

AUTHORIZED ECONOMIC OPERATOR PROGRAM IN TURKEY: EVALUATION OF BENEFITS AND CHALLENGES FROM THE SUPPLY CHAIN PERSPECTIVE*

TÜRKİYE'DE YETKİLENDİRİLMİŞ YÜKÜMLÜ STATÜSÜ PROGRAMI: TEDARİK ZİNCİRİ PERSPEKTİFİYLE FAYDALARIN VE ZORLUKLARIN DEĞERLENDİRİLMESİ

Araştırma Makalesi
Research Paper

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Abstract:

Authorized Economic Operator (AEO) is a program that is introduced by World Customs Organization (WCO) with its foundations built on customs-business cooperation. The main aim of the program is identifying and certifying the low-risk, trustworthy firms that meet the necessary criteria set by the customs administrations. From the supply chain perspective, acquiring this certification will provide benefits such as improved quality, security and reduced time and costs throughout the international trade process. Since its adaption by Turkey in 2013, 417 firms have acquired this certification and the participating firms reached a point that they can evaluate the challenges they had faced in the early stages of the program and the benefits they have now started to experience. Therefore this study aims to evaluate the effects of AEO program in Turkey by carrying out a qualitative research with supply chain perspective by focusing on the benefits and challenges AEO holders have experienced. Findings reveal that the expectations regarding cost savings, time reduction, and increased firm reputation, supply chain performance and security are met; whereas the challenges faced during the application process are still present.

Keywords: Authorized Economic Operator, Customs, Supply Chain Stakeholders, International Trade.

Öz:

Yetkilendirilmiş Yükümlü Statüsü (YYS), temelleri gümrük-işletme işbirliğine dayanacak şekilde Dünya Gümrük Örgütü (DGÖ) tarafından hazırlanmış bir programdır. Programın temel amacı, gümrük idareleri tarafından belirlenen gerekli kriteri yerine getirebilen güvenilir ve düşük riskli firmaların tespiti ve sertifikasyonudur. Tedarik zinciri açısından, bu belgeye sahip olmak; uluslararası ticaret sürecinde kalite ve güvenlik artışı ile zaman ve maliyet tasarrufu gibi faydalar sağlamaktadır. Programın 2013'te Türkiye'de

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uygulamaya girmesinden itibaren 417 firma bu belgeyi almış ve katılımcı firmalar programın başlarında karşılaştıkları güçlükler ile geline nokta tecrübe etmeye başladıkları faydalarını değerlendirebilecek konuma ulaşmışlardır. Buna bağlı olarak bu çalışma Türkiye'deki YYS programının etkilerini nitel araştırma yöntemi ile tedarik zinciri perspektifinden YYS sahibi firmaların tecrübe ettiği güçlükleri ve faydaları göz önünde bulundurarak değerlendirmeyi amaçlamaktadır. Bulgular göstermektedir ki firmaların maliyet ve zaman tasarrufu, firma prestiji ve tedarik zinciri performansı ile ilgili beklentileri karşılanmıştır. Buna rağmen firmaların başvuru sürecinde yaşadıkları güçlükler halen mevcuttur.

Anahtar Kelimeler: Yetkilendirilmiş Yükümlü Statüsü, Gümrük, Tedarik Zinciri Paydaşları, Uluslararası Ticaret.

INTRODUCTION

Customs transactions consist of a series of procedures that cover the inspection of the cargo, verification of the existence and authenticity of electronic and written documents, examination of accounts and other records of enterprises, and control of transportation vehicles and collection of the duties (Üyümez and Gültekin, 2016). From a broader point of view, all these transactions are governed by the customs administrations with the aim of ensuring the security of global supply chains on one hand and providing trade compliance and facilitation on the other (Widdowson, 2007). As a result of these exhaustive aims of the customs administrations and vast amount of transactions to be completed by the trading parties, a significant part of the foreign trade process takes place during the customs procedures. Therefore, customs are considered to be crucial nodes within the global logistics systems as they may affect the performance of supply chains both in terms of cost and time (Heaver, 1992; Hintsa and Hameri, 2015).

