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HYBRID-PAPERLESS ADOPTION & INTEGRATION IN FOREIGN TRADE: EVALUATION OF THE CURRENT SITUATION IN TURKEY

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ABSTRACT

Unprecedented technological changes are taking place in the extremely chaotic business environment of today. Removing paper-based processes and increasing integration have become a strategic priority in all business lines. Nevertheless, foreign trade area can still be regarded as relatively conservative. Traditional paper-oriented process still continues to be widely used in the field of foreign trade. Therefore, there is a need for a radical and comprehensive shift from paper-based approach to full integration by means of electronic documents. Foreign trade transactions are currently performed in a mixed way, which varies between digital and traditional. This phenomenon is called hybrid-paperless solutions. The main purpose of this paper is to clarify the current situation of hybrid-paperless adoption and the level of integration in Turkey by conducting qualitative analysis. For this purpose, interviews have been performed to understand the prevailing perceptions of foreign trade practitioners.

Keywords: Paperless Trade, Hybrid-Paperless, Electronic Document, Integration

1. Introduction

The alteration and transformation of mankind, which began approximately in 10,000 BC with the agricultural revolution, continued with industrial revolutions. The history of humanity has experienced three major industrial revolutions, and is now going through the fourth industrial revolution called industry 4.0 (Görçün, 2016). With the advent of the internet, information revolution took place (Civelek M. E., 2009). Regarding the internet from the perspective of the intellectual development of humanity, it can be stated to have more influence than that of the invention of printing press (Civelek M. , 2019). The process of digitalization is a transition from analogue to digital transmission of information (Ashmarina, Mesquita, & Vochoz, 2019). Transition from analogue environment to digital environment started with the transfer of physical resources such as paper, photography, video recording to the digital environment and continued with the transformation of the business processes. With the increasing technological innovations in all areas of our lives, digital transformation process has been initiated. Digital transformation process is considered to be a transformation process with digitalization being reflected to the processes of a person or an organization by applying digital culture in every field. Digital transformation is the implementation of a new business model in which all the operational process is redesigned by using digital technologies. It is expected that digital transformation and technological innovations allow businesses to attain optimization regarding cost and time (Çemberci, Uca, Çelebi, Özalp, & Civelek, 2017).

Nonetheless, digitalization is viewed to be limited or distant for traditional foreign trade transactions (Çemberci, Uca, Çelebi, Özalp, & Civelek, 2017).Organizations need to accelerate transformation and digitization in foreign trade transactions because paper-based processes will be abandoned in other business lines. Chaotic business environment in the digital age forcibly leads the organizations to undergo changes. Especially, with the advent of industry 4.0, business processes have started to be shaped by new technologies which include but are not limited to big data and analysis, intelligent robots, machine learning, Internet of Things, 3D printers and cloud technology. Despite all such developments, foreign trade area can be regarded as relatively conservative. Traditional paper-oriented processes still continue to be widely used in the field of foreign trade. Therefore, there is a need for a radical and comprehensive shift from paper-based approach to full integration by means of electronic documents (Civelek, Uca, & Çemberci, 2015). Foreign trade transactions are currently performed in a mixed way that varies between digital and traditional. Cepero and Vysin call this phenomenon hybrid-paperless solution (Cepero & Vyšín, 2019).

The potential benefits of e-documents in the field of foreign trade can be summarized as follows: (1)reduction in processing time, (2)reduction in costs, (3) increase in usability, (4) elimination of application discrepancies / differences, (5) reduction in the effect of human factor, (5) decrease in the archive costs, (6) recording the economic activities, (7) prevention of fraud, (8) elimination of the complexity in payment methods, (9) reduction in the number of documents, (10) facilitating the acquisition of commercial information, (11) increase in global trade volume, (12) predictable costs and (13) eliminating the problems that stem from language differences. The leading benefits among them are the reduction of the number of documents and the elimination of complexity in payment methods (Civelek & Seçkin, 2017). Approximately 30 documents are issued for performing foreign trade transactions. Civelek and Sözer (2003) initially discussed that it would be possible to combine the functions of documents used in typical foreign trade transaction suggesting for the first time a new foreign trade business process that is conducted through a single document. Upon this early attempt, solutions started to be discussed gradually. Civelek et al. (2017) proposed a taxonomical approach to surmount the integration problem considering that the neccesity of a road map before reaching a single document. According to this approach, it is expected that the documents will gradually evolve towards a single document (Civelek, Çemberci, Uca, Çelebi, & Özalp, 2017). Civelek and Artar (2019) discussed the effects of the advent of blockchain and artificial intelligence technologies. According to the writers, these technologies will bring an end to the obsolete and outdated foreign trade methods (Civelek & Kibritci Artar, 2019).

