

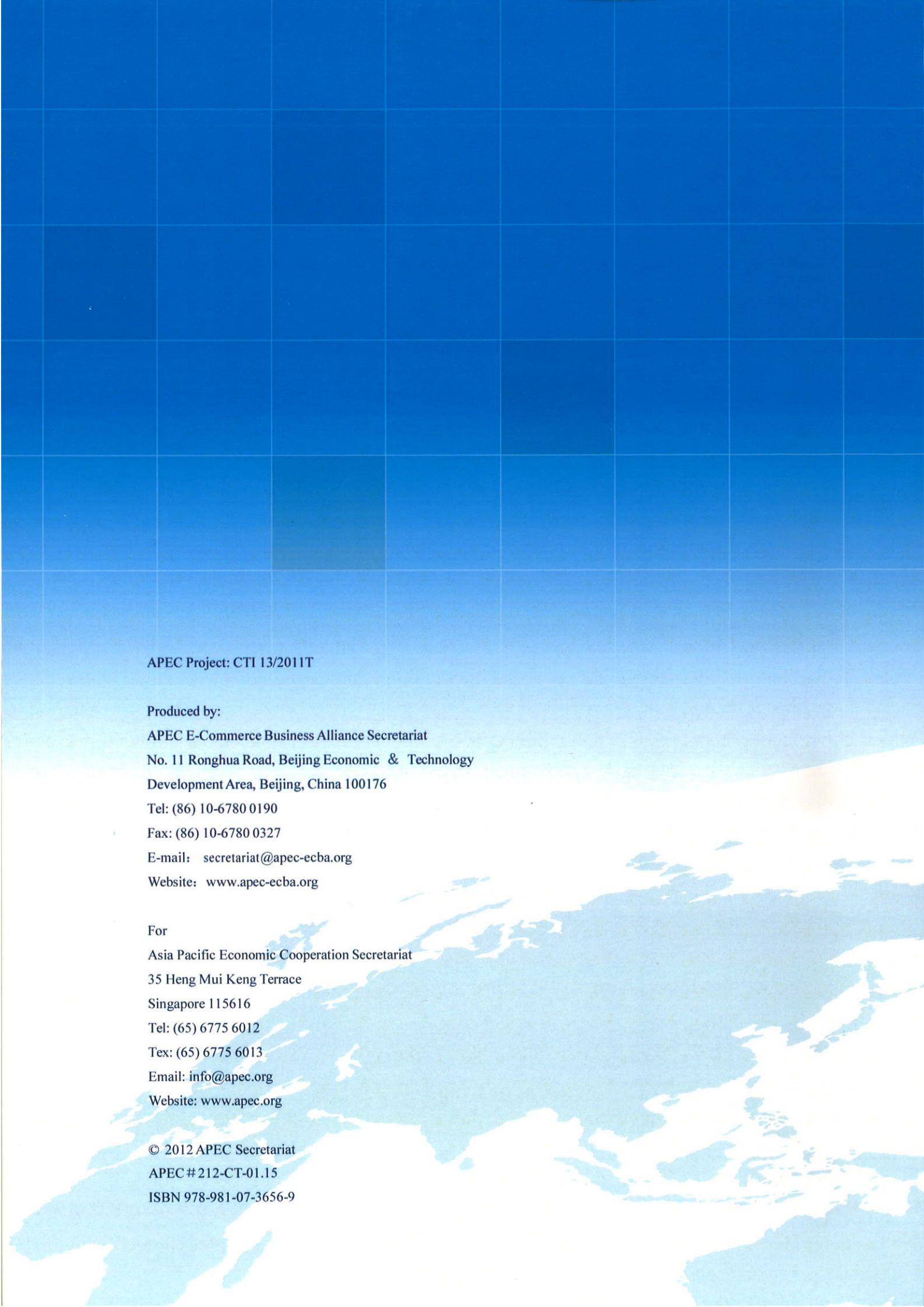


**Asia-Pacific
Economic Cooperation**

Study on the Readiness of ECO Implementation in Cross-Border Trade in APEC Region

**APEC Electronic Commerce Business Alliance
APEC Electronic Commerce Steering Group**

September 2012



APEC Project: CTI 13/2011T

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Preface

The Study on the Readiness of ECO Implementation in Cross-Border Trade in APEC Region is proposed in accordance with APEC's key priorities in promoting trade facilitation, which directly support the work to the priorities for APEC Ministerial Meeting's Statement 2010 in Japan on Ease of Doing Business with special priority of Trading Across Borders in Phase I and also undertake additional Phase II programmes for making business environment 25% cheaper, faster and easier to do business by 2015, and to achieve a 5% improvement by 2011.

This report has made summaries on the basic conditions to a successful ECO cross-border transmission via analyzing and drawing lessons from Korea-Chinese Taipei ECO Pathfinder Project. Based on these basic conditions, the report has analyzed the readiness of APEC member economies in implementing ECO cross-border transmission, and put forward corresponding suggestions so as to promote the process of paperless trading and trade facilitation in APEC region.

Specifically, the primary targets of this project include:

- (1) To make an analysis of the practice and experience of the Korea-Chinese Taipei ECO Pathfinder Project from the perspective of policy, legal, technology, etc.
- (2) To analyze and sum up the basic conditions of successfully implementing the ECO cross-border transmission;
- (3) To make an analysis of the readiness for ECO cross border transmission in other APEC member economies based on these basic conditions;
- (4) To analyze difficulties and barriers encountered by stakeholders in ECO cross border transmission, and make relevant solutions and suggestions for its future implementations.

The project report composes of three parts:

The first part is a brief introduction of rules of origin and certificates of origin in APEC region, in which the rules of origin, concept and functions of certificate of origin are elaborated. Besides,

this part also briefs the different management models of certificate of origin as well as the development process of electronic certificate of origin in APEC region.

The second part is a presentation of the development status and analysis of electronic certificate of origin in APEC region. Drawing on the experience of Korea-Chinese Taipei ECO Pathfinder Project, this report sums up the basic conditions for a successful ECO cross-border transmission and makes an analysis of these conditions. Meanwhile, the report analyzes the readiness of ECO cross border transmission in APEC region based on the basic conditions, and then touches upon possible difficulties and barriers that may have been encountered by APEC member economies.

The third part is of suggestions for promoting the implementation of ECO cross border transmission in APEC region. The suggestions are put forward from the perspectives of consolidating the basic environment construction and improving crossover cooperation.

In compiling the Report on the Readiness of ECO Implementation in Cross-Border Trade in APEC Region, Questionnaires and feedbacks from Canada, Chile, Hong Kong, China, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Russia, Chinese Taipei, Thailand, United States and Viet Nam have been received and we would like to extend our sincere appreciation to their support and assistance.

This project is led by Mr. Zhang Nianlu, Secretary General of APEC Electronic Commerce Business Alliance. Assistance has also been received from APEC Secretariat, APEC Electronic Commerce Steering Group, APEC other fora and working groups such as SCCP, CTI, SMEWG, APEC Electronic Commerce Business Alliance, Pan Asia E-Commerce Alliance as well as Ministry of Commerce of People's Republic of China, General Administration of Customs of the People's Republic of China, General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, Shandong University, China, University of International Business and Economics, China, We hereby make a grateful acknowledgment for all their contributions.

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I. A Brief Introduction to the APEC Certificate of Origin

1.1 Rules of Origin

1.1.1 Background of Rules of Origin

In order to establish a set of rules of origin that are fair, transparent, simplified and consistent, General Agreement on Tariffs and Trade (GATT), along with Customs Cooperation Council (CCC) has made unremitting efforts.

As early as in 1947, Clause Nine in GATT has made regulations on "indications of regional origin" for the sake of trade statistics and transnational marketing. In 1973, CCC has made the *International Convention on Simplification and Harmonization of Customs Procedures* in Kyoto, Japan (commonly known as *Kyoto Convention*). The main content of *Kyoto Convention* is about customs procedures with Rules of Origin included.

However, the signatory countries were merely more than 40, and made no uniform rules of origin but the standard terms and proposed terms for choice or reference. The member countries have made their own rules of origin respectively. Rules of origin have been listed as an important topic by Non-tariff Measures Negotiating Group until the multilateral trade negotiations of Uruguay Round, which started in 1986.

With joint efforts of all related parties, *Agreement on Rules of Origin* was finally passed through in 1993 when the Uruguay Round came to an end. This agreement is the first international agreement concerning rules of origin in multilateral trade system within GATT, which actively promotes the work of simplifying, coordinating and harmonizing rules of origin among different countries. World Trade Organization (WTO), which was established in 1995, has set up Committee on Rules of Origin under the Council for Trade in Goods, aiming to strengthen coordination and convergence on Rules of Origin around the globe.

1.1.2 What are Rules of Origin?

Rules of Origin (ROO), also known as Origin Rules of Goods, refer to a set of rules made according to the laws and regulations of the country or international agreements to determine where the goods are produced or manufactured. To implement the preferential duties or differentiated treatment, quotas, and other measures relating to trade, the Customs must determine the origin country of the goods based on the standards of Rules of Origin to guarantee the corresponding customs treatment. The origin of the goods is also addressed as the *economic nationality* of the goods, and the rules of origin play an important role in international trade.

1.1.3 Classification of Rules of Origin

(1)According to the flow direction of the goods: it can be classified as rules of origin for imported goods and rules of origin for exported goods. There are some countries that combine the two types under their own rules of origin.

(2)According to the applicable zone: it can be classified as rules of origin for single country and rules of origin for a special region.

(3)According to the applicable scope: it can be classified as preferential rules of origin and non-preferential rules of origin. To get the tariff concessions from the importing countries such as Generalized System of Preference(GSP), or to get the reciprocal preferential treatment among the member countries of regional economic bloc, a set of rules of origin are made, which are called preferential rules of origin.

(4)According to the components of the goods: wholly-obtained rules of origin and partially-obtained rules of origin. Wholly-obtained products are generally referring to the products whose raw materials are naturally produced in a certain country through growing, being extracted and reaped or used for the processing of the products. Even if there is a slight part of the raw materials which are imported, the products will be regarded as partially-obtained products.

1.2 An Overview of Certificate of Origin

1.2.1 Implications and Functions of Certificate of Origin

As an essential part of the rules of origin, CO is an important document of certificate in international trade. CO is a legal document issued by the exporting country or region in accordance with the rules of origin for the purpose of certifying the origin of a product. According to the rules, CO can be categorized into preferential and non-preferential ones. Non-preferential CO refers to the ordinary CO, and preferential CO mainly refers to GSP CO and regional preferential CO.

Most countries and regions do not exert strict control over non-preferential COs. Exporters are not required to submit any CO in the case of non-preferential products. For example, in Thailand, there are no requirements for COs when non-preferential products are imported from abroad. On the other hand, preferential CO is often related to reduction or elimination of certain tariff (custom duties) and therefore is always under strict control of relevant countries and regions. In fact, customs of importing countries or regions often have strict requirements for COs when preferential products are imported.

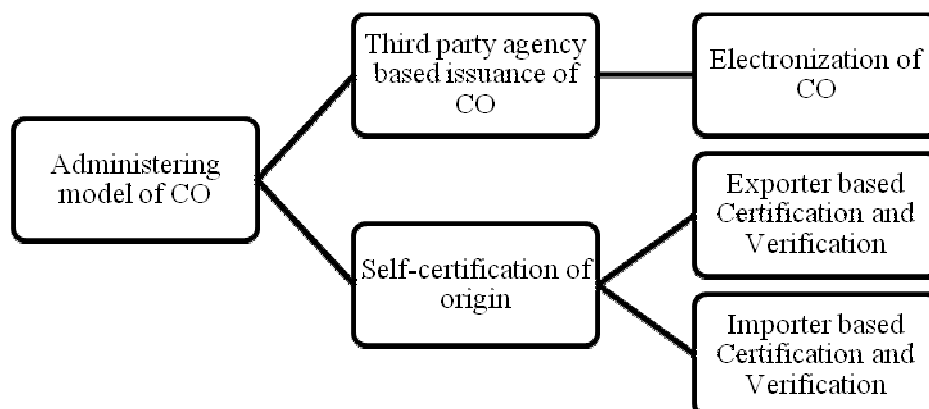
At early stages, CO was mainly used for statistics of a nation's trade. But later it was extended to the implementation of international trade policies such as the determination of tariff rate, quota, anti-dumping or anti-subsidy, government purchase, etc. From the perspective of trading companies, CO is a necessary document of certificate for them to claim preferential tariff. With the increase of bilateral and multilateral preferential trade agreements, regional preferential CO will give exporters more chances to receive preferential tariff treatment.