Herewith, customs administrations all around the globe now have to cope with the challenge of not disrupting the global network flows while carrying out their primary roles which is to control the flow of goods of a nation's borders and eliminate associated security risks. Considering that these tasks of the customs administrations get harder day by day as a consequence of the heavy increase in global trade volume, WCO and the member states take solutionary steps that decrease the workload of the customs while increasing the performance of the global supply chains. For instance, improvements in electronic exchange of information with customs is one of the operational steps in terms of reducing efforts and costs (Henningson and Henriksen; 2011; Shirsavar and Shirinpour, 2016). On the other hand, customs harmonization, which provides universally approved classification codes for the products, is a valuable attempt that fixed the artificial interstate differences and allowed traders to benefit from economies of commonality (Haugton and Desmeules, 2001).

In line with the above mentioned operational and structural changes in governance of customs, introduction of the AEO concept by WCO comes out as another significant improvement that benefits both the customs administrations and the supply chain stakeholders such as shippers, freight forwarders, transportation companies and ports (Zhang and Preece, 2011). Figuratively speaking, the logic behind the AEO program

asks the question of “to what extent should customs administrations examine the goods and means of transport in order to prevent the security risks?” and by building up customs-to-business relationships that are based on cooperation and reciprocal trust, this program aims to decrease the workload of the customs administrations while providing many benefits to the certified firms in terms of their customs procedures. With all the benefits it serves to the global trade and its’ exponentially growing popularity worldwide, AEO is now considered to be an important facet of customs reform (Miled and Fiore, 2014).

Despite the increasing interest from the business community to the AEO program, this new phenomenon is still understudied by the researchers. With the motivation of filling this gap, the aim of this study is to evaluate the effects of the AEO program on the stakeholders of global supply chains by focusing on the benefits and challenges of participating in the program.

Initiation of the AEO program started in 2001 in United States, and in 2008 in European Union. However, the initiation of the program in Turkey is as recent as 2013. Hence it’s effects are just being experienced by the members of the supply chains. Thus, this study is believed to be contributive for both the not-yet-matured AEO literature in Turkey, and in familiarizing the business environment with the concept.

The next section gives a detailed explanation of the AEO concept and focuses on how the program was adapted by Turkey and what the status quo is since it’s initiation. In the second section, the literature on AEO which is not yet quite extensive, is discussed and the contribution of this study is emphasized. Third section provides detailed information on the methodology of the study by explaining how the sampling and data collection processes were carried out. The last section reveals the findings of the study and presents recommendations in accordance with the results.

1. CONCEPT OF AUTHORIZED ECONOMIC OPERATOR

In June 2005, WCO has introduced the concept of AEO within the SAFE Framework of Standards to Secure and Facilitate Global Trade. Considering the rising concerns for trade security, especially after the 9/11 terrorist attacks, this new concept was developed with the aim of increasing the efficiency of customs by certifying the companies with no risks and shifting the inspection capacity to the ones with higher risks. Thereby, for the companies with the AEO status, benefits such as quicker movement of goods, simplified procedures, lower transport costs and reputation based on international recognition are generated. This new application, which can be defined as customs-to-business partnership, has become an interesting customs legislation as it fostered cooperation-based relations (see Fig. 1) between governments and supply chain stakeholders and has already become widespread among WCO member countries. Gradually the number of countries with AEO programs have increased and now reached to 77 (World Customs Organization, 2018).