Together with developing technology and changing world, Far East Asia countries have become pioneers to realize the importance of switching from paper-dependent processes to digital environment in foreign trade transactions. The workload and high cost of paper-based workflow processes along with the evolving foreign trade volumes motivated the Korean government to take the lead in international competition by adapting to the paperless foreign trade processes. The transition to paperless foreign trade operations started in 1989 and has continued until today with the opening of the UtradeHub portal in 2007 at Korea. With the UtradeHub Portal, integration between trading firms, logistics firms, customs brokers and banks is achieved and the use of digital environment in foreign trade transactions is targeted (Utradehub, 2019).

There are some web applications designed to carry out foreign trade operations through a single window. Some of them are at regional level, like the ones in Germany (DAKOSY), Ghana (GCNet), Australia (Tradegate), Finland (PortNet), Guatemala (SEADEX), Hong

Kong (DTTN), Jamaica (TradePoint), Japan (NACCS), Korea (KTNet), Malaysia (Dagong Net), Mauritius (TradeNet), Netherlands (VIPPROG system), Singapore (TradeNet), Sweden (VCO), Thailand (TradeSiam), Tunisia (TTN) and United States (ITDS). Some of them are at multi-national level like ASEAN Single Window and EU Single Window as well as the ones at international level like Bolero.Net (McMaster & Nowak, 2007). The main purpose of such applications is to realize the integration of the processes in a typical foreign trade transaction. Single window is an attempt to make all the parties involved in a foreign trade operation come together. These attempts and efforts have not been adeuqate though. It is important that all the processes changed radically. There is no need to issue separate documents for each transaction. Rather, the functions of all the foreign trade documents should be combined in single documents. Additionally, a multinational single window system should be set up in order to achieve an actual and efficient integration.

The documents used in foreign trade are divided into six groups as invoices, transport documents, insurance documents, financial documents, movement documents and compliance documents, which represent approximately 27 documents (Civelek & Sözer, 2003). Moreover, the documents used in foreign trade transactions vary depending on the legal practices of the countries, bilateral or multilateral agreements with the country in which the product is imported or exported and the manner of loading. This diversity in documents used in foreign trade transactions constitutes a legal and practical disharmony among the commercial parties. In order to reduce waste of time and save on transaction costs, electronic documents should be used in foreign trade. An electronic document can be described as a file (a text or a photograph, or in Word, PDF or XML format) created in a computer program in which the content approved by electronic signature is to be issued by certificate authority (Civelek & Sözer, 2003). In order for an electronic document to be legally valid, the electronic document must have an electronic signature which represents equal validity and power as the wet signature. Electronic signature should testify the authenticity and authority of the signer and also the integrity of the relevant documents. Authenticy authenticates the source of messages; while authorization specifies rights, responsibility and competence of the sender. Integrity function prevents the orginal document from being altered in any sort (Civelek, Uca, & Çemberci, 2015). Concisely, electronic signature is a digital code that defines the identity information and authority of the sender of a document that has been sent in electronic form (Reed, 2003). Electronic signature is superior to a wet signature. Therefore, electronic documents are also superior to paper documents. For instance, retrospective issuance is not possible in electronic documents owing to timestamp function. Hashing function also protects the confidentiality and security of electronic documents (Civelek, Uca, & Çemberci, 2015).

Civelek and Özalp (2018) have listed the obstacles regarding electronic documents in foreign trade transactions as folows: (1) there is the fact that the paper document process and the paperless document process are subject to different business processes in foreign trade, (2) complex business process that occurs when many parties from different countries are involved in foreign trade transactions, (3) the paperless trade process has not yet been defined in international standards, (4) there is a difficulty in ensuring international coordination in order to establish a platform in accordance with the standards and legal infrastructure of all countries. In order to ensure the transition to a completely paperless foreign trade process, a single window system should be established within a common legal framework that will be adopted by all countries (Civelek & Özalp, 2018). The Single Window System is the platform that provides access to all the information required by all the relevant parties (including the

importers, exporters, forwarders, insurance companies, banks, customs agents, governments, etc.) involved in a typical foreign trade transaction. Although all countries must have technological infrastructure capability to put single window system into practice, international legal infrastructure does not support this practice. The international validity of digital signatures, in particular, is a disputed area.

