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Post-Clearance Audit (PCA), Effective Factors and Solutions Using Foreign Trade Facilitation and Development Approach

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ABSTRACT

Because of the challenges that the Customs Organization faces, some changes have been occurring in the management system of customs in different countries of the world. The Islamic Republic of Iran and the management system ruling its customs has accepted that structural change is an essential need in this sector. Hence, this study was conducted to examine the post-clearance audit and solutions and factors affecting it using the foreign trade facilitation and development approach. The extant research is applied research in terms of objective, and required data were collected from questionnaires distributed among 92 subjects including experts in customs affairs. Results showed that six criteria of risk management, customs strategies, customs human resources, importers and traders, rules and regulations, and customs infrastructures are the factors affecting an optimal post-clearance audit implementation. Customs infrastructures were introduced as the most critical factor. Accordingly, it seems that it is essential to create Customs Infrastructures as the first effective step to successful PCA

Keywords:

Post-Clearance Audit (PCA), Foreign Trade Development, Audit Pattern, Customs Affairs.

1. Introduction

Experiences related to recent decades have shown that countries must match themselves with global economic growth and must record high rates in the modern customs environment to manage the high volume of customs-based transactions. In doing this, countries can compete with each other in the context of world trade. In today's trade environment, customs are expected to achieve certain objectives such as acquiring the actual entry fees, accelerating the goods transaction process, enacting clear rules and regulations, and creating a secure supply chain. As suggestive measures, the modern control approach names PCA[1] can be used to improve many transactions in countries, in particular, Iran (Behravesh, 2018).

The physical presence of Customs at the gateway to a country means that required controls are conducted timely before issuance of cargos clearance. The mentioned controls comprise all activities that are done as deterrents to prevent infringement and fraud in customs. Currently, the physical controls in the entrance borders are the inherent measures and tasks of customs but the excessive and time-consuming checks at the point of clearance are costly and counterproductive measures for modern customs. PCA can be used as a control method that monitors and directs the clearance process based on international standards. PCA means audit-based customs control after the release of the consignment from the custody of the customs. PCA aims to verify the authenticity and accuracy of declarations by monitoring the business data and information of traders, trade systems, and documents (Weru & Kamaara, 2013).

The limited documentations that are presented at the time of goods importation to the customs do not provide the whole picture and context of transactions that should properly determine the correct customs value, classification, affiliated entry fees, and preferential tariffs. Therefore, under such circumstances, it is unfeasible for customs to decide entry fees and other debt related to inquiries in the narrow time frame available. Even if such a decision is made, there might be a delay in the clearance of goods. The PCA process can be defined as the structured examination of relevant commercial systems, sales contracts, financial and non-financial records, physical stock, and other arrests. The development of modern processes and procedures and the acquisition of relevant skills is a significant priority of customs to transit from the traditional system to an audit-based control system. PCA, however, is not implemented as an independent and separate process in Iran's customs (Shishechiha, 2017).

However, the guidelines of the World Customs Organization (WCO) about PCA led to a complete examination and update of previous ones enacted for PCA in 2006. Such a growth rate highlights the need for members to provide revenue besides legitimate trade facilitation and emerging and increasing immigration. The customs activities far from the traditional border control have developed to the PCA environment to facilitate the trade process (Hummels, 2018).

Therefore, PCA implementation has been introduced as a necessity of Iran's Customs as this standard has not been implemented successfully in Iran due to existing constraints. Nevertheless, some inconclusive measures have been done in Iran. Hence, this study was conducted to examine PCA, effective executive factors, and solutions by using foreign trade facilitation and development approach in Iran. Accordingly, effective factors or fundamental drivers for the successful implementation of this standard in Iran are identified and discussed.

Literature Review

Post-Clearance Audit

PCA means audit-based customs control after the release of the consignment from the custody of the customs. PCA aims to verify the authenticity and accuracy of declarations by monitoring the business data and information of traders, trade systems, and documents (Moradi, 2014).

Accordingly, PCA includes the following steps:

1) Pre-audit examinations: the customs audit is chosen considering the firm size, or the data is requested to be sent through a questionnaire.
2) The initial contact with the importer: customs contacts importers at the time of common audit before beginning the audit operations to receive detailed data about the type of records and documents required for audit initiation.
3) Audit briefing session: all selected auditors, relevant customs units, audited companies' officials, controllers, and lawyers of firms should receive information about objectives and other relevant issues in the first audit

session. The purpose of this meeting is to identify and evaluate the real controls on the documents.