1.2.2 Administering Models of Certificate of Origin

There are mainly two administering models of CO: a third party agency based issuance of CO and traders based certification and verification of origin. Currently, COs issued by third party agencies have been employed and accepted by economies around the world. In this model, the development trend is the electronization of CO. on the other hand, the self-certification model under which trading companies certify and verify their COs is also being promoted. This refers to a case where trading companies, on the basis of their understanding and knowledge about the specific production processes of their products, undertake to certify the origin of their products and issue relevant statements about this. This administering model can be sub-divided into Exporters-focused Certification and Importers-based Certification.

The administering model of CO is developing into two directions: one is electronization of relative processes of CO issued by a third party agency with the help of modern IT technology; the other is the simplification of processes based on the independent certification by trading companies, as indicated in Chart 1.1.

Chart 1.1 Administering Models of CO



(1) Third party agency based issuance of CO

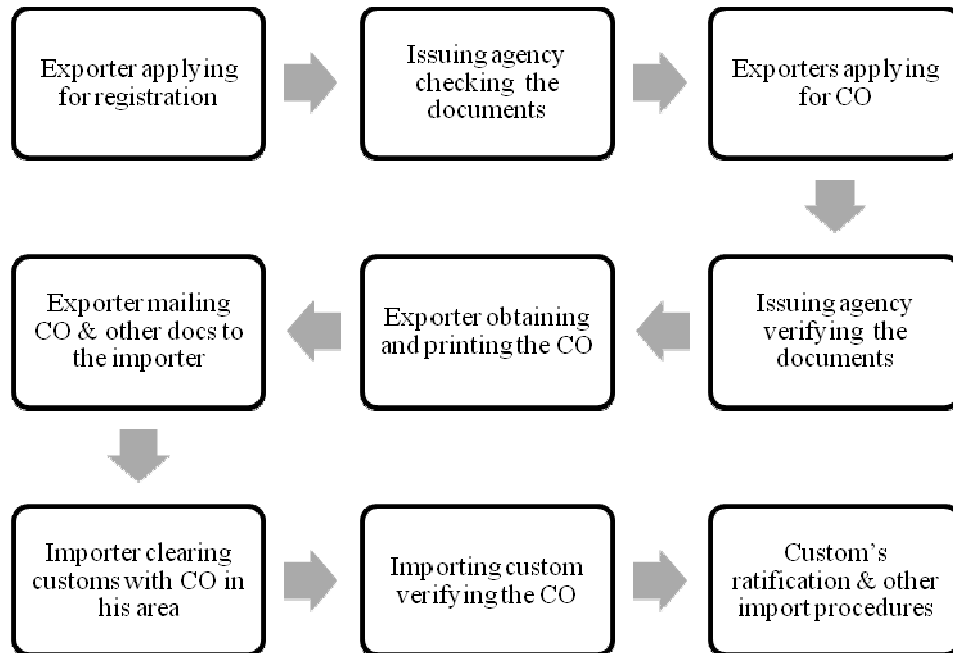
Flow chart 1.2 is a presentation of the administering model where a third party agency issues the CO.

In the first step, exporters will submit relevant information to the issuing agency to apply for registration. In this case, information for submission should include the information about the exporter itself and information about export products. Then the issuing agency will begin to check and identify the information provided by the exporter, and if nothing is wrong, the application for registration will be accepted.

After the registration is completed, the exporter will proceed to apply for the CO to the issuing agency. Here the exporter needs to submit all the necessary documents as required by the issuing agency. The issuing agency will then check all the application documents to make sure that everything is correct. If so, the exporter will be able to obtain the CO and print it out and mail it to the importer along with other shipping documents. Upon receipt of the CO, the importer may use it for customs declaration and go through other import procedures. The importing customs may check and identify the CO if necessary.

Nowadays, on-line application and registration has been realized in most economies, and in most cases, CO is applied and approved through the Internet. But most of the importing customs only accept CO in paper form, and therefore the exporter still needs to print the CO out and mail it to the importer. When checking the CO, the importing customs will often have collaboration with the issuing agencies in the exporter's economy. On-line checking has been realized among many economies, i.e. the importing customs may have access to the database of the relevant issuing agencies of the exporter's economy to verify the relevant information in the CO. This kind of checking by the importing customs will be based on the checking costs and the need of risk control.

Chart 1.2 Procedures of CO Issued by A Third Party Agency



(2) Self-certification of CO by enterprises

This model is relatively less put into practice in today's world. Among these, exporters-based certification is more frequently used than importers-based certification. Typical examples are the independent certification model by the U.S. importers and exporters, the independent certification model by European Union (EU) exporters and APEC Pathfinder for Self-certification of Origin in the APEC region.

North America Free Trade Agreement (NAFTA) was officially put into effect in 1994. Since then the United States has begun to promote the model of self-certification of origin by exporters. This promotion is based on the notion that exporters will have a deeper understanding of the specific production process of their exports.

According to the relevant regulations of self-certification model, exporters or manufacturers only need to make a statement about the origin of the goods in the commercial documents (s/c, invoice, etc.). This statement will be deemed as evidence when customs identify the

origin of the goods, and the importer will not be required to present a CO issued by the issuing agencies in the exporter's economy. If the importing customs considers the statement of origin dubious, the importer will be required to contact the exporter for relative supporting documents.

The exporter based self-certification of origin system by the EU is slightly different from that of the U.S. model. As early as in 1975, members of European Free Trade Association began to adopt exporter based self-certification of origin under which the "identified exporters", if approved by the customs, do not need to submit any CO issued by customs. At the same time, the exporters must bear all the legal responsibilities for its invoice statement of origin. The operating procedures are indicated in Chart 2.3 and are interpreted as follows:

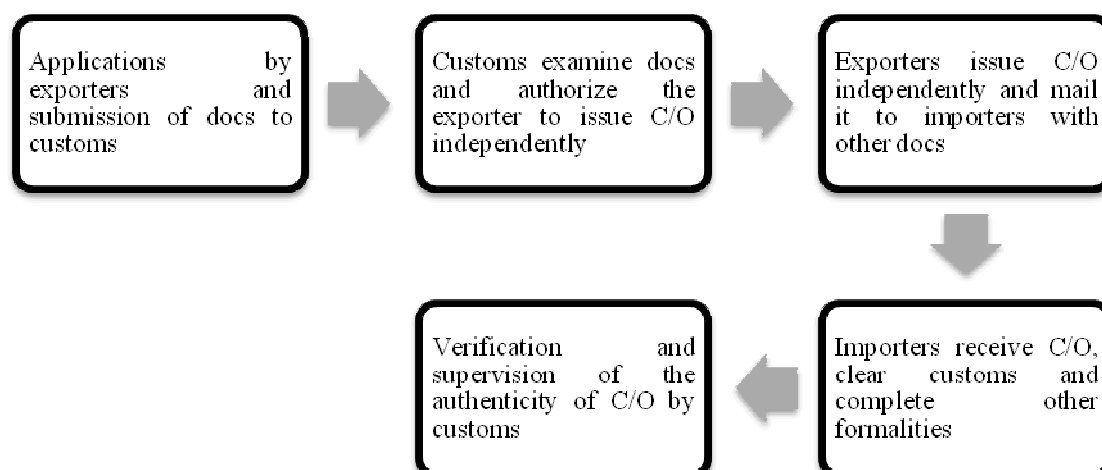
① Exporters make the application for qualifications of self-certification of origin. Exporters will present all the application documents as required by the customs.

② Customs will examine the qualifications of the exporters in terms of the following items: Is the exporter a regular trader? Does the exporter understand all the relevant rules of origin? Can the exporter provide all the necessary documents to verify the origin of the products and the exporter's ability to provide such documents of origins of goods? Is the exporter reliable and is he capable of undertaking the relevant legal responsibilities? If verified, the exporter may obtain an authorized code to issue statement of origin as well as an authorization to issue such statement within a specified period of time.

③ Exporters now may independently issue statements of origin. Such statements may be transmitted electronically to the importer and then be delivered to the customs by the importer.

④ Verification and supervision by the importing customs. Exporting customs may undertake to examine and verify the origin of the cargo if required by the importing customs. In case of non-qualification or improper use of such authorization on the part of the exporter, customs may withdraw such authorizations. If exporters provided incorrect statement of origin or false documents, or if exporters try to obstruct the examination of origin by the customs, they may face dual punishment of authorization cancellation and administrative penalties. Because this model has its prominent advantage in lowering the cost of transaction and government administration, customs of EU countries are actively promoting this system in issuing and managing CO for FTA.

Chart 1.3 Procedures of CO under the Model of Exporters-based Certification



In 2009, in order to promote the administering model of self-certification of origin, APEC Committee on Trade and Investment(CTI) launched the “Pathfinder Project for Self-Certification of Origin” which aims at improving trade facilitation and increasing the utilization of Free Trade Agreement(FTA)/Regional Trade Agreement(RTA). This Pathfinder Project is now being implemented within the framework of APEC in economies such as Japan; Australia; Canada; USA; Singapore; New Zealand; Korea; Malaysia; Brunei Darussalam and so on. The operating procedures are quite similar to the system adopted by Norway and other European economies where exporters can independently issue certificates of origins of products only after being ratified and qualified by the government agencies.

The administering model of self-certification of origin by importers is comparatively less used. This model is mainly promoted by the U.S. customs. In this model, the importers will make a statement of origin on the basis of their understanding and knowledge of the import cargo information. The U.S. customs may demand the presentation of a statement of origin even after the cargo had already been cleared, or initiate the verification procedure of origin if necessary.

The research of this report will be focused on the cross-border transmission of Electronic Certificate of Origin(ECO)issued by a third party agency. The questionnaires have been handed out to all the APEC member economies. Among them Chile; China; Hong Kong, China; Indonesia; Malaysia; Mexico; Peru; Thailand; the Philippines and Viet Nam have done a careful response to the questionnaire. Therefore, detailed analysis will be made based on the effective questionnaires collected from the above-mentioned economies in the report, meanwhile, suggestions on how to further promote the ECO cross border exchange in APEC region are put forward accordingly.

1.3 The Development and Tendency of Certificate of Origin in APEC Region

While most economies are generally lenient on the control of ordinary CO, but they exert strict control on preferential CO. With the development of international trade and the increase in the number of FTA and tariff agreements, regional preferential CO is becoming more and more predominant for its prevalence in the practice of trade. Since 1990, the number of RTA in effect has increased from 50 to over 230. A lot of FTAs between economies in APEC region have been under negotiation as well. In this case, the effective application of CO will provide a strong guarantee for the realization of RTAs or FTAs. Therefore, it will be very important on how to ensure the authenticity of CO and reduce the cost of CO application.

As for administering models, we can see that the issuance of CO by a third party agency is still the predominant model in real practice. But at the same time, the model of self-certification of origin by importers and exporters is undergoing a rapid development. Under the third party agency-based model, the Chamber of Commerce and Customs are the principal agencies to issue preferential COs. According to the statistics of World Customs Organization (WCO), economies which accept Chamber of Commerce and Customs as issuing agency of COs account for 23% and 61% of its total members respectively. At the same time, 22% of its members grant authorizations to other institutions to issue preferential COs. An increasing amount of economies are accepting the practice of self-certification of origin, and they account for about 65% of total WCO members (for many economies accept various practices and the total percentage of various issuing institutions is greater than 100%). Among these, the exporters based self-certification of origin is more popular used than that of importers-based certification. Generally speaking, there is a coexistence of the model of CO issued by a third party and the model of enterprises self-certification in many economies.