According to the Global Digital 2019 report, only 36% of the total population is internet users in Africa. Compared to European countries where 86% of the total population is internet users, it seems difficult to establish a healthy integrated platform between two continents where access to technological infrastructure is not the same (We Are Social, 2019). Therefore, while the single window system is an easy process to integrate the parties involved in foreign trade transactions in developed and developing countries, this situation will not be at the same level in the case of underdeveloped countries. Another question about the applicability of a single window system concerns the way to ensure information security. Whether or not the parties carrying out foreign trade transactions both within the country and in the other country can have access to which information, at what level, the way they ensure the security of information and documents of both countries and foreign trade parties are all important issues that need to be taken into consideration.

According to Laryea's study (2005), barriers to paperless foreign trade are divided into two groups operationally and legally. Different procedures followed by countries in foreign trade transactions, different document requirements, different paperless process administrations that are already structured and not integrated with each other is an operational obstacle. Concerns about whether paperless documents will be sufficient for the parties to fully meet their legal obligations or whether paperless documents will be sufficient in any judicial process are seen as another obstacle in the way of the paperless process. (Laryea, 2005). According to Civelek et al. (2017), the most common obstacle is the lack of psychological, administrative and technical standardization in order to establish paperless trade platform. For all these reasons mentioned such as the lack of sufficient infrastructure for paperless foreign trade transactions of countries, the lack of an integrated system between countries, the differentiation of documents requested by countries for import and export transactions and security, the implementation of paperless documentation is actually the "hybrid paperless" which is very efficient compared to the paper-based process; yet, it is not able to reflect the efficiency and advantages of the fully realized paperless process (Djassemi & Sena, 2006)

2. Hybrid-Paperless Integration

Hybrid-paperless refers to the process by which several processes are digitalized, but still paper documents are required to complete the processes. This is because there is no infrastructure where all processes are integrated and data security is assured (Djassemi & Sena, 2006). On the other hand, fully-paperless process management refers to the process in which transactions are carried out in a purely digital environment from the beginning to the end. In a fully-paperless process, transactions are not paper dependent. Hybrid-paperless process refers to a half-digital process compared to fully paperless process referring to a more digitized process than paper-oriented process (Djassemi & Sena, 2006). Based on Cepero and Vysin's study, the differences among paper-based, hybrid-paperless and fully-paperless processes in foreign trade transactions are summarized as in Table1.

Table 1. The Differencesamong Paper-Based, Hybrid-Paperless and Fully-Paperless Processes in Foreign Trade

Process	Paper-Based	Hybrid-Paperless	Fully-Paperless
Filling and signing the documents	Non-digital	Digital	Digital
Notification of different parties	Non-digital	Digital	Digital
Document exchange between parties	Non-digital	Digital	Digital
Finalization of document and delivery to customs	Non-digital	Non-digital	Digital
Access to document and verification of authenticity	Non-digital	Non-digital& Digital	Digital

Source: (Cepero & Vyšín, 2019)

In the study entitled “Impact of paperless trading on organization” conducted by Ignacio Herrera Cepero and LubomirVyšín, from the Lund University School of Economics and Management department, it was aimed to measure the contribution of process management in the digital environment to foreign trade transactions and organization and how the future development of digitisation will remove the dependence on the traditional paper processes. In this research, qualitative analysis was conducted by interviewing the companies. In the sample of this research, there are two groups consisting of platform users and service providers. Service providers are the companies that provide foreign trade portal service to the foreign trade companies. Platform users are the companies that use the service provided by these service providers. The effects of hybrid-paperless process on financial resources, human resources, business efficiency, future of the organization, customer satisfaction were evaluated according to the results of the interview. Instead of the old method in which several transactions and approvals are required even for a single document, Cepero &Vyšín stated that the positive impact on human resource efficiency and effectiveness was provided by digitalization along with the reduced error; on the other hand, loss of documents causes extra burden on financial resources of companies. One of the participants of the interview stated that although the main objective is not to create financial resources, even an improvement of 0.1 - 0.125% in all shipments indicates that the company gains profits by enhancing customer satisfaction. And other participants of the interview as service providers reported that the financial gain would be higher than what the platform users had anticipated, and a company with 15,000 employees could earn more than 6.5 million euros annually. Interview participants indicate that companies are shifting their surplus human resources to other positions owing to the increase in productivity in human resources along with reduced processing time. Cepero &Vyšín stated that 10% - 20% of time saving is achieved on a single file by reducing the error risk, human and paper dependent process, and this contributes directly to customer satisfaction. The prevention of delays in the traditional process increases customer satisfaction and all these results contribute enormously to the business productivity, and therefore, to the future of the organization(Cepero & Vyšín, 2019).In today's rapidly evolving and changing technology age, states and various commissions are aware of the fact that foreign trade cannot be managed by traditional paper-based processes, and various improvements have been made to shorten the process of bureaucratic processes and to establish a fast reliable foreign trade structure. A few examples of these applications are E-TIR, E-Awb and E-B/L.