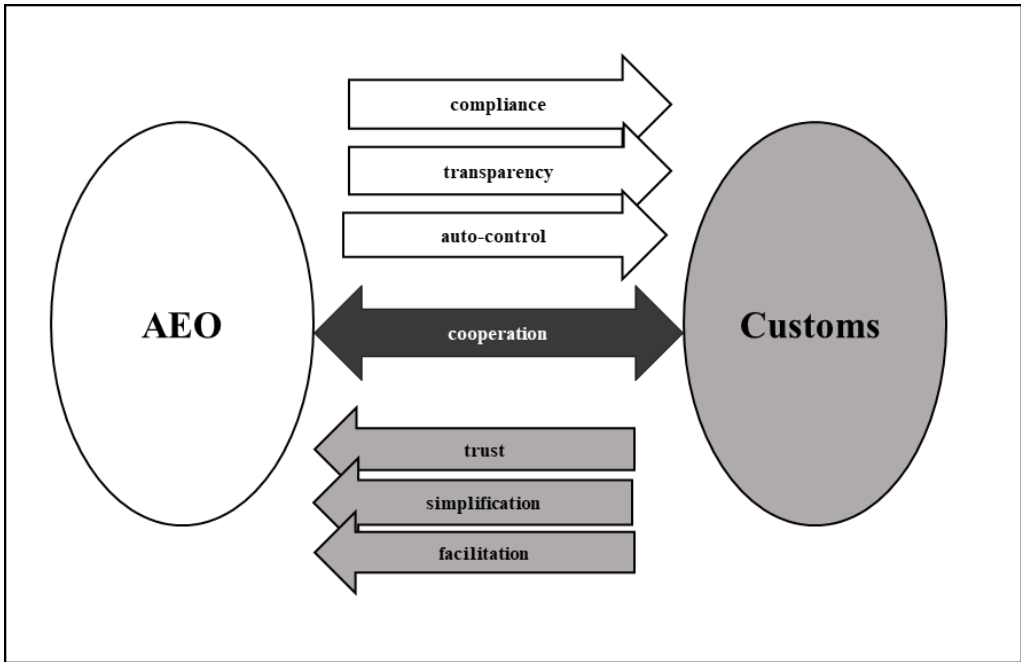


Figure 1: Representation of AEO-Customs Relations

Source: Republic of Turkey Ministry of Trade, 2018a.

In the beginning of 2013, Turkey also launched its AEO program which allowed firms to carry out some operations that were previously carried out by the customs administration. The program offers many various benefits for companies that are certified for being an AEO. All AEO's can benefit from presenting summary declaration with reduced mandatory information entries, lesser documentation audits, declaration with outstanding documents, eligibility for partial collateral, eligibility for blue line and eligibility for simplified procedure without a limitation depending on the commodity type and any requisition or additional terms. In addition, by requisition and compliance with additional terms, AEO's can benefit from exporting in accordance with the new customs application, transportation operations as authorized consigner, eligibility for lump sum collateral application, ATR movement certificate preparation rights and ability to edit invoice declarations and EUR-MED invoice declarations.

While participating in an AEO program can speed up the customs procedures in one leg of the supply chain, the commodities are also subject to customs in their destinations. Through establishment of mutual recognition agreements (MRAs), many countries recognized the AEO authorizations of one another, spreading the benefits of AEO over on both legs thus achieve reciprocal benefits. So far, Turkey has signed an MRA with South Korea in 2014 and has ongoing negotiations with some countries such as USA, Georgia and Kazakhstan.

In this new regulation that ensures customs-to-business partnership, few new concepts have arisen that define new status and operations. “Authorized Responsible Status” is given by the customs to firms that; abide by the rules, keep organized and traceable records, are self-auditing, have financial capability and security standards. A firm that achieves the authorized responsible status proves its reliability. Only firms with authorized responsible status can enjoy the “On-site customs clearance” and “Authorized consignor” rights. With this application, commodities of reliable firms will not go to customs and only the commodities of firms that their reliability is uncertain will go through the customs inspection. With “On-site customs clearance” reliable firms will be able to use their own facilities for customs procedures (Republic of Turkey Ministry of Trade, 2017). “Authorized consignor” status is given to firms which their reliability is proven, in order to ease their procedure by allowing said firm to conduct the required inspections on export commodities. Only firms that have “Authorized Responsible Status” and are in compliance with the related additional terms are eligible for being an “Authorized consignor”. Authorized consignor can directly dispatch the commodity to the customs border post without presenting it to the domestic customs first, provided that the transit procedures of said commodity was carried out in their own facilities following the simplified procedure. While this application’s range is limited to exporters, importers and international freight carriers in Turkey, the applications in EU, India, China and United States also cover other supply chain stakeholders such as warehouse operators and terminal operators (World Customs Organization, 2018).