4) Audit inquiry: the firms may be asked to write the information about the organizational structure, transactions, goods, payment methods, valuations, costs, etc., in the inquiry and give it to the auditor.
5) In-firm review: in possible cases, the customs encourage the audited firm to review and analyze audit-related operations.
6) Audit compliance: the auditee party should be informed about the potential findings or other relevant issues.
7) Identification and analysis of firms that should be audited. It is the first process in which ownership and relationships of the firm with other companies should be specified. Moreover, management and internal operational systems of the firm are identified.
8) Beginning audit operations: in general, examinations constitute a comparison between documents, records, and information declared by the firm and those recorded in financial books.
9) Accounting examinations: these examinations include customs and financial statements, receivable accounts, recorded infringements, capital assets and costs, payment methods, and so on.
10) Case examinations: description of goods' tariff, origin, destination, value, and the volume that is the most substantial step to discover possible frauds and violations.
11) Closing session: the formal meeting with the firm's representatives to discuss audit results.
12) Final report: customs provide the auditee firm with a version of audit results.
13) Valuation: customs administrations take some mechanisms for valuation and evaluation to achieve a successful PCA plan (Karbasian, 2011).

Factor affecting PCA implementation

This part of the study presents a brief background of studies conducted on the studied subject and their results with an emphasis on the factors affecting PCA implementation. Alipour and colleagues (2012) carried out a study entitled “requirements and strategies of exerting control in PCA” and concluded that PCA and risk management are the most important discussions related to customs modernizations. Accordingly, PCA leads to the reduction of required time and costs and facilitates the process of realizing goods. PCA implementation especially in developing countries like Iran which seeks fundamental and effective reforms in customs rules and regulations can lead to positive changes in commercial indices and customs services. To this end, the effectiveness of five factors including customs rules and regulations, infrastructures, risk management technique, human resources, and traders in PCA's performing strategies have been analyzed in the form of five major hypotheses.

Tabatabaee and colleagues (2018) carried out a study on WCO with an approach to barriers to the Islamic Republic of Iran Customs Administration. They found that Iran has been facing challenges in political and economic sectors caused by their related infrastructures; hence, Iran could not benefit from the advantages of this administration. As physical borders have been disappeared, international organizations and world trade play a vital role in the national interests and economy of countries. Therefore, customs mechanization and reformation, creation of e-trade, and a single window for customs formalities can make opportunities to create a secure environment for competition between commercial markets and attract foreign investments in the region. This paper tried to introduce some challenges in political-economic sectors and legal constraints in the customs administration of Iran.

Morakabatchi (2015) examined the effects of PCA application in the Islamic Republic of Iran Customs Administration and concluded that traditional customs control cannot create value for the trade community due to the increasing volume of commercial goods and diversities in form of international trade. The solution for the case is using the modern risk management-based methods. PCA reflects a different approach to customs control that leads to a reduction in time and cost of releasing goods from customs. This study aimed at preparing a national roadmap with a concentration on the accounting system of economic actors and PCA in the Islamic Republic of Iran Customs Administration by using structural equation modeling and its executive effects.

Moradi and colleagues (2014) conducted a study entitled "identifying the factors affecting audit risk

using Delphi Method" and concluded that it is inevitable to use modern customs controls including risk management, sudden and records-based inspections and PCA owing to changes and increases in world trade volume over recent years. As a common method in developed countries, PCA is one of the effective measures to prevent and discover trade frauds in the field of value determination. Iran's customs can ensure the accuracy of declarations proposed by natural and legal individuals who import and export goods by examining their financial books, records and clearance records.