1.4 The Development of Electronic Certificate of Origin in APEC Region

1.4.1 The Concept of Electronic Certificate of Origin

Certificate of origin is in paper form in international trade before the realization of paperless trading. Generally, exporters send the printed certificate of origin with other trade documents to the importers, who then can use these documents to apply for commodities inspection and declare the import customs clearance. By comparison, the application and use of paper documents are cumbersome which can increase the cost of time, storage and personnel. Thus, the transaction cost has increased in international trade.

The development of information and network technology makes the paperless trading possible. By applying modern information and network technology, paperless trading can make the domestic and cross-border exchange of trade documents online possible by means of standardizing relative information involved in trading documents. The reduction or even

elimination of paper trade documents can reduce the relative cost in international trade. As an important supporting document in cross-border trade, the electronization of certificate of origin is the very implication of paperless trading. Therefore, implementing ECO which is helpful for reducing trade cost, is a significant step in achieving paperless trading.

The connotation of ECO can be apprehended statically and dynamically. On the one hand, ECO is the electronic form of CO, including the same information and performing the same functions of paper CO. This is the static connotation of ECO. On the other hand, ECO means the electronization process of CO, which comprises the online application and issuance, and cross-department and cross-border exchange of CO. This is the dynamic connotation of ECO. In this report, ECO refers in particular to the complete electronization of CO. It is the highest level of electronization of CO, where the CO is totally in electronic form and the paper CO is eliminated in the whole process of international trade.

Compared with paper CO, ECO has the following characteristics:

(1) Reducing the costs of international trade. ECO implementation, which is consistent with the goal of APEC in reducing trade costs, can cut down the trade costs, such as trade documents-related cost, time cost and so on.

(2) Ensuring the security of online transmission. Secure online transmission system is a fundamental factor in implementing ECO in order to ensure the secure and timely transmission of ECO data. Besides, ECO data cannot be falsified. Meanwhile, sophisticated files backup system should be established for the online inquiry and check.

(3) Ensuring the authenticity. The authenticity of ECO should be guaranteed by the appliance of electronic signature technology and realization of network inter-connectivity inspection.

II. The Development and Analysis of ECO in APEC Region

2.1 Korea-Chinese Taipei ECO Pathfinder Project

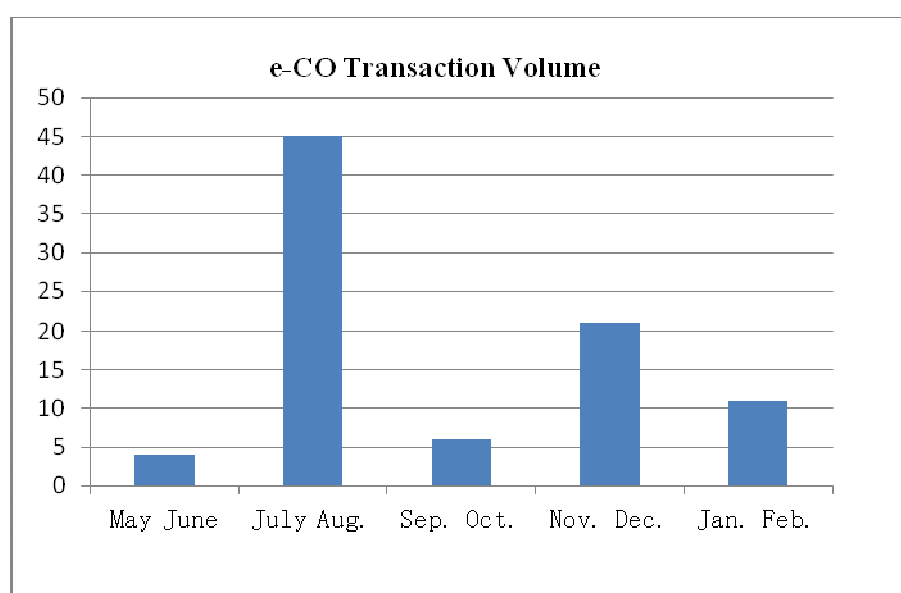
The cross-border exchange of ECO is very important in realizing paperless trading, promoting trade facilitation and reducing trade cost. ECO has been one of the most active pathfinder projects under APEC Electronic Commerce Steering Group(ECSG). In 2002, it was put forward to realize the electronization of certificate of origin in the “TFAP I”. In 2004, a joint proposal of ECO pathfinder project was submitted by Singapore and Korea in ECSG meetings.

In December, 2004, a meeting between Ministry of Commerce, Industry and Energy (MOCIE), Korea International Trade Association (KITA) and Korea Trade Net (KTNET) of Korea and Bureau of Foreign Trade (BOFT) and Trade-Van of Chinese Taipei was held and an agreement was reached to jointly implement the cross-border ECO exchange project. In January, 2005, a meeting between the two sides was held to discuss the proposed ECO cross-border exchange scenario. Both sides agreed to simplify trade processes according to *Kyoto Convention* to make preparations for ECO cross-border exchange and raised the importance of cross-border PKI/CA mutual recognition.

In April 2005, Korea and Chinese Taipei held the first official bilateral meeting. Project team was established and project schedule was planned in this meeting. Up to 2007, inter-connectivity test using ebMSV2.0 between KTNET (Korea) and Trade-Van (Chinese Taipei) had been completed. ECO testing sample from Korea had been sent to Trade-Van and mapped with Chinese Taipei Customs’ requirement has been carried out as well. On 13 May 2010, the cross-border exchange of ECO was finally realized after years of the joint effort of the both economies.

According to the updated report of 2011, there were 15 Korean exporters and 20 Chinese Taipei importers adopting the cross-border transmission system of ECO. From May 2010 to February 2011, the number of ECO transmitted cross-border is demonstrated in Chart 2.1. According to the updated project report of 2012, the number of enterprises which have adopted ECO cross-border exchange system has been rising. Till now, there are 16 Korean exporters and 25 Chinese Taipei importers adopting the ECO cross-border exchange system. The trading enterprises and export items (fruits and seafood only) are shown in Table 2.1.

Chart2.1 ECO Transaction Volume (Korea-Chinese Taipei) (May 2010–Feb.2011)



Source: ECO Pathfinder Project Update and Way Forward, 2011/SOM1/ECSG/PTS/011, 15th Paperless Trading Subgroup Meeting, Washington, D.C., United States, 4 March 2011

Table 2.1 Trading Enterprises Using ECO Cross-Border Exchange System

Korean Exporters	Chinese Taipei Importers
Fruits Exporters: Meansun Gyeong Buk Samjin Globalnet Taibong	Diing Nong Enterprise Jau Neng Agriculture Marine Chang Lung Agriculture Trading Chian Lun International Greens Essence Trading Co., Ltd.

NH Trading	KingGo Fruits
Dong Seo	Jih Hao Trading
Kyeongnong	Fuh Uei Trading
SAMWANG	Pyh Perng Trading
Bu Young Farm	Maru Marco Enterprise
KyungBok	Amanda&Vincent Resources
Burim	Rich Partner International
Hana pears	Dar Diing International Inc.
Green Company	SHANG CHUN LIN TRADING
Changrak	SHIN CHAO INTERNATIONAL
HEBEISHENXIANGHUAHE KOREA	FAZTech
Seafood Exporters:	Long Firm Trading
Sea Well	FU KUO HUNG ENTERPRISE
	ZHWU J COMPANY
	SHINE FOOD CORPORATION
	Prime stone
	FRUIT SEE FOOD
	ZHWNJ
	Grand Profit
	Full Blossom Co.

Source: ECO Pathfinder Project Update, by Chinese Taipei, 2012

2.1.1 Process of Cross-border ECO Exchange between Korea and Chinese Taipei

ECO implementation is the reformation and betterment of traditional CO procedures. The trade process can be much simplified after implementing ECO. The Korea-Chinese Taipei ECO Pathfinder Project is taken as an example to explain the procedures of ECO. Table 2.2 demonstrates the main stakeholders and parties of both Korea and Chinese Taipei involved in the ECO exchange project.

Table 2.2 Stakeholders Involved in Korea-Chinese Taipei ECO Project

Korea	
MOCIE	Ministry of Commerce, Industry and Energy, who is the government administrative department of international trade in Korea

KCCI	Korean Chamber of Commerce and Industry, who is responsible for issuing certificate of origin in Korea for export
KITA	Korea International Trade Association, who plays an import role in Korea's trade facilitation
KTNET	Korea Trade Net, an electronic service provider, founded by KITA in 1991, one of whose major roles is to facilitate the exchange of electronic documents between the Korean trade community and Government and related agencies
Exporters	Exporter of goods from Korea, who are the users of ECO exchange system
Chinese Taipei	
BOFT	Bureau of Foreign Trade, who is the government administrative department of international trade in Chinese Taipei
NTA	National Treasury Agency, whose is responsible to enforce Chinese Taipei import of alcoholic products, requiring certificate of origin for each alcoholic product imported. NTA has not yet participated in the first phase of ECO implementation between Korea and Chinese Taipei.
Customs	Chinese Taipei customs, who is responsible to enforce Chinese Taipei import and export regulations, including checking that goods imported satisfy the import control requirements based on origin and claims for preferential tariffs are valid
Trade-Van	Chinese Taipei's electronic service provider, one of whose responsibilities is to facilitate the exchange of electronic documents between the Chinese Taipei trade community and Government and related agencies

Importers	Importers in Chinese Taipei who import some certain goods from Korea
Customs Brokers	Agents of the importers to handle the required customs procedures

2.1.1.1 Paper CO Scenario between Korea and Chinese Taipei

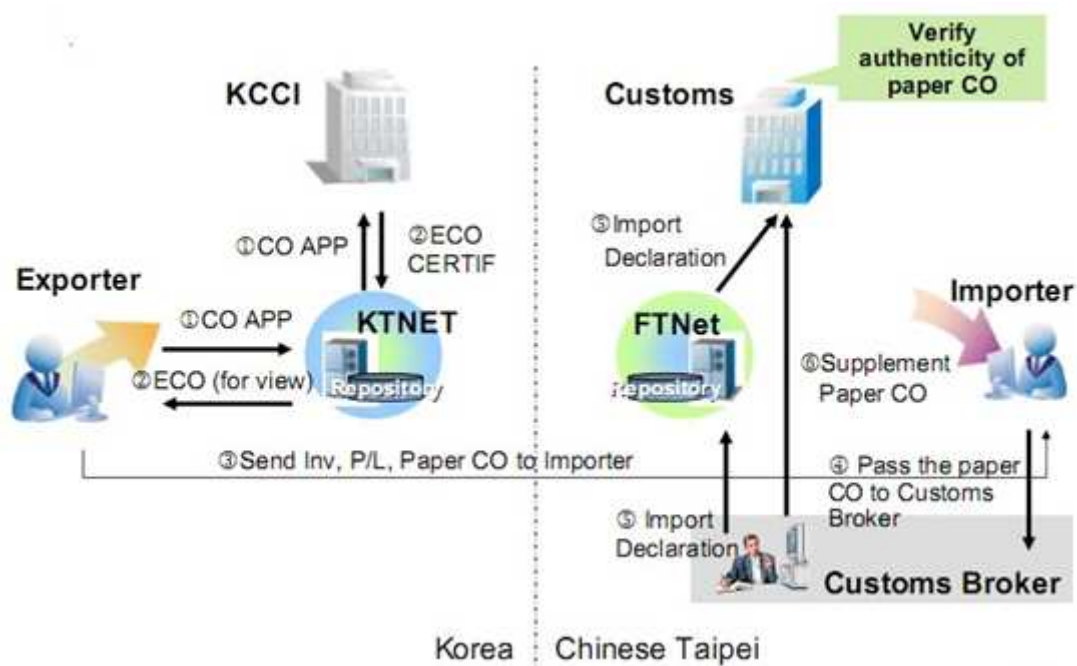
Prior to the implementation of ECO, the application and issuance of CO in Korea had been conducted electronically since 2006. Chinese Taipei has also realized the online application of customs declaration. However, the international trade from Korea to Chinese Taipei is still based on the printed CO. The paper CO scenario is showed in Chart 2.2 and the following is the brief explanation of the process.