The TIR (Transports Internationaux Routiers) convention is governed by the United Nations Economic Commission, established in 1959, and currently has 68 countries that are parties to the convention. The TIR convention is based on the principle of issuing a Tır Carnet for road shipments to be made between the contracting parties and providing guarantee for transactions through the Tır Carnet.Tır Carnet is a document sold to transport companies by guarantors authorized by the International Road Transport Union (IRU). Each Tır Carnet is arranged for a single transport and has a different reference number. Each Tır carnet is issued

in duplicate documents as many as the number of customs administrations to which the goods will pass, and is tear-off at the entry and exit customs in each country after being submitted to the customs authority. In the period it was prepared, the trade carnet, which facilitated the trade, lost its trade-facilitating effect with the digitalization of the customs administrations and foreign trade transactions. Therefore, in 2003, the E-Tır project was initiated among all parties that are members of the Tır Convention. The E-Tır project aimed to provide secure data transfer between customs administrations and parties by transferring truck contract procedures to computer environment. With the E-Tır platform, the security of transactions is increased while the administrative procedures at customs are reduced, irregularities in scorecards are prevented, which contributes to an effective supply chain method. With the E-Tır system, if there is no problem in the completed customs declaration or goods, the truck information will be transferred to the E-TIR system so that the customs authorities will have prior knowledge in all exits, transits and destination transactions between the contracting parties' customs, and thus, the duration of the transactions in the customs administrations will be reduced (Unece.org, 2019). This process is completely paperless.

With the E-freight project implemented within the scope of IATA Simplify the Business program, all paper documents belonging to airway shipments can be created and transferred electronically. With e-freight, all parties (carriers, shippers, freight forwarders, and customs brokers and customs authorities) that are the parties to an air freight are integrated into the system, which eliminates dependence on paper, prevents document losses, and therefore, reduces delivery times and duration of transactions. In order to transfer all documents to the digital environment, the electronic airway bill (E-AWB) implementation created and shared in a digital environment was implemented within this scope. Thus, the airway bill was not required to be arranged as paper, which prevented paper-related losses and delays (iata.org, 2019). This process is paperless between the forwarder, the carrier and the shipper. Ultimately it is not a paperless process, but a hybrid paperless transaction.The documents required to be obtained from the country where the product is imported are supplied by the exporter and the originals are sent to the importer. And the importer company or the authorized customs broker shall take the print out of all the documents related to the loading and apply to the customs administration together with the documents which must be submitted as original (certificate of origin, A.Tr certificate, health certificate, etc.).

While digitalization works are being carried out in airway and road transport, an integrated system has been tried to be established between the parties in seaway loadings. Bill of lading provides the transfer of ownership rights on products, so it is very difficult to present the bill of lading to the parties unless payment requirements are met like in airway and road transport. In order to proceed to the electronic maritime bill of lading, a fully integrated system is needed which is integrated in the payment system and in a way that provides trust between the importer and exporter. Since Bolero, essDOCS and e-titleTM system can provide an end-to-end paperless process method; E-B/L is also successfully implemented. The E-B/L is arranged by the carrier on the system and submitted to the loader for approval in draft. If the shipper approves the draft after checking, the carrier confirms the bill of lading with a single keystroke and the bill of lading is forwarded to the next parties together with the other documents. Only one party at each stage can act as a holder of the bill of lading. On each transfer of the bill of lading, the rights are placed on the transmitted party. Bolero, essDOCS and e-titleTM system allow the electronic bill of lading to be converted into paper bill of lading in any up to scratch (Tan & Starr, 2017).