Momeni (2015) identified and examined the challenges in the process of goods clearance to present solutions (case study: Tehran Customs Administration). Results showed that interaction between affiliated organizations, timely training of customs procedures, use of modern technologies, informing customers, non-interference in governmental centers, reduction in customs formalities, mutual respect, and proper size of warehouses and volume of customs' goods have a significant effect on the goods release process. According to the abovementioned studies and other relevant references, some effective factors in PCA implementation were identified and reported in the table below:

Table1. Factors affecting PCA implementation

Factor	Components	References
Strategies	Customs orientation and reaction to issues of imported goods release Customs orientation and reactions to the government's interests Customs orientations and reaction to traders' interests Customs orientation and reactions to society's interests	Tabatabaee & Sabeti (2018) Azizi (2017) Alipour (2012) Yousefi (2016)
Customs' Infrastructures	Creation of administrative and managerial structures Existence of single window Customs operations and affairs flow Existence of advanced information systems, hardware, and software	Karbasian (2011) Morakabatchi (2015) Behravesh (2015) Yousefi (2016)
Importers and Traders	Traders' familiarity with clearance rules and regulations Traders' acceptance of normal profit Traders' familiarity with tax rules and regulations Mechanized customs activities	Polner (2010) Laporte (2012)
Risk Management	Applying transparent and sustainable rules and regulations System efficiency in income collection Acceleration of goods transportation Reducing the risk of terrorism by creating a secure and simple international supply chain	Mwachiro (2016) Weru, Kamaara, & Weru (2013) Koichi-Asami (2017)
Rules and Regulations	Rules of order Rules of clearance, transportation, and transit Rules of import and export Rules of tolls, taxes, and fines	Tariff Bureau (2015) Mwachiro (2016) Hummels (2008) Weru (2013)
Customs Human Resources	Quality of required technical human resources Quantity of required technical human resources The commitment of required technical human resources The specialty of required trained human resources	Askarzadeh (2014) Shishechiha (2017) Karbasian (2011)

Methodology

The methodology is an important case that may lead to unreal results if it is ignored. The method of research is selected based on the nature of the research subject and its executive facilities. Accordingly, this is applied research in terms of objective. Besides, it is a survey study in terms of the data collecting method.

Society and Sample

Statistical society of this study comprised experts of customs affairs (scholars, officials, group heads, deputies and managers of Iran customs), target customs administrations (Shaheed Rajaee of Bandar Abbas, Bushehr, Khoramshahr, Tehran, Bazargan, Imam Khomeini Port, Astara, and Bandar Anzali), and professors and instructors of customs affairs in universities located in cities of selected customs administrations. Non-probability and judgmental sampling methods were used to measure sample size. Because this is a specialized subject that requires experts to answer the questions, 92 experts with at

least BA degrees on the major related to customs affairs, 5-years work experience, experienced professors, and instructors of customs affairs were chosen to fill out the research questionnaire.

Results

Data Collecting Tool

The researcher-made questionnaire was used as a data-collecting tool based on the components introduced in table (1). The items are based on the five-point Likert Scale. The validity of the questionnaire was approved based on the content validity examined by 30 experts in customs affairs. The reliability of the questionnaire was also approved by using Cronbach's alpha and AVE coefficient. Table (2) reports the mentioned values.

Table2. Reliability of questionnaire

Variable	Number of items	AVE	Cronbach's alpha
Strategies	4	0.611	0.891
Rules and Regulations	4	0.689	0.837
Customs Infrastructures	4	0.511	0.811
Importers and Traders	4	0.692	0.779
Risk Management	4	0.685	0.831
Customs Human Resources	4	0.599	0.792

Data Analysis

The KMO test was first for different items that the results of this test indicate that performing factor analysis on these items can be acceptable. The KMO test results are presented in the table (3).

According to table (3) , considering that KMO criteria is 0.767 and more than 0.7, therefore, the correlations among the data are suitable for factor analysis and also Kaiser Meyer statistics were 0.74 which was more than 30%. Therefore, the number of effective factors is appropriate and sufficient, and since the significance level of Bartlett's test is significant (less than 0.5), there is no ambiguity point in the matrix of factors and it is quite clear which factor each question belongs to.

As can be seen in the table (4), the indicators of this study have a factor load of more than 0.6 on their own structure.

Dillon Goldstein coefficient has been used to investigate the composite validity of each construct, as mentioned above. In the methodology of structural equation modeling, the combined reliability coefficient higher than 0.6 for each structure indicates its appropriate reliability. The values of this coefficient, which is more than 0.6, are expressed in table (4). Therefore, these structures have a suitable combination of reliability.