- ① Korean exporter uses the KTNET uTradeHub(uTH), the Korean Single Window for paperless trade, to complete the CO application form over the Internet, and digitally signs it. This online ECO application system is operated by KTNET.
- ② KCCI, as the CO issuing authority, reviews and approves the ECO application after examination and verification, and sends an approval message (CERTIF) to the Exporter though KTNET uTH.
- ③ The exporter prints a written form of the CO in the uTH on the paper provided by KCCI. The exporter takes the written form of the CO to the Chinese Taipei Mission Office in Seoul (or Busan) for authentication. This is done to avoid the possibility that the CO will be rejected due to suspicion by Chinese Taipei Customs that the CO is a fake. And exporter sends it along with other trading documents to the importers in Chinese Taipei.
- ④ Upon receipt of the written form of the CO, The importer will pass the CO, together with other documents to the customs broker.

⑤ The importer or importing customs broker will have applied (electronically) for any required import permits and certificates, and submit electronically the import declaration to the customs.

⑥ The broker will submit the paper CO to the importing customs, and the importing customs will then grant release to the goods after examining and verifying the documents. The importing customs broker or the importer will then arrange to pick up the goods from the terminal or holding area and deliver them to the importer's warehouse or required location.

Chart 2.2 Paper CO Scenario (Korea to Chinese Taipei)



Source: Best Practice of ECO Cross-Border Exchange-Case of Chinese Taipei and Korea, by Chinese Taipei, for WCO Informal Workshop on Rules of Origin, January 2011

2.1.1.2 ECO Scenario between Korea and Chinese Taipei

On 13 May 2010, the Global ECO Service was introduced through cooperation between Trade-Van in Chinese Taipei and KTNET in Korea. All CO-related procedures are finished electronically. This allows the electronic version of the CO as approved by KCCI to be sent electronically directly from the exporter to the importer which would eliminate the use of printed CO in the process of cross-border trade. However, the management of CO on import of alcohol products is in the charge of National Treasury Agency which is not involved in the current ECO cross-border transmission. The ECO Scenario is outlined in Chart 2.3.

① Korean exporter uses the KTNET uTradeHub(uTH), the Korean Single Window for paperless trade, to complete the CO application form over the Internet, and digitally signs it. This online ECO application system is operated by KTNET.

② KCCI, as the CO issuing authority, reviews and approves the ECO application using its own legacy system and sends a confirmation to the Exporter through KTNET. Exporters can have an access to the ECO database for inquiry according to the ECO code issued.

③ The Exporter, sends the approved ECO to the Importer with the uTH of KTNET which is interconnected with Trade-Van's online ECO service. Before the ECO is being delivered to Trade-Van, KTNET signs the approved ECO on behalf of KCCI and exporter by the PKI mutual recognition agreement of Pan Asian e-Commerce Alliance: an organization for cross-border paperless trade service. It is no longer necessary to take the CO to the Chinese Taipei Mission Office for authentication, as the digital signature technology provides more than sufficient assurance to Chinese Taipei Customs on the origin, authenticity and integrity of the ECO. In the meantime, the goods are being shipped to Chinese Taipei from Korea.

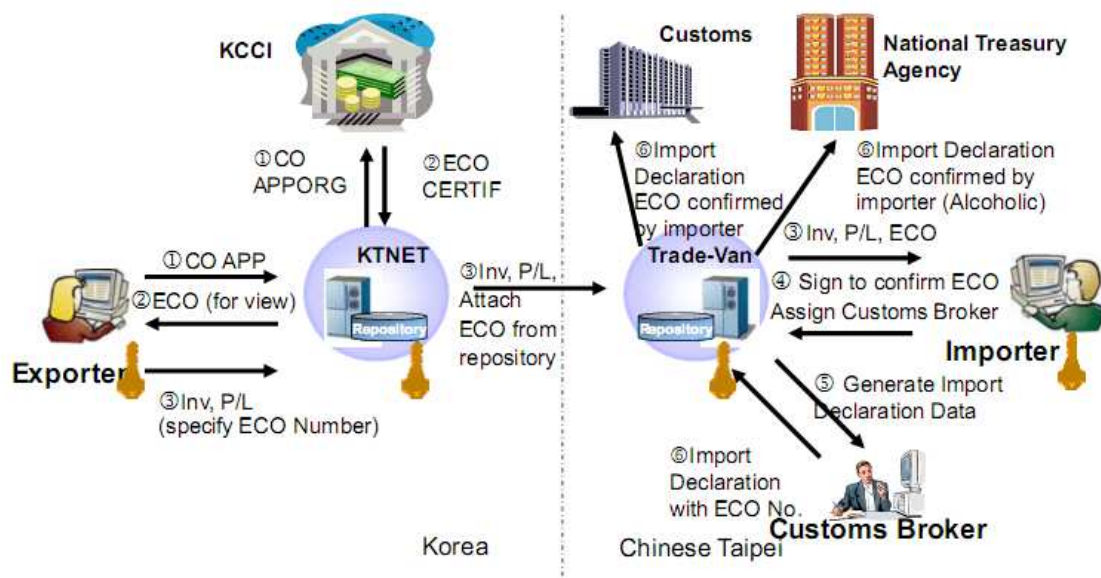
④ The ECO system will remind the importer by an email notification that the ECO has been

sent out by the exporter. By way of the Trade-Van ECO service, the exporter digitally signs the ECO to confirm that it is correct and forwards it electronically to the Customs and the Customs Broker.

⑤The importer or customs broker will have applied (electronically) for any required import permits or certificates, and submit them to the customs for customs declaration by using ECO documents.

⑥Customs of Chinese Taipei can get access to the ECO database of Korea for inquiry. After inquiry and taxation, the customs will grant a release to the goods. The Customs Broker or Importer will then arrange to pick up the goods from the terminal or holding area and deliver them to the importer's warehouse or required location.

Chart 2.3 ECO Scenario (Korea to Chinese Taipei)



Source: ECO Pathfinder Project Update and Way Forward, 2011/SOM1/ECSG/PTS/011, 15th Paperless Trading Subgroup Meeting, Washington, D.C., United States, 4 March 2011

2.1.1.3 Improvements after Implementing ECO

Through the comparison between the Paper CO Scenario and ECO Scenario, it is obvious that ECO can simplify the CO-related procedures to a great extent, hence promote the trade facilitation effectively. Process improvements after implementing ECO are described as below.

(a) For the Korean exporters, implementing ECO can ensure the authenticity of CO document. Therefore, it is not necessary to get the CO authenticated at the Chinese Taipei Mission in Korea, which would save a lot of time and costs. Chinese Taipei customs can inquire and check the ECO online, which can eliminate the possibility that the exporters need to provide some information for the CO inquiry. Besides, ECO can be transmitted electronically and directly from exporters to the importer or to the importer's customs broker, which can avoid the delay of sending the paper CO by mail or express.

(b) For Chinese Taipei's importers and brokers, ECO can be received online which can save a lot of time compared with the paper CO. Besides, the importer can send the ECO to its broker online which can avoid the process of mailing the paper CO. Brokers need not submit the paper CO in person to the customs while doing clearance after implementing ECO. Moreover, ECO can guarantee the authenticity of CO document, which would be beneficial for the importers.

(c) For the regulators of both sides, firstly, ECO can avoid the procedure to get the CO authenticated at the Chinese Taipei Mission in Korea; secondly, ECO can simplify the process of inquiring and checking and ensure the authenticity of CO documents.

Table 2.3 Improvements after Implementing ECO

	Process Improvements
Korean exporters	<ul style="list-style-type: none">➤ Eliminate the procedure to get the CO authenticated at the Chinese Taipei Mission in Korea➤ Avoid sending the paper CO to the importer or the importer's customs broker by mail or express➤ Simplify the process of inquiring and checking into the authenticity of CO
Importers and the brokers	<ul style="list-style-type: none">➤ Save the time of receiving the paper CO➤ Avoid the procedure to submit the paper CO to customs in person➤ Ensure the authenticity of CO and simplify the inspection of CO
Regulators	<ul style="list-style-type: none">➤ Eliminate the authentication of CO➤ Ensure the authenticity of CO and simplify the inspection of CO

2.1.1.4 Benefits of Implementing ECO

1. Benefits for the Regulators

Implementing ECO can improve the administrative efficiency. Firstly, ECO can simplify the issuance procedures of CO and improve the issuance efficiency. Clearance process can be simplified as well, which would improve the customs' efficiency. Besides, ECO can guarantee the authenticity of CO, which can improve the efficiency of customs duty collection. Meanwhile, implementing ECO can reduce the costs of trade which is beneficial for the government to accomplish the APEC goal of trade facilitation. Lastly, implementing ECO would also simplify the process of the inspection of CO and reduce the cost of inspection process.

2. Benefits for the trading companies

For exporters, implementing ECO can simplify the trading processes, save the cost and time on CO application and delivery, and reduce trading costs, which is helpful to improve the competitive edge of the exporting commodities. For the importers, implementing ECO can ensure the safety and authenticity of the CO. The simplification of trading process and the save of time also reduce the warehouse charges.. Table 2.4 and Table 2.5 demonstrate the trade transaction costs per container (TEU) saved after implementing ECO cross-border transmission by foreign trade enterprises of both Korea and Chinese Taipei. It is obvious that the costs of documents preparation, customs clearance and technical control have been reduced dramatically. For exporters, the total cost per TEU has decreased by 22%, from \$1253 to \$979. For importers, the total cost has decreased by 35%, from \$1173 to \$760 per TEU. We can see that ECO implementation can play a significant role in reducing trade transaction costs.

Table 2.4 Improvement in Trade Transaction Costs for Korean Exporters

US\$/TEU	Documents preparation	Customs clearance and technical control	Ports and terminal handling	Inland transportation and handling	Totals
Before ECO	210	175	284	584	1253
After ECO	27	84	284	584	979
Improvement	183	91	0	0	274
Improvement (%)	87%	52%	0%	0%	22%

Data resource: Draft Final Report for Reducing trade transaction costs in APEC through electronic commerce: A case study of Electronic Certificate of Origin(ECO), by APEC Policy Support Unit, 2 September 2011

Table 2.5 Improvement in Trade Transaction Costs for Chinese Taipei Importer

US\$/TEU	Documents preparation	Customs clearance and technical control	Ports and terminal handling	Inland transportation and handling	Totals
Before ECO	195	371	311	297	1173
After ECO	92	60	311	297	760
Improvement	103	310	0	0	413
Improvement (%)	53%	84%	0%	0%	35%

Data resource: Draft Final Report for Reducing trade transaction costs in APEC through electronic commerce: A case study of Electronic Certificate of Origin (ECO), by APEC Policy Support Unit, 2 September 2011

2.1.2 Basic Conditions for Cross-border ECO Exchange

According to the report by Korea-Chinese Taipei in January, 2011 on the informal meeting of World Customs Organization, there are five basic conditions for a successful ECO cross border exchange:

Sophisticated ECO System Construction

Online application and issuance of CO and cross-department transmission are the foundation of ECO cross border exchange. This will check if the economy possesses necessary network infrastructure, and at the same time, the stability and effectiveness of the ECO system can be tested from the cross-department transmission as well.

Electronic Signature Law and PKI Technology Application

To guarantee the legality and effectiveness of the electronic documents, the electronic signature law must be put in place inside the member economies. Meanwhile, the electronic data transmission based on the PKI technology is the reliable safeguard for ECO system,

which can guarantee the safe transmission of the electronic documents between economies. This is also the essential condition for ECO cross border exchange.