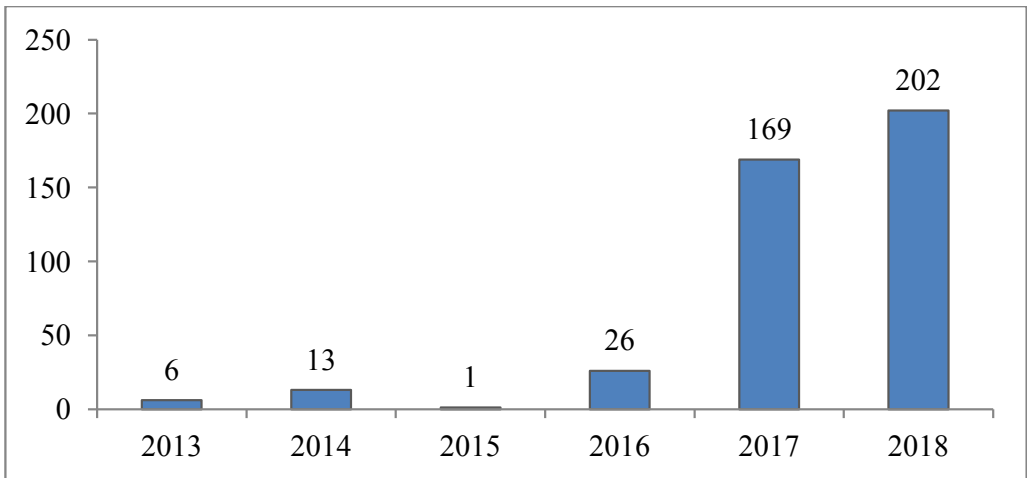


Figure 2: Number of Firms with AEO certificates

Source: Republic of Turkey Ministry of Trade, 2018b.

At this point, total of 417 firms have been certified as AEOs in Turkey. In the first three years of the program, the number of firms that applied for this certification was rather

small. However, starting in 2016 and peaking in 2018 the program gained momentum. With companies sowing early started to reap the benefits, it is expected that this momentum will continue at an increasing pace.

2. LITERATURE REVIEW

The changing role of customs administrations within the supply chains, whether it's role on trade facilitation or supply chain security, has been an ever-relevant subject due to the increasing global trade and associated security risks. Within this body of literature, the concept of AEO, with its differing applications and effects in each participating country, is a relatively new and rapidly growing study field. These researches stretch from the conceptual ones (see Grainger, 2011) that present the potential of the program to the empirical ones that investigate the experiences of the participating firms (see Fletcher, 2007).

There are several studies in the customs literature that investigate the effects of the AEO program on various facets of firm performance. In their research, Miled and Fiore (2014) carry out a case study on French and Tunisian AEO holders and found that having the AEO certificate improves the firm performance significantly on cost reduction, customer complaints and error reduction in customs clearances. Urcioli and Ekwall (2015) tackles the performance related aspects of AEO program through security perspective. Using the structural equation model, authors found that the level of security achieved by being an AEO holder proves to be increasing the efficiency of the firm. The study of Park and Park (2018) which also investigates the effect of having AEO certificate on firm performance, shows that financial investments made by public and private sector in order to implement AEO program have positive impact on firm performance. Cedilnik and Ramsak (2013)'s study differs from the above mentioned researches based on the fact that it covers not only the business side of the program but also the governmental bodies involved by asking whether the AEO program truly facilitates the performance of customs procedures. Their findings reveal that by simplifying the procedures the program benefits both sides in terms of performance enhancement.

Besides the literature that analyzes the effect of the AEO program on firm performance, there are also studies that focus on country-specific implementations of the program. Schramm (2015) aimed to identify the general specifications of firms that are AEO holders in Austria. Findings of the study shows that in general export oriented firms have acquired this status. The international transport firms that serve the logistics needs of said firms also showed interest in the program, just not as much as the export oriented firms. Huang (2016) studied the motives of three AEO holder freight forwarders in Taiwan. Results show that "improving business image" and "request by higher managerial" are the leading internal motives, whereas "conform to the trend" is external motive that is prominent. Homenuik (2015) researched the requirements for the acquisition of AEO status in Ukraine. In this exploratory study the aim was to

identify the benefits of the program as well as reasons for revocation and suspension of the certificate. Similarly Erceg (2014) carried out an informative study in Croatia, identifying the prerequisites and possible benefits of participating in AEO program. In their research Den Butter et al. (2012) focused on the use of information technologies in the trust based regulation that is present in AEO certification and government-to-business relations in the Netherlands. In the conclusion of the study, authors recommend reputation increasing policies on AEO program considering the matters such as the popularity, reliability, effectiveness and international recognition.