3. Methodology

The scale developed by Cepero &Vyšín (2019) has been adapted to Turkish language. Interviews with the leading business professionals in banking, information technology and education sectors have been performed. This research is a qualitative study. The responses that are collected from the sample have been consolidated and summarized in the conclusion of the study, and the results have been compared with the results of the research by Cepero &Vyšín. The scale comprises the following questions:

Interview questions for the organizations that use the digital platform:

- What is your profession within the organization?
- How many employees does your organization have?
- Why have you decided to adopt a digital plat-form for paperless document exchange?
- How hard was a process of transition between paper-based and paperless structure? (Elaborate on the problems experienced)
- What were the expected results of having a digital solution for document exchange?
- What is the impact of this digitalization on financial resources?
- What is the impact of this digitalization on human resources?
- How much time do you spend on one document in comparison to the old way?
- Do you use paper (after digitalization) in any of your current processes – i.e. sticky notes?
- Does the solution bring all the expected results already?
- Where do you plan to invest saved resources? (new products, new services …)
- How do you see the future of this digital platform and your organization?

Interview questions for the creator of a service provider:

- What is your profession within the organization?
- Can you describe the functionality of the digital platform?
- Why did you choose a hybrid-paperless model?
- How many organizations are using the solution?
- How did you overcome different barriers and what was the most common one?
- What needs to be fulfilled in order to transfer your solution to fully paperless?
- What are the advantages that organizations might gain by using your solution?
- How do you see the future of this digital platform and your organization?

4. Comparison of the Results

When the responses of the participants in the research of Cepero &Vyšín were compared with the responses of participants in Turkey, it was observed that Turkish participants gave more indefinite and general answers to the questions. The participants in Cepero &Vyšín's research

gave clearer and more numerical answers. For example, when asked about the impact of paperless process integration on financial resources of companies, one participant in Cepero &Vyšín's research stated they had saved almost 150.000 Euros, which means reducing the need for 2-3 workers each year. Turkish respondents believe that the reducing error rate, quick and easy results of transactions and increasing customer satisfaction have a positive effect on financial resources. When the impact of hybrid process on human resources was asked, one participant in Cepero &Vyšín's research stated that the need for at least one person in charge of the certification process would be reduced and that the person could be employed in a different department. This person may also be assigned to a different department within the company. Another participant in Cepero &Vyšín's research, who is head of global customs operation, considers that the need for 3 people from the documentation unit can be reduced by digitalization in the workflow. Turkish participants, on the other hand, believe that will not require the human resources to decrease, on the contrary, the companies will need people with expertise in this field. In the meantime, the employees will be trained and be able to continue their tasks. One of the participants in Cepero &Vyšín's research, who is head of supply chain supervision, stated that 24-72 hours can be saved in each shipping with creation of multiple documents in less time and with fewer errors regarding the impact on business efficiency. Another participant in Cepero &Vyšín's research, the head of global customs operation, stated that digitalization process provides 5-6 minutes of time saving on a single document, which results in 10-20% time saving per document. Turkish participants agreed that there is a positive effect on business effiency and customer satisfaction, but did not provide complete numerical data. Both research participants agree that the digitisation process and its contributions to their companies will be even more positive, but a few more years are needed for a fully digital processing process to occur.

5. Conclusion

The leading professional in their sector who has asked similar questions stated that fast, modern, error-based inefficiencies are prevented by moving operations to the digital environment; however, due to both legal regulations and process security, they stated that they could not proceed to a completely paperless process management. Since many local and international public and private sectors are not integrated into digital environment, hybrid-paperless process is used instead of a completely paperless process. In addition to the legal and legislative challenges, the initial investment cost, the difficulties in finding technical personnel to establish the necessary infrastructure and the training of the personnel required for the process change are stated as the problems and costs encountered at the beginning of the process. Furthermore, they agree on the need to cooperate with the public sector and law maker, and make long-and short-term plans for the digitisation programmes to ensure paperless process managements. It can be stated that financial improvements due to the reduction of errors and risks will also create financial resources for the further improvement of the process, and that, contrary to popular belief, human resources will not be reduced by digitalization and the related employee will be trained and recruited by / for different departments. With all these improvements, there is no doubt that speed, confidence, accuracy, risk and cost reduction will have a direct impact on customer satisfaction at the outset and ~~then~~ on the future of the organization subsequently.