The mean values of extracted variance related to structures have been reported in table (5) with which the third criterion of internal consistency of structures can be investigated. In Table (5), these values are greater than 0.5, indicating the appropriate validity of the measurement instrument.

In table (6) SSO is the sum of observation squares for each variable block and SSE is the sum of prediction errors for each block of the last variable. Finally, 1-SSE/SSO is a credit check for redundancy, also called Q2. According to the above image, the index of redundancy validity of all dependent variables is positive. Therefore, the structural model has good quality; it means that independent variables have the ability to predict dependent variable.

Table (7) has also examined the results of the quality of the measurement tool (independent variables). According to table (7), the validity index of the instrument for measuring all the variables in the last one is positive. Therefore, the measurement tool has good quality.

factors	Agents	
special values	۱,۷۴۳	۵,۵۴۷
percentage of explanatory variance	۱۷,۴۳	۵۵,۴۶
Total percentage of variance explained	۷۲,۸۹۶	
KMO index value	۰,۷۶۸	

Table3. Factor analysis results in the main component method

Kaiser Meyer statistics	significance level	Bartlett statistics	Total variance explained
۰,۷۴	۰,۰۰۰	۲,۷۸	%۷۲,۸۹

Table4. Exploratory Factor Analysis Results

Hidden Variable	factor load of obvious variables	Hidden Variable	factor load of obvious variables
Strategies	۰,۷۵۲ ۰,۶۰۹ ۰,۶۸۴ ۰,۶۹۸ ۰,۶۹۳ ۰,۶۷۲ ۰,۷۱۲ ۰,۸۸۸	Customs Infrastructures	۰,۷۷۴ ۰,۷۹۳ ۰,۶۲۲ ۰,۸۱۲
Rules and Regulations	۰,۸۹۰ ۰,۷۶۲ ۰,۷۵۵ ۰,۷۹۸	Importers and Traders	۰,۸۷۱ ۰,۷۱۱ ۰,۶۴۴ ۰۷۶۷ ۰,۸۱۸ ۰,۷۷۱
Risk Management	۰,۷۸۹ ۰,۸۶۲ ۰,۷۰۲ ۰,۷۰۱ ۰,۸۰۰ ۰,۷۰۱	Customs Human Resources	۰,۶۷۶ ۰,۶۷۰ ۰,۸۹۴ ۰,۶۱۳

Table5. Study of AVE values and compound reliability

Variables	AVE	Composite Reliability
Strategies	۰/۶۱۱	۰/۸۹۱
Rules and Regulations	۰/۶۸۹	۰/۸۳۷
Customs Infrastructures	۰/۵۱۱	۰/۸۱۱
Importers and Traders	۰/۶۹۲	۰/۷۷۹
Risk Management	۰/۶۸۵	۰/۸۳۱
Customs Human Resources	۰/ ۵۹۹	۰/۷۹۲

Table6. Redundancy validity check results (for dependent variable)

1-SSE/SSO	Total
۰/۴۵۲	Correct control of Post-Clearance Audit

Table7. Validation results of the measuring tool

Total	1-SSE/SSO
Strategies	۰/۸۰۴
Rules and Regulations	۰/۶۶۹
Customs Infrastructures	۰/۷۵۲
Importers and Traders	۰/۸۹۱
Risk Management	۰/۷۴۷
Customs Human Resources	۰/۷۲۳

Table8. Test of factors affecting PCA

Components	t	df	Sig.	Mean difference	The confidence level of 95%	
					Upper limit	Lower limit
Strategies	13.81	91	0.000	0.83250	0.7102	0.9548
Rules and Regulations	9.352	91	0.000	0.65000	0.5134	0.7866
Customs Infrastructures	03.381	91	0.000	0.83250	0.7102	0.9548
Importers and Traders	12.409	91	0.000	0.78000	0.65645	0.9036
Risk Management	9.953	91	0.000	0.68000	0.5457	0.8142
Customs Human Resources	13.381	91	0.000	0.83250	0.7102	0.9548

Based on table (8), a one-sample T-test was used to examine the indicators. It should be mentioned that this test is used when it is supposed to compare the mean value of a specific variable with a certain value. Because the items have been scored on the five-point Likert scale from very low (1) to very high (5), the number of 3 indicates the average value of this test. Considering the logic of this test, the variables with significance levels lower than 0.05 and mean values greater than 3 are confirmed. According to the table, all of the identified factors as factors affecting the PCA implementation were confirmed based on the research literature and quantitative analyses.