In line with the above mentioned articles that focus on country-specific applications of AEO program, the study of Eşrefoğlu (2011) carries out a comparative study of German and Japanese AEO programs and presents recommendations for Turkey, prior to Turkey's initiation of the program. The study underlines the importance of electronic data interchange integration within customs administration and businesses in terms of efficient management of the certification process. On the other hand, to become more immaculate, the author recommends decentralization in resemblance with the Japanese system. Considering the lack of empirical studies in the field since the initiation of AEO program in Turkey, this study aims to contribute to the existing the literature.

3. METHODOLOGY

In accordance with the exploratory aim, which is to reveal the benefits and challenges that arose since the initiation of the AEO program in 2013, this study is designed in a qualitative nature. Application of the qualitative methods helps the researchers gain a richer understanding of the problems, phenomena and influences, especially when the subject topic is relatively new and its effects have recently surfaced (Maxwell,1996; Healy and Perry, 2000).

As mentioned in the previous sections, there are 417 firms in Turkey that have acquired the AEO certificate. Among these, 66 of them opted to remain anonymous. As the whole of remaining 351 firms would prove to be troublesome to conduct a qualitative research, maximum variation sampling was carried out. The main standpoint of this sampling strategy is to select a number of participants from previously determined criteria in order to keep the homogeneity of the sample (Patton, 1990). As the customs procedures are heavily dependent on the type of commodity and the perceived effects of AEO program may vary depending on the duration of being an AEO holder, these two variables were chosen as the two predetermined criteria for sampling. Detailed information of the participations is shown in Table 1.

Table 1: Profile of the Firms Participated in the Study

Year of Establishment	N=20	Number of Employee	N=20
1990 and before	15	1-9	-
1991-2000	4	10-49	-
2001-2010	-	50-250	1
2011-2018	-	More than 250	19
Annual Shipment (TEU)	N=20	Location	N=20
1-5,000	3	İstanbul	8
5,001-30,000	8	Ankara	1
More than 30,000	1	İzmir	3
No response	8	Bursa	3
		Aydın	1
		Eskişehir	1
		Tekirdağ	1
		Kocaeli	1
		Manisa	1
AEO Competency	N=20	Duration of AEO holdership (Year)	N=20
Authorized consignor	6	Less than 1	10
Authorized consignee	5	1	5
On-site customs clearance in export	2	More than 1	5
On-site customs clearance in import	3		
None	11		
Field of Business N=20			
Automotive	2	Construction	1
Textile	3	Packing	3
Food	2	Defense industry	1
Supply services (importation)	1	Electricity	1
Alumina	1	White goods	1
Machinery	1	Logistics	1
Cooking utensils	1	Plastics manufacturing	1

A structured interview instrument was used as a data collection tool for this study. What makes structured interview form the most suitable for this type of research is the standardization of the questions asked to the respondents. This provides means to collect the data in written format and reduce interviewee bias as there will be no guidance by the conductors. In order to disperse the hurdles of collecting extensive responses through structured interview method, the questions were designed as open ended with sub-questions when it is necessary to delve a bit deeper (Fontana and Frey, 2000). Open ended questions

are favorable when the clear understanding of the respondents' views and experiences on the matter is essential (Foddy, 1994). Apart from the open ended questions, profile information for both respondents and their firms were gathered, excluding the firm names, which were told to be kept confidential.

In order to collect accurate data, another focal point was reaching the right participant from the firms in the sample who were highly familiar with the AEO concept and their firms' experiences on the matter. Thus, before sending out the interview questionnaire, each firm was phoned by one of the authors and the right person for the study was identified and their consent on participation was taken. In the end 20 individual responses were collected. The titles of said respondents include foreign trade executives, customs executives, logistics managers, purchasing managers, operations managers and planning managers.