With the developments in technology, it has become important for countries to follow policies aimed at facilitating trade in order to develop. Facilitating trade and increasing the effectiveness of import and export controls has forced the customs authorities to follow the developments in technology and use it accordingly. From hand-written customs declarations

to the transition to the paperless customs process, Turkey's digitalization efforts continue intensively. To summarize the developments in the historical process, the following can be noted:

In 1995, the customs declaration began to be written in the computer program according to application of the customs union, thus, this removed the manual writing of the customs declaration. Computerised Customs Activities System (BILGE) is a program that allows the declaration of the customs declaration submitted to the customs authorities by means of software to be organized in a computer environment. Within the scope of the project for modernization of the customs administration (GIMOP), BILGE was started to be implemented in 2000 as software for conducting customs transactions electronically. Bilge system is still being implemented in all customs administrations. With the BILGE system, basic customs procedures such as summary declaration, declaration of arrival and import declaration for goods which enter the customs zone of Turkey, export declaration and declaration of exit arrangement for goods which come out of the customs zone of Turkey can be done easily. With the BILGE System, 21 institutions are integrated into the Single Window System (TPS) and customs procedures of 118 different documents are done within the scope of Single Window System. On the other hand, BILGE system is provided to obtain information about the importer and exporter companies' own declarations correctly and quickly. In this way, information as to where the goods are at the customs, at what stage of the customs process they are and the average processing time can be followed momentarily.

In 2007, inward processing licence started to be issued electronically. Company files started to be received electronically in 2009 under the obliged tracking system. The General Directorate of Customs announced that the paperless declaration system would be passed with the Article No. 2001 dated 13.10.2009. In 2010, electronic signature and central BILGE system began to be implemented. Published in the Official Gazette dated 20/03/2012 and numbered 28239, “Single Window System in Customs Services” was adopted with the circular, and thus, single window system has been implemented since 14/01/2014. The integration of the BILGE system with the single window system allows the electronic control of the necessary permission documents for the related goods. The documents are transmitted electronically to the customs administration directly by the relevant institution to ~~was~~ prevent falsification of the document. With the single window system, the documents organized by the institutions are arranged in a certain standard. Traceability was increased as the documents and declarations used in these documents were transferred to electronic environment. Delays caused by customs transactions were also reduced as a result of which trade was facilitated.

In 2017, the e-invoice began to be implemented in the export declaration. In 2018, A.T.R certificate and certificate of origin documents started to be produced electronically. With the circular dated 03.07.2017, the implementation of Container and Port Tracking System has entered into force. The information from the agents and shipowners and the information found in the customs administrations were collated and the information flow to the screens of the customs surveillance and protection officer in the ports and the port entrance and exits was made. In addition, it allows the preparation of containers and goods to be prepared for inspection quickly by issuing instructions through the system for inspections to be carried out by customs inspection officers.

On 1 July 2018, the "Port Single Window System" entered into force, which allows the notification made by the agencies to be entered from a single database prior to the arrival and departure of the ship to the port. The information needed by different institutions and organizations and port enterprises is to be taken from this database, and the results of the

permits and transactions made by public institutions and organizations are to be seen on the system.

Binding tariff information and settlement applications were moved to electronic environment. As of 03.12.2018, the Foreign Exchange Transfer statement has ended in paper environment. As of March 2019, paperless declarations have been started to be implemented in export declarations. Export declarations will be signed by the relevant officer with e-signature, and e-signed copies will be accessible by the relevant exporter via the GET-APP application. After August 20, 2019, the paper copy of the export declaration, customs administrations obliged or any institution / organization was not given.