Secure Exchange Network and PKI Mutual Recognition

It's self-evident that the importance of the security of the network inside member economies and between economies to the ECO crosses border transmission. It requires each economy to adopt secure network system, and then connect with outside network by agreements, which will guarantee the safety of ECO cross border exchange. However, to realize the smooth connection of network between economies, the mutual PKI recognition must be achieved beforehand. Therefore, PKI mutual recognition is also one of the integral requirements for electronic data cross border transmission between economies.

Governments' Recognition and Acceptance of ECO Issues

All member economies should give more attention on the importance of ECO issue and put enough emphasis on this topic; governments in charge should actively promote the construction of ECO system, reduce trade cost and improve trade efficiency. Meanwhile, governments concerned should play a leading role in implementing ECO cross-border exchange, have discussions and negotiations with other economies over the issue in an active manner, and reach agreements for further cooperation.

To implement ECO cross border transmission, the effectiveness of electronic documents with electronic signatures must be accepted, and relative laws and regulations ensuring the effectiveness of these electronic documents must be put in place. During the cooperation with other economies, efforts should be made on improving relative laws and regulations concerning ECO cross border transmission.

Online ECO Repository for Inquiry and Data Validation

To realize ECO cross border transmission, there should be ECO database in place for online inquiry and data validation. Generally speaking, trade administrations need to regulate the trading process, and ECO cross border transmission made no exception. There should be necessary checks by trade administration to safeguard the authenticity of ECO. Therefore, online ECO repository for inquiry and data validation is also very important for ECO cross border exchange.

The above-mentioned five basic conditions are the summary of experiences of Korea-Chinese Taipei ECO cross border exchange project, which is also the starting point for further exploration of ECO cross border exchange by other economies. Next, analysis will be made based on the performance of other APEC economies through the recovered questionnaires in terms of the five basic conditions, and then conclusions on readiness of ECO implementation in APEC member economies will be drawn according to the analysis.

2.2 Analysis on Readiness of ECO Implementation in APEC Economies

2.2.1 Methods of Analysis

The research teams of the project, combining the desk study and information collected from questionnaires, as well as referring to the suggestions and ideas of experts have made analysis on the readiness of ECO cross border transmission in other APEC member economies according to the five basic conditions summarized from Korea-Chinese Taipei ECO cross border exchange.

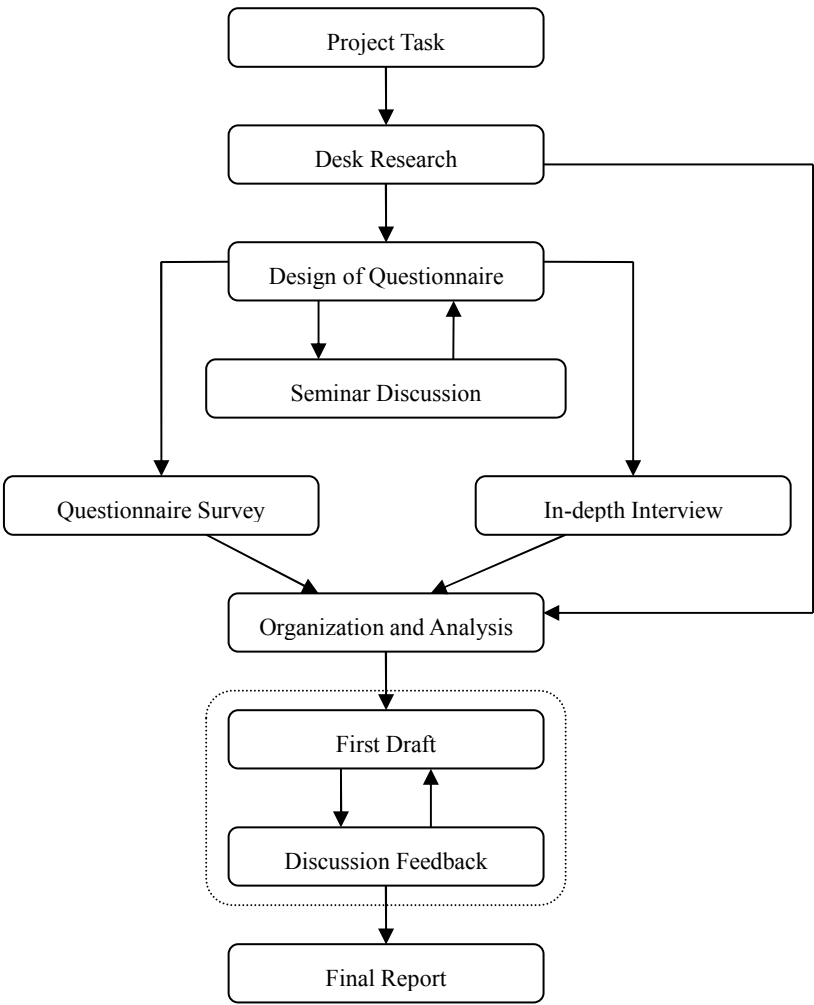
Since some economies have adopted the administering model of self-certification of CO by importers, for example, the United States; Canada; Australia and New Zealand, while Korea and Chinese Taipei have successfully realized the ECO cross-border transmission, the analysis objects will be limited to the rest 14 member economies. At the same time, according to the effectiveness of the questionnaires, nine out of the 14 member economies

have been selected out for analysis including China; Hong Kong, China; Indonesia; Malaysia; Mexico; Peru; Thailand; the Philippines and Viet Nam.

Research procedure and data sources for the ECO cross-border transmission are explained as follows:

2.2.1.1 Research Procedure

Chart 2.4 Research Procedure of ECO Project



The research procedure of this project is illustrated in Chart 2.4

2.2.1.2 Sources of Data

The relevant data are collected by the ways of literature survey, questionnaire survey and in-depth interviews. The three sources of data are interpreted respectively in the following:

(1)Literature Survey

The purpose of conducting literature survey is to know the relevant work and researches that have been done by some international organizations and institutions. The policies and international rules relevant with ECO implementation are collected and organized through desk research. Moreover, it is important to know about the Rules of Origin in all APEC economies as well as their readiness for carrying out cross-border ECO transmission. Finally, the relevant information and data about Korea-Chinese Taipei ECO pathfinder project are attached great importance in this project and are collected and analyzed thoroughly as well.

(2) Questionnaire Survey

The questionnaires are designed on the basis of desk research. The design of the questionnaires is in accordance with the five basic conditions for ECO implementation as well. As for enterprises and government departments, different questionnaires are designed respectively.

The questionnaires are divided into three parts: basic information of economies, the readiness for cross-border ECO exchange implementation and the benefits of ECO and difficulties in implementing ECO. The basic information of economies mainly covers that of the managing department, that of the issuing department of certificate of origin, and some other relevant information. The readiness for ECO implementation is in accordance with the five basic conditions. As to questions about the benefits and difficulties in carrying out ECO, they will mostly refer to the experiences of Korea-Chinese Taipei's ECO pathfinder project.

The questionnaires were designed twice, and the two versions were both distributed and delivered to the relevant departments and trading enterprises domestically and abroad through various channels after being completed. The questionnaire survey of the trading enterprises on ECO was only conducted in mainland China.

As far as mainland China is concerned, 210 copies of trading enterprises' questionnaires have been recovered. 20 copies of questionnaires from the government departments have been collected, including the issuing departments of CO and the Customs. Besides, questionnaires from 14 APEC economies have been collected successfully, including the Philippines; Peru; Chinese Taipei; Brunei; Hong Kong, China; Japan; Viet Nam; Thailand; the Russian Federation; Canada; Malaysia; etc. Of all these above-mentioned economies, nine out of the 14 recovered questionnaires are resent after the ECO workshop in Beijing, and then we have got the response from the nine economies. The information and data collected from the response after workshop would be beneficial for the assessment of the readiness for ECO implementation in APEC economies.

(3) In-depth Interviews

The project team has conducted several domestic on-the-spot surveys, respectively on China Customs, Entry-Exit Inspection & Quarantine of China, the China Council for the Promotion of International Trade, and some trading enterprises, etc. Meanwhile, seminars have been organized many times with regard to ECO implementation in China. Furthermore, telephone interviews with the participants of Korea-Chinese Taipei ECO Pathfinder Project have been made. The communications with the participants of Korea-Chinese Taipei ECO pathfinder project through e-mails are carried out as well.

The report is prepared on the basis of the collection and analysis of the information and data. After the first draft is completed, a discussion session will be held during the ECO workshop held in Beijing among APEC economies and other institutions that may be concerned. The project team will revise and improve the project report according to the feedback from various APEC economies, and the report would then be finalized.

2.2.2 Analysis Result

According to the five basic conditions for successful ECO cross border transmission between Korea and Chinese Taipei, the analysis in this report will also be focused on the five aspects: domestic ECO system construction in economies, electronic signature law and PKI technology application, secure exchange network and PKI mutual recognition, governments' recognition and acceptance of ECO issues, online ECO repository for inquiry and data validation.

On the basis of the feedback in the questionnaires collected, the analysis will be made from the perspective of each condition. In combination with the information got from other channels, the analysis results will reflect objectively the readiness on ECO cross border exchange of each member economy.

From the vertical perspective, the readiness of member economies on each condition concerning ECO cross border transmission will be made clear; seen from the performance on all the five conditions, a conclusion can be drawn on the economy's readiness on current ECO cross border transmission.

2.2.2.1 Domestic ECO System Construction in Economies

In light of the successful case of Korea-Chinese Taipei on the implementation of ECO cross border exchange, it is necessary to have some software technology support to implement ECO system. Firstly, sophisticated ECO system should be set up inside the economies to realize online application and issuance of CO as well as electronic clearance. This is the basic condition for ECO cross border transmission.

Concerning the domestic ECO system construction in APEC economies, please refer to the following tables:

Table 2.6

1. Domestic ECO system						
	1.1 Has your economy implemented the online application of CO?			1.2 Has your economy implemented the online issuance/certification of CO?		
	Yes	No	Don't know	Yes	No	Don't know
China	√			√		
Hong Kong, China	√			√		
Indonesia	√			√		
Malaysia	√			√		
Mexico	√			√		
Peru		√			√	
Thailand	√			√		
The Philippines		√			√	
Vietnam	√			√		

Among the nine economies, eight of them have realized online application and issuance of CO. While according to the feedback, the rest economies have planned to implement online application and issuance of CO in near future.

Table 2.7

1. Domestic ECO system			
	1.6 Has your economy achieved success in the domestic transition of ECO among different departments of the governments?		
	Yes	No	Don't know
China	√		
Hong Kong, China	√		
Indonesia	√		
Malaysia		√	
Mexico	√		
Peru		√	
Thailand	√		
The Philippines		√	
Vietnam	√		

From the above chart we can see that most economies such as China, Hong Kong, China, Indonesia, Mexico, etc. have realized cross-department CO online transmission in their own

economy, which shows that there are well-facilitated network and corresponding technical support. While those failed to realize cross-department transmission of ECO have been delayed because of the same reason.

2.2.2.2 Electronic Signature Law and PKI Technology Application

The implementation of paperless trading is the transformation of traditional trading pattern by modern technologies. Therefore, legal environment construction should be improved to adapt to the new model of trade. Electronic signature law is the crucial basis of the legal environment construction for ECO implementation, whose main role is to regulate electronic signature behavior, guarantee the same legal effect of electronic signature with traditionally hand-written ones, and stipulate rights and obligations relative to electronic signature.

As an infrastructure, the PKI has been established through public key theories and technologies that finally can offer security services. PKI technology is the core of information security technology, which is also the key and basic technology of electronic commerce.