Data collection process had started in 15.03.2018 and ended in 24.04.2018 when the saturation was achieved. In order to determine the saturation point, the study of Guest et al. (2006) was used as a guide. When no new construct could be coded, it was decided that the data was saturated.

To analyze the collected data, written qualitative information were coded separately by all three of the authors and in order to ensure the consistency of the themes the codes were compared (Kolbe and Burnett, 1991).

4. RESULTS and DISCUSSION

The data collected was grouped in two main sections based on their content: benefits and challenges. Then these sections were divided in to subsections based on emerging themes. These themes that are deduced from the structured interviews with the participants are shown in Table 2. The themes are ordered based on the frequency of expression.

When it comes to the benefits of the program, the most prominent themes were the effects on supply chain performance, security, firm reputation and cost management. On the effects of AEO program in supply chain performance, the majority of the respondents pointed out that time savings they managed through the usage of green line as a standout benefit. This helps the firms to reach their target market abroad at least a day faster than a non AEO holding firm by eliminating the customs inspection. Other time related benefits that were stated by the respondents include faster documentation, fuel savings on behalf of shorter service times and shift of labor for increased productivity as a result of decreased man hour needed in customs procedures. Furthermore, being able to know how long the customs procedures would take, creates benefits for stock planning and minimizing related costs as stated by the respondents. From the viewpoint of authorized consignor firms, the minimized time spent at customs also means a smoother intermodal transportation process, considering the time wasted at every transportation mode change hampers the feasibility of the operation.

Table 2: Benefits and Challenges of AEO Program to AEO Holders

Benefits	<i>Frequency</i>	Challenges	<i>Frequency</i>
Supply Chain Performance		Questionnaire Form	
Time saving	17	Excess number of questions	10
Cost saving	12	Unclear nature of questions	9
Labor saving	10	Existence of similar questions	7
Stock planning	10	Application of the same form for firms in different sector	6
Cost Management		Extra Costs	
Decrease in customs expenses	16	Consultant firms	9
Storage costs reduction	14	Safe zone investments	5
Import tax incentives	6	Supply Chain Security	
Supply Chain Security		Insufficient number of AEO holders	8
Increase in supply chain security	20	MRA	
Safe zone	13	Insufficient number of MRA	14
Trust to supply chain partner	12		
Certificates (ISO 9001 and 27001)	10		
Firm Reputation			
International reputation	17		
Trusted in customs	14		
Increase in customer trust	12		
First mover advantage	7		

As it can be seen, the benefits of AEO program within the scope of time related matters are not limited to lesser time spent on customs procedures but also efficient operations planning based on its predictable nature. From the viewpoint of the supply chain as a whole, the respondents highly value the predictability achieved via the AEO program, as it enables the partners of the supply chain coordinate more efficiently.

In addition to the cost savings made by time reduction, cost savings made by procedural changes are voiced by the respondents. Basically, based on priority service in customs, firms can save serious costs on storage fees in ports and other customs bonded areas. Another cost advantage comes in the form of tax incentives for import operations for AEO holders. Similarly, while being a relatively smaller cost, AEO holders are also exempt from documentation costs for export operations.

When the supply chain security is considered, all the participants circled around similar concepts and stated that the overall supply chain security is improved in many facets. Prerequisites of the AEO program require firms to adapt several security measures such as

safe zones for customs operations and the acquiring of ISO 9001 and ISO 27001 certificates. As a result of meeting these prerequisites, AEO holder firms reach a level that ensures both their information and physical security. Moreover as the program incentivizes the cooperation of AEO holder manufacturers and logistics providers, the chain as a whole becomes much more secure.

Along with the performance and security advantages created by the program, the participants underline that their firms' reputation has increased drastically both in the eyes of the customs administration and in the eyes of their business partners. Due to the international nature of the AEO program, the reputation achieved by the acquirement of the certificate is considered to be effective both domestically and internationally. On the other hand, as the program is a rather recent one in Turkey, the applicants take pride and have a sense of accomplishment especially when they are the first AEO holder in their respective business fields.

