency.

Relationship with Customs

Company J claims its relationship with *Tullverket* has been really good from the beginning. The company has not experienced any major improvement in the relationship due to being AEO certified. When the company was in the process of applying for its AEO certification, they got a lot of help from *Tullverket* employees who visited their office numerous times.

They feel that the information flow from *Tullverket* is adequate but sometimes the company needs to hunt for the information on its own. Regarding UCC, the company has not received any information directly from *Tullverket* but only from secondary sources.

Future

The respondent was aware of the upcoming regulations with UCC, and mainly about the new IT-solutions, but did not have any knowledge about how it will or might affect AEO. The expectation they have is that having more electronically based customs handling throughout the unions definitely is something very good and will facilitate trade but they do not expect this to be the reality for many years.

Company J has a belief that the recognition of the AEO certificate will increase in the future and even more focus will be on making trade more efficient for certified companies. Their belief is that the AEO certificate in future will become more important as a quality stamp for companies.

Company X

Company X provides technology for Sweden's security. It designs and provides the military with defence materials and services. Company X has operations in about 80 locations in the country.

Respondent's position: *Customs and Export Control*.

AEO impacts

Company X is no longer AEO certified since it in the summer of 2013 asked *Tullverket* to revoke its certificate. Company X did not experience any benefits related to being AEO certified which led to them asking *Tullverket* to revoke their license. It is worth of note that Company X was not previously a member of the Stairway program.

Company X did not want to discuss the reasons with the authors any further, and decided to not be interviewed. The company stated by phone that none of the current staff were involved with AEO anymore. The person responsible for following AEO procedures from 2009-2013 was retired. The company thereby claimed it would not have been able to respond to any AEO related inquiries in a satisfactory way.

Discovering that Company X has had its license revoked was not much of a surprise when looking at the company's replies in the previous study conducted four years ago by Gotheim and Fjaervoll (2011). Due to its area of business, Company X's facilities were very secure before it applied for the AEO certificate. The company did not experience any improvement of its supply chain security following the implementation of the AEO guidelines. (Gotheim and Fjaervoll 2011)

In 2011, Company X claimed that it had experienced an obvious increase in the amount of customs and administrative workload, claiming it to be a direct result of becoming AEO certified (Gotheim and Fjaervoll 2011).

Company X also claimed that it believed that it had become more of a subject to customs control than before (Gotheim and Fjaervoll 2011).

The only claimed benefit associated with the AEO program was that Company X said that it was easier to apply for different types of government permits (Gotheim and Fjaervoll 2011).

Relationship with Customs

Company K claims that when contacting *Tullverkets* helpdesk, it received different sets of information depending on whom they spoke with (Gotheim and Fjaervoll 2011).

When applying for the AEO Company K was promised a dedicated contact person at *Tullverket*, which was of high importance for Company K. Later this system was removed due to budget constraints (Gotheim and Fjaervoll 2011).