Table9. Ranking the factors affecting PCA

Evaluating criteria	Rank mean	Factor rank
Strategies	6.57	Third
Rules and Regulations	6.54	Fourth
Customs Infrastructures	6.79	First
Importers and Traders	6.70	Second
Risk Management	6.52	Fifth
Customs Human Resources	6.44	Sixth

This part of the study (table 9) ranks the confirmed identified factors affecting PCA by using Freidman Test. Results in the table below indicate that the Customs Infrastructure is the most effective factor in the post-clearance audit that is followed by Importers and Traders, Rules and Regulations, Risk Management, and Customs Human Resources, respectively.

Discussion and Conclusion

The main purpose of this study was to identify factors affecting the post-clearance audit (PSA) to develop foreign trade in customs. The obtained results have been discussed herein.

According to the theoretical background, experiences of other selected countries, and opinions of sample experts, six criteria (Risk Management, Customs Strategies, Customs Human Resources, Importers and Traders, Rules and Regulations, and Customs Infrastructures) were chosen as factors leading to an appropriate PCA. All of the mentioned components were confirmed by a one-sample T-test. Besides, the components were ranked based on Freidman Method, and results showed the high importance of Customs Infrastructures followed by Importers and Traders, Strategies, Rules and Regulations, Risk Management, and Customs Human Resources. The obtained results were in line with findings obtained by Priya (2010), Weru et al. (2013), and Mwachiro (2013). Accordingly, it seems that it is essential to create Customs Infrastructures as the first effective step to successful PCA. Therefore, the following recommendations are proposed:

1) Creating administrative and managerial structures to facilitate the administrative bureaucracies to achieve a successful PCA.
2) Creating a single window to unify management measures.
3) Accurate monitoring over the operations flow and customs affairs process after clearance and creating proper regulations with an effective executive guarantee.
4) Existence of advanced information systems, hardware, and software to record and store all data through an efficient online method.

It was also concluded that Importers and Traders, Strategies, Rules and Regulations, Risk Management, and Customs Human Resources play an effective role in successful PCA implementation. It is suggested to traders in the context of rules and regulations that keep documents, records, and books based on the accepted accounting principles. Moreover, rules should provide customs with audit implementation, accessibility to the place of traders, and other parties involved in the importation process. Also, it is recommended that customs rank the traders based on their risks and issue some certificates (manually or electronically) to give some advantages such as a few numbers of inspections and ease of clearance process. It is also suggested to expand the use of modern technologies and develop the e-customs in order to take some advantages such as e-declaration of goods, automatic approval of e-data sent by traders, and processing the customs declaration before the goods enter the customs, which accelerate the clearance of consignments at the point of entry to customs. Furthermore, it is suggested to hold some training sessions in the field of consignment selection, PCA, goods routing, and requirements for business society. In this case, traders can participate in some training courses of customs experts in the context of post-clearance controls. It is recommended to employ eligible staff as information analysis for PCA and risk management teams working on the audit, inspection,

and ICT. Some incentives such as appropriate salaries and interests to analysts prevent corruption and improper behaviors. Moreover, it seems that traders should keep documents and records for a certain period to give the required documents to customs officials in a suitable customs structure. In doing this, traders should allow customs to have access to databases, records, business books, and staff. Customs should have enough power to control business transactions after clearance, to investigate and control business documents of traders, and inspect any place under the supervision of customs.

Recommendation for further studies

According to the research process and obtained results, the following recommendations can be presented. Firstly, in this research, the effect of six factors on the accurate implementation and PCA control was examined, so it is recommended reviewing and finding reasons leading to these factors. Secondly, to design an accurate PCA model, opinions of 30 experts were asked, so it is suggested to study the considered harms to PCA based on the other documents and compare the results. Thirdly, reviewing the literature more profoundly to explore other factors influencing proper implementation and control of PCA is highly recommended. Lastly, investigating other customs located in other parts of Iran as target customs administrations in order to determine whether these factors are applicable there or not, could be considered as the final suggestion.

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Notes

[1] Post-Clearance Audit