Despite all these developments and digitisation practices, there is no integrated single window system among the countries that are parties to foreign trade, thus, completely paperless process management is not possible. Although many steps have been taken regarding electronic documents and electronic platforms, the originals of some documents still need to be submitted to customs. Therefore, the system used currently is not a completely paperless process, but a hybrid-paperless process. For instance, for a product to be imported from South Korea to Turkey the exporter can give telex release approval for the bill of lading and the importer can start the customs clearance procedures by making payment in exchange for the loading documents shared online. However, due to our legislation, the original certificate of origin received from the exporter must be submitted to customs. The exporter has to arrange the relevant document in the paper version and send it to the importer. And the customs broker of importer has to take print out documents with orıgınal certificate of origin and submit the custom authority in order to start customs clearance. As another example, the original copy of the health certificate issued by the exporter company must be submitted to the customs administration in the import of food items. In addition, after the customs clearance procedures are completed, the customs broker has to deliver all the documents and the original customs declaration to the importer. In accordance with the customs legislation in Turkey these documents should be kept for 5 years and must be shown to authorize persons if necessary. In this case, even if the importer companies do not use any paper, the exporting company has to send some documents as original and the customs broker firms print all documents at least twice. And the importer must keep each of the customs declaration and document. Therefore, it would not be possible to name this the paperless process for existing applications, it would rather be more appropriate to name it the hybrid paperless process where the paperless process is managed in a partial way.

REFERENCES

(2019, 11 10). iata.org: https://www.iata.org/whatwedo/cargo/e/efreight/Pages/index.aspx adresinden alınmıştır

(2019, 11 10). Utradehub: https://www.utradehub.or.kr/porgw/index.jsp?_locale=en&sso=ok adresinden alınmıştır

Ashmarina, S., Mesquita, A., & Vochoz, M. (2019). *Digital Transformation of the Economy: Challenges, Trends and New Opportunities* . Springer: New York.

Cepero, I. H., & Vyšín, L. (2019). Impact of Paperless Trading on Organizations. Department of Informatics, Lund School of Economics and Management, Lund University.

Civelek, M. (2019). A Compilation of the Research Models Regarding E-Commerce Web Site Success: An Approach in the Managerial Implications Perspective. Y. Akgül içinde,

Structural Equation Modeling Approaches to E-Service Adoption (s. 83-100). Hershey: IGI Global.

Civelek, M. E. (2009). *İnternet Çağı Dinamikleri.* İstanbul: Beta Basım.

Civelek, M. E., & Özalp, A. (2018). Blockchain Technology and Final Challenge For Paperless Foreign Trade. *Eurasian Academy of Sciences*(15), 1-8.

Civelek, M. E., & Sözer, E. G. (2003). *İnternet Ticareti: Yeni EkoSosyal Sistem ve Ticaret Noktaları.* İstanbul: Beta Basım.

Civelek, M. E., Uca, N., & Çemberci, M. (2015). eUCP and Electronic Commerce Investments:e-Signature and Paperless Foreign Trade. *Eurasian Acadeny of Sciences Eurasian Business & Economics Journal, 3*(1), 60-70.

Civelek, M., & Kibritci Artar, O. (2019). Blockchain and Artificial Intelligence Technologies for Balanced Foreign Trade: Replacing Exchange Function of Money. *The European Scientific Journal*, 137-149.

Civelek, M., & Seçkin, N. (2017). Paperless Trade: Evaluation of the Current Situation & towards the Integrated Single Foreign Trade Document. *Journal of Management Research, 9*(2), 1-10.

Civelek, M., Çemberci, M., Uca, N., Çelebi, Ü., & Özalp, A. (2017). Challenges of Paperless Trade: Redesign of the Foreign Trade Processes and Bundling Functions of Traditional Documents. *International Business Research*, 74-81.

Çemberci, M., Uca, N., Çelebi, U., Özalp, A., & Civelek, M. (2017). Challenges of Paperless Trade:Redesign of the Foreign Trade Process and Bundling Functions of Traditional Documents. (10), 74-81.

Djassemi, M., & Sena, J. (2006). The Paperless Factory: A Review of Issues and Technologies. *International Journal of Computer Science and Network Security, 6*(12), 185-191.

Görçün, Ö. (2016). *Dördüncü Endüstri Devrimi Endüstri 4.0.* İstanbul: Beta.

Laryea, E. (2005). Facilitating Paperless International Trade: A Survey of Law and Policy in Asia. *International Review of Law Computers& Technology, 2*(19), 121-142.

McMaster, J., & Nowak, J. (2007). The Evolution of Electronic Trade Facilitation: Towards a Global Single Window Trade Portal.

Tan, J., & Starr, L. (2017, May). Electronic Bills of Lading. United Kingdom.

Unece.org. (2019, 11 10). https://www.unece.org/trans/bcf/etir/background.html adresinden alınmıştır

We Are Social. (2019). *Global Digital 2019 reports.* New York: We Are Social Ltd.