Concerning the electronic signature laws and the application of PKI technology in the selected economies, please refer to the following charts:

Table 2.8

2. Electronic Signature Law and PKI Technology Application									
	2.1 .Does your economy have any laws or regulations on electronic signature?			2.2 Does your economy use PKI technology?			2.3 Does your economy have CA service?		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
China	√			√			√		
Hong Kong, China	√			√			√		
Indonesia	√			√			√		
Malaysia	√			√			√		
Mexico	√			√			√		
Peru	√			√			√		
Thailand	√			√			√		

The Philippines	√			√			√		
Vietnam	√			√			√		

According to the chart, all the nine economies have had relative electronic signature laws in place, and PKI technologies have been employed as well with the CA service provided. As it is known to us that this is a very important aspect for ECO cross border transmission, which can guarantee the smooth cross border transmission of ECO between economies.

2.2.2.3 Secure Exchange Network and PKI Mutual Recognition

According to the successful experience of Korea-Chinese Taipei, it is necessary to have some certain technical support for the implementation of ECO cross border exchange. Firstly, secure network should be adopted and guaranteed for ECO system, which is the basic system for online CO application and issuance as well as electronic clearance.

Secondly, PKI mutual recognition should be achieved to guarantee the safe transmission of ECO data. CA center should also be established to offer international CA certification services based on PKI mutual recognition.

The implementation of ECO cross border transmission involves the simplification of trade procedures and some technical standards of data and communication. Therefore, it will be of great importance in adopting relative international standards and carrying out interconnection tests.

For the secure network and PKI mutual recognition issue, please refer to the following tables:

Table 2.9

3. secure network systems and mutual recognition of PKI			
	3.1 Does your economy use secure network systems, such as VPN?		
	Yes	No	Don't know
China	√		
Hong Kong, China	√		
Indonesia	√		
Malaysia	√		
Mexico		√	
Peru	√		
Thailand	√		
The Philippines	√		
Vietnam	√		

We can see from the chart that most economies have had secure network in place, which have laid a solid foundation for the online safe transmission of data between economies.

Table 2.10

3.secure network systems and mutual recognition of PKI			
	3.2 Has your economy realized the mutual recognition of PKI / CA with other economies?		
	Yes	No	Don't know
China	√		
Hong Kong, China	√		
Indonesia	√		
Malaysia	√		
Mexico	√		
Peru		√	
Thailand	√		
The Philippines		√	
Vietnam		√	

From the above chart, it can be seen that the majority of the economies have realized PKI/CA mutual recognition with other economies. It's of crucial importance to safeguard the security of online data transmission. For the PKI/CA mutual recognition is the basis for safe transmission of electronic data online.

Table 2.11

3.secure network systems and mutual recognition of PKI			
	3.4 Is your economy implementing the ECO data interconnectivity test with other APEC economies?		
	Yes	No	Don't know
China	√		
Hong Kong, China	√		
Indonesia	√		
Malaysia	√		
Mexico		√	
Peru		√	
Thailand	√		
The Philippines	√		
Vietnam	√		

Table 2.12

3. secure network systems and mutual recognition of PKI			
	3.6 Has your economy realized the ECO data interconnectivity test with other APEC economies?		
	Yes	No	Don't know
China		√	
Hong Kong, China	√		
Indonesia	√		
Malaysia	√		
Mexico		√	
Peru		√	
Thailand	√		
The Philippines	√		
Vietnam		√	

Table 2.13

3. secure network systems and mutual recognition of PKI			
	3.8 Has your economy realized the cross-border transmission of ECO with other APEC economies?		
	Yes	No	Don't know
China		√	
Hong Kong, China	√		
Indonesia	√		
Malaysia	√		
Mexico		√	
Peru		√	

Thailand	√		
The Philippines		√	
Vietnam		√	

We can see from the above three charts, Hong Kong, China and Indonesia have made active explorations on ECO cross border transmission. Hong Kong has realized ECO cross border transmission with mainland China, while Indonesia has also realized ECO cross border transmission with Malaysia. Other economies such as Thailand and Vietnam have also been undertaking relative projects in an active manner, which is sure to realize the goal of ECO cross border transmission in near future.

2.2.2.4 Governments' Recognition and Acceptance of ECO Issues

Due to the huge differences in political system, economic performance and cultural environments, different economies have different recognitions and attitudes on the implementation of ECO, which would determines whether the government will formulate some relevant policies, carry out the necessary institutional reforms and provide the appropriate policy support for ECO implementation.

Meanwhile, the government should play a leading role in ECO cross border transmission, promote discussions and negotiations with other economies in an active manner, and reach an agreement for cooperation to guarantee the effectiveness of the electronic documents during cross border transmission.

For example, the governments of Korea and Chinese Taipei both play a role of leadership in promoting the development of paperless trading in the economies. To take Korea as an example, Korea has set up the “e-Trade Facilitation Committee” in 2004, which is under direct leadership of the Korean Prime Minister, to promote the development of paperless trading in Korea; KITA has set up KTNET in 1991, which was identified as the technical service provider of paperless trading in Korea by MOCIE, and could provide technical service for the implementation of ECO. In a word, given the important role of ECO to facilitate trade and reduce trade costs, the governments of Korea and Chinese Taipei both

have been very supportive of the implementation of cross-border ECO exchange.

The implementation of ECO cross border transmission cannot do without governments' support, including the recognition of ECO cross border transmission and the acceptance of electronic documents with electronic signature. For the government's recognition and acceptance of ECO issues, please refer to the following tables:

Table 2.14

4. Governments' Recognition and Acceptance of ECO Issues								
	4.1 How important does the government think is it to develop ECO?				4.2 How is the attitude of the government on implementing the cross-border exchange of ECO?			
	Very important	Important	Not important	Don't know	Very supportive	Supportive	Not supportive	Don't know
China	√							√
Hong Kong, China	√				Open-minded			
Indonesia	√				√			
Malaysia	√				√			
Mexico	√				√			
Peru	√				√			
Thailand	√				√			
The Philippines	√				√			
Vietnam	√				√			

We can see from the chart that all the governments of economies hold positive attitude towards ECO cross border transmission, deeming it very important to develop ECO system. The positive attitude of the governments will play an important role in further facilitating the construction of ECO system and promoting ECO cross border transmission.

Table 2.15

4. Governments' Recognition and Acceptance of ECO Issues			
	4.3 Has your economy reached an agreement with other APEC economies on cross-border exchange of ECO?		
	Yes	No	Don't know

China			√
Hong Kong, China	√		
Indonesia	√		
Malaysia	√		
Mexico		√	
Peru		√	
Thailand	√		
The Philippines	√		
Vietnam		√	

It can be seen from the above chart that most economies have not reached any agreements for cooperation with other economy in terms of ECO cross border transmission. Since ECO cross border transmission is a cutting-edge issue, currently, there are only Korea and Chinese Taipei have carried out the pathfinder project and realized cross border exchange of ECO. On the other hand, however, it also means lots of opportunities for cooperation on this issue, which can jointly drive the work of ECO cross border transmission.

Table 2.16

4. Governments' Recognition and Acceptance of ECO Issues						
	4.4 Does your economy have the special agency to implement ECO project? If yes, please list the agency?			4.5 Does the economy carry out any reforms of governmental administration system for ECO implementation?		
	Yes	No	Don't know	Yes	No	Don't know
China			√			√
Hong Kong, China	√			√		
Indonesia	√			√		
Malaysia	√			√		
Mexico	√			√		
Peru		√		√		
Thailand	√			√		
The Philippines	√			√		
Vietnam	√				√	

Nonetheless, some economies such as Hong Kong, Mexico, Indonesia, Malaysia and Thailand have actively promoted the study of ECO related projects, and designated special

agencies for ECO affairs. Take Thailand as an example, the leading agency for ECO affairs is Department of Foreign Trade, Ministry of Commerce. Moreover, these economies have made institutional restructuring in facilitating the ECO projects. It is fairly to say that these economies have done a lot to promote the implementation of ECO cross border transmission.

Table 2.17

4. Governments' Recognition and Acceptance of ECO Issues									
	4.6 Does the government recognize e-documents with electronic signatures which are submitted by the enterprises or individuals?			4.7 Does the e-documents with electronic signature are recognized among government departments?			4.8 Does the government recognize e-documents with electronic signatures from other economies?		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
China	√				√			√	
Hong Kong, China	√			√				√	
Indonesia	√			√				√	
Malaysia	√			√				√	
Mexico		√		√			√		
Peru		√			√			√	
Thailand	√			√			√		
The Philippines	√			√				√	
Vietnam	√			√				√	

The acceptance of electronic documents with electronic signatures is an important factor for the implementation of ECO cross border exchange. It can be seen from the above chart that economies like Hong Kong, China, Indonesia, and Thailand have already recognized the effectiveness of electronic documents with electronic signatures submitted by enterprises and individuals; In Hong Kong, Indonesia, Mexico and Thailand, the documents with electronic signatures have been accepted between different government agencies. However, the realization of ECO cross border transmission calls for the mutual recognition of electronic documents with electronic signatures between economies. Mexico and Thailand have done well in this regard, while there is room for improvement for other economies.

Table 2.18

4. Governments' Recognition and Acceptance of ECO Issues									
	4.9 Does your economy have any laws or regulations to recognize the legal validity of electronic documents?			4.10 Does your economy have any laws or regulations on ECO -related dispute settlement?			4.11 Does your economy have any laws or regulations on prescribing the responsibilities in the errors or negligence of electronic data transmission?		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
China	√				√			√	
Hong Kong, China	√				√			√	
Indonesia	√			√				√	
Malaysia	√			√				√	
Mexico	√				√			√	
Peru	√				√			√	
Thailand	√					√		√	
The Philippines	√				√			√	
Vietnam	√				√			√	

It can be seen from the above chart that all the economies have had laws and regulations in place to guarantee the legality of the electronic documents, which have laid certain legal foundation for ECO cross border transmission. Since the research and practices of ECO cross border transmission have not been in full swing, there are nearly no such an economy that has established laws or regulations on prescribing the responsibilities in the errors or negligence of electronic data transmission.

2.2.2.5 Online ECO Repository for Inquiry and Data Validation

It is an essential link to have online CO database established to make the online inquiry and data validation possible in order to implement ECO cross border transmission. About the issue of whether the economies in APEC region have realized online ECO repository for inquiry and data validation or not, please refer to the following table:

Table 2.19

5. Online ECO Repository for Inquiry and Data Validation						
	5.1 Has your economy realized online inquiry of ECO data?			5.2 Has your economy realized online check of ECO data?		
	Yes	No	Don't know	Yes	No	Don't know
China		√		√		
Hong Kong, China	√			√		
Indonesia	√			√		
Malaysia	√			√		
Mexico	√			√		
Peru		√			√	
Thailand	√			√		
The Philippines		√			√	
Vietnam	√			√		

It can be deduced from the chart that most economies have already realized the online ECO repository for inquiry and data validation. It is shown to us that ECO database has been set up inside the economies, and online inquiries can be made concerning relative data. Moreover, government administrations can have online inquiry and checks for ECO data at any time, which have played a supporting role in a smooth implementation of ECO cross border transmission.

Based on all the analysis above, the comprehensive performance of each economy in question on the five basic conditions for ECO cross border transmission is as follows:

Table 2.20

Readiness of APEC economies on ECO cross border transmission						
	Domestic ECO System	Signature law and PKI Technology	Secure network	PKI mutual recognition	Government's acceptance of ECO issue	Online ECO repository
China	√	√	√	√	√	√
Hong Kong, China	√	√	√	√	√	√
Indonesia	√	√	√	√	√	√
Malaysia	√	√	√	√	√	√

Mexico	√	√	√	√	√	√
Peru	×	√	√	√	√	×
Thailand	√	√	√	√	√	√
The Philippines	√	√	√	√	√	√
Vietnam	√	√	√	√	√	√

It can be seen from the above chart that most economies have done well in the five basic aspects for ECO issue, in other words, these economies have well-prepared for ECO cross border transmission. All they need to do is to reach some certain agreements for cooperation with other relative economies to jointly promote the implementation of ECO cross border transmission.