When the challenges that the participants faced with were asked, the most frequent response was on the problems regarding the questionnaire form that is published by the Ministry of Trade in order to present the program's prerequisites. Respondents stated that the excess number of questions, unclear nature of said questions, existence of similar questions and the fact that manufacturers and transportation firms answering the same set of questions were the main troublesome issues. Nevertheless, these issues were mainly faced in the first years following the introduction of the program and later resolved to some extent with the modification of the questionnaire with the feedback received from the participating firms. In said years, the absence of a guide for application procedures, resulted in a need for consulting firms to help applicants through the process, and consequently this drove the cost of application to the program. Especially for the firms that applied to on-site customs clearance, infrastructural investments that are required for the building of secure areas were another important cost item that created a challenge for the applicants.

Alongside above mentioned problems, there are several unmet expectations stated by the respondents following the acquirement of AEO certificate. Exclusively for the AEO holders that do not have any of the additional certifications such as authorized consignor, authorized consignee and on-site customs clearance, the benefits experienced were stated to be not much different than Customs Approved Operator Status (CAOS), which many of the mentioned firms already had. The number of transportation firms that have authorized consignor/consignee certification still seems to be below the expectations of manufacturing firms that are AEO holders and this results in less transportation options in building a secure chain. Lastly, the respondents underline the importance of MRAs. As it stands, Turkey has MRA only with South Korea. The respondents expect that the number of MRAs should be increased, especially with countries that have a high volume of trade with Turkey.

CONCLUSION

After analyzing both the literature and the data collected throughout this study, it can easily be stated that the security improvements that are deemed necessary in order to obtain AEO certificate creates a win-win situation for customs administration and participating firms. For these firms, improvements made not only increase the overall security, but also the trust in between the supply chain stakeholders. On the customs administration side, ensuring the level of security for the participants, reduces the time spent for AEO holder commodities, and allows them to reallocate their resources to riskier operations.

So far the AEO program, in addition the increased security, helped firms increase their supply chain performance by cost and time reduction. As the findings of the study show, by the improvements in the AEO application process and benefits achieved after the acquirement of the certificate, participating firms had increased their competitive advantages in their respective fields.

In the short time since its initiation in 2013, the program shows promising returns for their target audience. Hence, at this time the important point is to encouraging more firms to be involved in the program. Especially considering the number of transportation firms involved in this program is merely not enough, focusing on this matter is believed to be prominent. In the efforts of expanding the reach of this program, the feedbacks received from the already participating firms could be contributive in order to eliminate the challenges they have faced. For instance the challenges faced during the application process are found to be off-putting, nevertheless they can easily be amended through collecting such feedbacks.

The way to maximize the benefits of the AEO program lays in MRAs. By increasing the number of MRAs the benefits achieved domestically can also be achieved in the international stage. If such agreements were made between countries that Turkey trades most with, the demand for the AEO program would -without a doubt- be increased.

As all studies, this one also has certain limitations. Essentially the sample size of the study prevents it from generalizing the findings. Considering the AEO program is a rather recent initiative, the benefits will present themselves increasingly in years to come. In this respect, further studies can focus on AEO program's development and the ways that it can improve. Keeping in mind that more than 80% of the firms in the sample of this study acquired the certification in the last two years, the benefits they have enjoyed are not fully surfaced. In the coming years, with the manifestation of these benefits, conducting quantitative researches on this particular topic could be methodologically more feasible.

ANNEX – Structured Interview Questionnaire

Questions related with the AEO status of participating firms

1. Which of these authorities does your company have?

On-site customs clearing in export

On-site customs clearing in import

Authorised consignor

Authorised consignee

None

Questions related with the benefits of AEO application

2. How would you evaluate the impact of AEO on import/export processes?:
3. How would you evaluate the impact of AEO on supply chain performance?:
4. How would you evaluate the impact of AEO on firm reputation?:
5. How would you evaluate the impact of AEO on costs?:
6. How would you evaluate the impact of AEO on security?:
7. Are there any other benefits you would like to add?:

Questions related with the challenges of AEO application

8. What are the difficulties/bottlenecks your firm encountered whilst applying for AEO?
Please specify if you have a solution proposition
9. What are the expectations that were not met after your firm acquired AEO certification?
Please specify if you have a solution proposition.
10. Do you have any additional comment or suggestion on AEO program?

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