2.3 Analysis on Difficulties of Implementing ECO in APEC Economies

On the basis of the analysis on the readiness of ECO cross border transmission in APEC economies, in combination with information from other channels, it can be seen that there are mainly three aspects of difficulties encounter by APEC economies when implementing ECO cross border transmission, including Inadequate Awareness of the Government and Trading Companies, Difficulties of Coordination and Cooperation between departments and between economies, as well as Inadequate capacity building.

2.3.1 Inadequate Awareness of the Government and Trading Companies on ECO

Table 2.21

2. Awareness of government and traders								
	2.1.1 To change the existing practices / awareness of relevant departments				2.1.2 Incentives for traders to use ECO			
	Very difficult	Difficult	Not difficult	Don't know	Greatly inadequate	Inadequate	Adequate	Don't know
China			√				√	
Hong Kong, China			√				√	
Indonesia		√					√	
Malaysia		√				√		
Mexico		√					√	
Peru			√			√		
Thailand		√					√	

The Philippines			√			None at this time		
Vietnam			√				√	

Firstly, the implementation of ECO cross border transmission means simplification and improvement of traditional trading procedures. On the one hand, the problem of path dependence might exist for the government departments and trading companies; therefore, it may be difficult to change the existing methods of working that they have got used to. On the other hand, the simplification of traditional trade process also needs to change the existing ideas of the relevant government departments and trading companies, which, however, would also be difficult.

Secondly, the trading companies may have inadequate incentives to adopt ECO system. The implementation of ECO requires the active participation of the trading enterprises. Nevertheless, not all trading products are required to provide the certificate of origin. Therefore, trading companies may not actively participate in the ECO project, which can result in the low utilization of ECO, and the advantages of ECO in saving trade cost can not be seen, even though ECO cross-border exchange system among the economies has been completed.

2.3.2 Difficulties of Coordination and Cooperation

Table 2.22

2. Difficulties of Implementing ECO: Cooperation and Coordination								
	2.1.3 Coordination among domestic government departments				2.1.4 Coordination and operation between relevant public and private organizations.			
	Very difficult	Difficult	Not difficult	Don't know	Very difficult	Difficult	Not difficult	Don't know
China			√				√	
Hong Kong, China			√				√	

Indonesia		√				√		
Malaysia			√			√		
Mexico		√				√		
Peru			√				√	
Thailand			√				√	
The Philippines			√				√	
Vietnam			√				√	

Table 2.23

2.Difficulties of Implementing ECO: Cooperation and Coordination				
	2.1.5 Coordination and operation between economies			
	Very difficult	Difficult	Not difficult	Don't know
China		√		
Hong Kong, China				√
Indonesia		√		
Malaysia		√		
Mexico		√		
Peru			√	
Thailand	√			
The Philippines			√	
Vietnam		√		

As it's known to all, the implementation of ECO involves different stakeholders who may have different interest demands in ECO implementation. Therefore, it may be difficult to coordinate their interests. For example, although some economies have realized the online application and issuance of CO at an early time, the transmission of ECO data among the relevant departments are still faced with many obstacles.

The main reasons are as follows: firstly, there exist the problems of cross-department management and overlapping functions on the regulation of CO, therefore, it is difficult to coordinate the interests of different government departments effectively; secondly, the standards of data and communication technology are inconsistent, which are also difficult to coordinate effectively; thirdly, there is no strong and unified leading agency of government to drive the implementation of ECO affairs.

Besides, the implementation of ECO also needs the international cooperation and coordination among the economies. Compared with coordination among domestic departments, it is sometimes much more difficult to coordinate internationally.

2.3.3 Inadequate Capacity Building

Table 2.24

2.Difficulties of Implementing ECO: inadequate capacity building				
	2.1.6 Physical infrastructure			
	Greatly inadequate	Inadequate	Adequate	Don't know
China			√	
Hong Kong, China			√	
Indonesia			√	
Malaysia			√	
Mexico			√	
Peru			√	
Thailand			√	
The Philippines			√	
Vietnam			√	

Table 2.25

2.Difficulties of Implementing ECO: inadequate capacity building				
	2.1.7 Technical support			
	Greatly inadequate	Inadequate	Adequate	Don't know
China				
Hong Kong, China			√	
Indonesia			√	
Malaysia			√	
Mexico			√	
Peru			√	
Thailand			√	
The Philippines			√	
Vietnam			√	

Table 2.26

2. Difficulties of Implementing ECO: inadequate capacity building				
	2.1.8 Trained personnel			
	Greatly inadequate	Inadequate	Adequate	Don't know
China			√	
Hong Kong, China			√	
Indonesia			√	
Malaysia		√		
Mexico			√	
Peru			√	
Thailand		√		
The Philippines			√	
Vietnam		√		

Firstly, hardware and software technology supports are the basic conditions for the implementation of ECO. Nevertheless, the construction of hardware infrastructure in some economies with lower economic development level is comparatively lagging behind. Therefore, the implementation of ECO in these economies lacks the basic material conditions. Moreover, the implementation of ECO needs some technologies to ensure the secure transmission of e-data. For example, in order to secure the transmission of ECO data among different departments, it is important to simplify and standardize the trade data. However, the problem is that different economies and different departments may use different standards. This can result in the difficulties on information sharing, and may finally lead to the difficulties to carry out ECO cross-department and cross-border transmission.

Finally, the implementation of ECO cross border transmission calls for the professional technicians. For example, the implementation of ECO depends on the staff of government regulators who can skillfully use the ECO system to deal with the ECO application and issuance, and trading companies who can skillfully use the ECO system to apply and receive ECOs or make customs declarations. Some economies have promoted the implementation of ECO actively, and their domestic ECO systems are relatively sophisticated. However, for the lack of corresponding training programs and promotion policies for the government staff and

traders, there are lower incentives for them to use ECO system, which may eventually hinder the implementation of ECO.

Based on the analysis of the difficulties encountered by member economies, suggestions and recommendations will be put forward in the following section.

III. Recommendations on ECO Implementations in APEC Economies

According to the analysis on the readiness of ECO cross border transmission in APEC member economies, combined with the current development of electronic commerce in APEC region, we have come up with the following suggestions on ECO cross border transmission in future:

3.1 Strengthen Environment Construction, Improve Technical Expertise

3.1.1 Strengthen ECO System Construction

It is already known to us that secure network system and sophisticated ECO system is the basis for ECO cross border transmission. Therefore, the hardware infrastructure for ECO system needs further consolidation and improvement. Moreover, it requires higher safety standards for the secure cross-border transmission of ECO data, which calls for high technological capacity. It is suggested that all economies attach more importance to further improvement of network infrastructure construction, and boost relative functional departments to have a deeper understanding on ECO system and online transmission of electronic data to promote actively the ECO system construction. At the same time, training about technical expertise on ECO system should be initiated and strengthened, the professionals in charge of ECO system needs to be trained.

3.1.2 Improve ECO-related Laws and Regulations

The implementation of ECO cross-border transmission asks for relative laws and regulations as safeguards. To this end, it is necessary to establish and improve the legal system concerning ECO affairs. For example, the enactment of electronic signature law to guarantee the effectiveness of the electronic documents, introducing of dispute settlement mechanism to deal with possible trade disputes in a proper way, strengthening legislation effort in relative links to watch over the procedures of ECO cross-border transmission, and studying

relative international laws to ensure a seamless connection with networks in other economies in the future.

3.1.3 Improve ECO Technical Expertise

The implementation of ECO cross-border transmission can not do without the strong support of electronic information technology. Firstly, PKI technology should be employed inside the economies as a firewall for the secure cross border transmission of electronic data. Secondly, CA services is also an important condition to implement secure cross border transmission of electronic data; Thirdly, economies needs to make researches on the expertise of how to connect with networks in other economies to facilitate the cross border flow of electronic data in a safe manner.

3.1.4 Establish Safe Network, Prevent Online Fraud

The electronization of international trade documents can reduce trading cost, improve trade efficiency and the administrative management level, and increase enterprises' competitiveness. However, the security of online environment should never be neglected. All member economies must pay enough attention to the construction of a safe and sound network to prevent the online fraud during the implementation of ECO cross-border transmission. Therefore, a secure network should be guaranteed by economies to ensure the safety and integrity of online environment.

3.2 Exert Government's Coordinating Role, Promote Crossover Cooperation

3.2.1 Consolidate Cross-Department Collaboration

There are difficulties of coordination to some extent between government departments in APEC member economies, developing economies in particular. Therefore, the competent departments of the government should give full play to the coordinating role on ECO cross border transmission, promote the feasible study on ECO project and boost to implement the ECO system. Meanwhile, governments should strengthen the publicity and promotion of the benefits of implementing ECO cross-border transmission to the potential users, make efforts

to change the ideas and views of stakeholders and introduce incentive measures.

To those economies with high marketization level on paperless trading development, the governments are suggested to strengthen promotion to deepen the understanding on ECO system and the advantages of ECO system. Meanwhile, the government departments concerned should initiate to enlarge the range of application of ECO system for more electronic trading documents' online transmission, and guide more participants to the application of ECO system.

In a word, all member economies are suggested to keep on strengthening the exchanges and cooperation between relative functional departments to help reach a consensus between different departments concerned on ECO cross-border transmission. Daily communication and contacts between different departments needs to be further strengthened to jointly address the possible problems propping up during the implementation of ECO cross-border transmission.

3.2.2 Promote Cross-Economy Cooperation and Exchanges

The successful implementation of ECO cross-border transmission calls for the effective coordination and cooperation between economies concerned. Ineffective coordination and cooperation is one of the main difficulties faced by economies on the implementation process of ECO cross-border transmission. Therefore, member economies are suggested to set up a cooperation framework for electronic trade documents cross-border transmission in APEC region. Then, the improvement of coordinative mechanism between different departments and the infrastructure for application and issuance of ECO are to be promoted. The implementation of ECO cross-border transmission will be boosted on the basis of pilot projects.

Besides, economies with intentions to carry out ECO cross-border transmission are suggested to sign the cooperative agreement on ECO online exchange to mutually accept the legality and effectiveness of each other's ECOs. Meanwhile, mutual recognition of PKI/CA is

a must to guarantee the secure data transmission. Moreover, a sound ECO repository should be set up in each economy to realize inter-connectivity of ECO repository and online checks.

In addition, member economies are suggested to establish a roadmap to implement ECO cross-border transmission in APEC region. Then, the implementation of ECO cross-border transmission will be achieved as planned in a gradual manner. Meanwhile, member economies are suggested to make document standards of electronic certificate of origin and to make the technical standards and security mechanism for ECO cross-border transmission. The standards and mechanism will lay a solid foundation for cross-border transmission of other electronic documents in future.

In addition, the implementation of ECO cross border transmission also involves the coordination of different laws and regulations in different economies. For example, the legality of electronic certificate of origin, trade dispute settlement mechanism, and so on. Generally speaking, economies concerned will sign MOU to settle legal issues through negotiations and consultations. However, this process demands lots of time and energy and only applicable to the signatories. If a third economy wants to be involved, the whole process needs to be started over, which is time-consuming and inefficient. Furthermore, MOUs are not legal documents, so they do not possess legal force.

Therefore, member economies are suggested to sum up experiences from past successful cases of ECO transmission and make joint efforts to establish a well-accepted legal framework within APEC, which will be very helpful in facilitating the implementation of ECO cross-border transmission in future.

3.2.3 Enhance Cross-Fora Relationships within APEC

A well-known fact is that there are natural ties between different working groups(fora) within APEC, particularly, between those with similar objectives or tasks. Thus, member economies are suggested to bring the coordinating role of departments concerned into full play to enhance the communication and contacts between different working groups (fora) in APEC.

Only in this way can the potential new cooperation points between different fora be found out, can the work of each working group be boosted and the trade facilitation in APEC region as a whole be promoted with concerted efforts.

For example, the Readiness on ECO Cross Border Exchange Project advocated by ECSG has a very close link with other working groups such as Sub-Committee on Customs Procedures(SCCP), Small and Medium Enterprises Working Group(SMEWG), and so on. As we all know that the imports and exports as well as all the trading documents shall be subject to customs examination in international trade, while small and medium enterprises are the main force of international trade in APEC region. Thus, if ECSG can have close coordination and cooperation with SCCP and SMEWG on the ECO cross-border transmission, the research and promotion of ECO issue will be further propelled with actual effect, and the work of SCCP and SMEWG will also be promoted along with this cooperation.

Appendix A: Questionnaire (1)

Electronic Certificate of Origin (ECO) Implementation Questionnaire for Customs

Certificate of Origin (CO) is compulsory document for cross-border trade regulatory compliance. This questionnaire is designed to collect information concerning the practice and the policies, regulations and legal issues on Certificate of Origin in each economy. Please provide relevant information to us in order to find out the readiness of implementing ECO in APEC region. Thank you for your cooperation and understanding.

APEC E-COMMERCE BUSINESS ALLIANCE

1. Basic Information

B1. Economy: _____

B2. Region: _____

B3. Organization: _____

B4. Department: _____

B5. Telephone Number: _____

B6. E-mail: _____

2. Technical Environment

T1. Does the customs invest on the paperless trading infrastructures?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

T2. Does the customs invest on public network construction?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

T3. Does the customs have software technical support on Electronic Certificate of Origin (CO) application?

0 NO/ DONØT KNOW 1 YES

T4. Does the customs invest on human resource development and capacity building to implement the Electronic Certificate of Origin (ECO)?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

T5. Does the customs have exchange network to transmit electronic documents?

0 NO/ DONØT KNOW 1 YES

T6. Does the customs have Electronic Certificate of Origin (ECO) repository for inquiring and data validation?

0 NO/ DONØT KNOW 1 YES

T7. Does the customs complete the interoperability testing of electronic data with other APEC economiesørelated sectors?

0 NO/ DONØT KNOW 1 YES

T8. Is there the Electronic Certificate of Origin (ECO) system at present?

0 NO/ DONØT KNOW 1 YES

T9. If yes, is the Electronic Certificate of Origin (ECO) system easily accessible and user-friendly?

0 NO/ DONØT KNOW 1 YES

3. Implementation Environment

S1. The role of customs in the process of Certificate of Origin (CO). Please check the options listed below.

Implementation of trade policies	Revenue Collection	Safety and Security
Protection on Environment and Health	Consumer Protection	Trade statistics

S2. Process simplified and standardized

0 POOR 1 COMMON 2 GOOD

S3. Is there a dispute resolution in Certificate of Origin (CO) management?

0 NO/ DONØT KNOW 1 YES

S4. Is there any regulations on prescribing the responsibilities on errors or negligence of electronic data transmission?

0 NO/ DONØT KNOW 1 YES

S5. How important do you think to develop Electronic Certificate of Origin (ECO)?

0 NOT IMPORTANT 1 IMPORTANT 2 VERY IMPORTANT

S6. What do you think about the feasibility of Electronic Certificate of Origin (ECO) implementation in your economy?

0 NOT FEASIBLE 1 FEASIBLE 2 VERY FEASIBLE

S7. Which are the most important benefits of implementing Electronic Certificate of Origin (ECO)? Please select three options and rank them according to their importance from the most to the least in the following box.

1. Facilitate international trade

2. Improves tax returns by enabling effective collection of import duties

3. Reforming customs procedures and make them simplification, harmonization, standardization and modernization

4.Reduces evasion opportunities

5.Reduces corruption levels of customs officials

6.Enhance competitive advantage

--

S8.Is there a clear plan to develop Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

S9. Does the customs have united planning to develop Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

S10. Does the customs have superior department to consult on Electronic Certificate of Origin (ECO) development?

0 NO/ DONØT KNOW 1 YES

S11. Does the customs carry out reforms on Electronic Certificate of Origin (ECO) implementation?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

S12. Does the customs actively promote and encourage Electronic Certificate of Origin (ECO) implementation so as to benefit stakeholders?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

The following are the possible barriers in ECO implementation:

S13. Lack of understanding of reform

0 YES 1 NO

S14. Lack of cooperation among public sectors.

0 YES 1 NO

S15. Difficulties to find out the optimal balance between trade facilitation and security.

0 YES 1 NO

S16.Conflicts between facilitation and security.

0 YES 1 NO

S17. Difficulties to simplify procedures.

0 YES 1 NO

S18. Lack of incentives for traders to use Electronic Certificate of Origin (ECO).

0 YES 1 NO

S19. Shortages of qualified staff.

0 YES 1 NO

S20. Inadequate physical infrastructure.

0 YES 1 NO

S21. Lack of effective measures on communication/data processing

0 YES 1 NO

S22. Besides above what might be other difficulties from your point of view?

S23. Please select three most severely difficulties from S13-S22 and rank them according to their seriousness from the most to the least in the following box.

Electronic Certificate of Origin (ECO) Implementation Questionnaire for Regulator

Certificate of Origin (CO) is compulsory document for cross-border trade regulatory compliance. This questionnaire is designed to collect information concerning the practice and the policies, regulations and legal issues on Certificate of Origin in each economy. Please provide relevant information to us in order to find out the readiness of implementing ECO in APEC region. Thank you for your cooperation and understanding.

APEC E-COMMERCE BUSINESS ALLIANCE

1. Basic Information

B1. Member Economy: _____

B5. E-mail Address: _____

B2. Organization(Sector): _____

B6. Job Title: _____

B3. Name: _____

B4. Phone Number: _____

2. Legal Environment

L1. Does your economy have the related supporting laws and regulations on paperless trading?

0 NO/ DONØT KNOW 1 YES

L2. Does your economy have any laws and regulations to harmonize the technical standards of cross-border electronic data?

0 NO/ DONØT KNOW 1 YES

L3. Does your economy have any laws and regulations to facilitate and secure electronic data submission/exchange?

0 NO/ DONØT KNOW 1 YES

L4. Does your economy have any laws and regulations to recognize the legal validity of electronic documents?

0 NO/ DONØT KNOW 1 YES

L5. Does your economy have any laws and regulations to strengthen the protection of intellectual property rights on paperless trading?

0 NO/ DONØT KNOW 1 YES

L6. Does your economy have any laws and regulations on implementing Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

3. Technical Environment

T1. Does the government have investment on the paperless trading infrastructures?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

T2. Does the government have investment on the public network construction?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

T3. Does your economy have the software technical support on the online Certificate of Origin (CO) application?

0 NO/ DONØT KNOW 1 YES

T4. Does your economy have the software technical support on issuing Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

T5. Is the technology of issuing Electronic Certificate of Origin (ECO) outsourced?

0 NO/ DONØT KNOW 1 YES

If yes, please list the name of outsourcing company

--

T6. Does the government have investment on human resource development and capacity building to implement the Electronic Certificate of Origin (ECO)?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

T7. Does your economy have exchange network to transmit electronic documents?

0 NO/ DONØT KNOW 1 YES

If yes, what exchange network your economy is using?

ebXML Others_____

T8. Has your economy created message standards for both commercial and government related documents?

0 NO/ DONØT KNOW 1 YES

T9. Does your economy have PKI technology for securing data transmission?

0 NO/ DONØT KNOW 1 YES

T10. Does your economy have cross-border PKI mutual recognition framework to assure the authenticity of cross-border electronic documents?

0 NO/ DONØT KNOW 1 YES

T11. Does your economy have Electronic Certificate of Origin (ECO) repository for inquiring and data validation?

0 NO/ DONØT KNOW 1 YES

T12. Has your economy implemented the online application of Certificate of Origin (CO)?

0 NO/ DONØT KNOW 1 YES

T13. Is the online application system of Certificate of Origin (CO) easily accessible and user-friendly?

0 NO/ DONØT KNOW 1 YES

4. Implementation Environment

S1. What are the main reasons for your economy to request Certificate of Origin (CO)? Please check the options listed below.

Implementation of trade policies	Revenue Collection	Safety and Security
Environment and Health	Consumer Protection	Trade statistics

S2. Is there the dispute settlement procedure in the management of Certificate of Origin (CO)?

0 NO/ DONØT KNOW 1 YES

S3. Is there any regulations on prescribing the responsibilities in the errors or negligence of electronic data transmission?

0 NO/ DONØT KNOW 1 YES

S4. How important do you think it is to develop Electronic Certificate of Origin (ECO)?

0 NOT IMPORTANT 1 IMPORTANT 2 VERY IMPORTANT

S5. What do you think about the feasibility of Electronic Certificate of Origin (ECO) implementation in your economy?

0 NOT FEASIBLE 1 FEASIBLE 2 VERY FEASIBLE

S6. Which are the most important benefits of implementing Electronic Certificate of Origin (ECO)?

Please select three options and rank them according to their importance from the most to the least in the following box.

1. Facilitate international trade 2. Improves tax returns by enabling effective collection of import duties

3. Reforming customs procedures and make them simplification, harmonization, standardization and modernization 4.Reduces levels of evasion 5.Reduces corruption levels of customs officials 6.Enhance competitive advantage

--

S7.Does your economy have an implementation plan of Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

S8. Does your economy have united planning to develop Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

S9. Does your economy have a special organization or agency to develop Electronic Certificate of Origin (ECO)?

0 NO/ DONØT KNOW 1 YES

S10. Does your economy carry out reforms to develop Electronic Certificate of Origin (ECO) implementation?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

S11. Does your economy actively publicize the Electronic Certificate of Origin (ECO) benefits to

the main stakeholders?

0 NEVER/ DONOT KNOW 1 SOMETIMES 2 ALWAYS

The following are the possible difficulties in ECO implementation:

S12. Government and public service organizations are conservative, lagging behind in innovation and reform (Path-dependence).

0 YES 1 NO

S13. Lack of understanding of reform.

0 YES 1 NO

S14. Gaps of interests and conflicts of interest among departments.

0 YES 1 NO

S15. Lack of transparency and cooperation among the associated bodies

0 YES 1 NO

S16. Coordination difficulties between related public and private organizations.

0 YES 1 NO

S17. Conflicts between facilitation and security.

0 YES 1 NO

S18. Difficulties to find out the optimal balance between trade facilitation and security

0 YES 1 NO

S19. Difficulties to simplify the complex procedures.

0 YES 1 NO

S20. Lack of incentives for traders to use Electronic Certificate of Origin (ECO).

0 YES 1 NO

S21. Shortages of trained personnel.

0 YES 1 NO

S22. Inadequate physical infrastructure.

0 YES 1 NO

S23. Lack of effective means of communication/data processing

0 YES 1 NO

S24. what might be other difficulties from your point of view?

--

S25. Please select three most severely difficulties from S12-S24 and rank them according to their seriousness from the most to the least in the following box.

--

S26. Does your economy advocate the Public-Private Partnerships?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

S27. Does your economy taken some incentives to encourage private sector to use Electronic Certificate of Origin (ECO)?

0 NEVER/ DONØT KNOW 1 SOMETIMES 2 ALWAYS

5. International Cooperation

C1. Has your economy participated in some international cooperation about ECO implementation?

0 NO/ DONØT KNOW 1 YES

C2. Does your economy have agreement on exchanging cross-border electronic documents?

0 NO/ DONØT KNOW 1 YES

C3. Does your economy have agreement on the legal validity of electronic documents?

0 NO/ DONØT KNOW 1 YES

C4. Does your economy have agreement on allowing option to mandate the electronic documents, or still allow their paper form?

0 NO/ DONØT KNOW 1 YES

C5. Does your economy have agreement on confirmation that the issuing agencies of the electronic documents are authorized to do so?

0 NO/ DONØT KNOW 1 YES

C6. Does your economy have agreement on that the issued electronic documents must be transmitted via the specified means and with the specified security?

0 NO/ DONØT KNOW 1 YES

C7. Does your economy has agreement on mutually recognizing the Digital Certificates?

0 NO/ DONØT KNOW 1 YES

C8.Does your economy have agreement on authenticity of the contents and origin of the electronic documents?

0 NO/ DONØT KNOW 1 YES

C9.Does your economy have agreement on offering a website for the other Party to make online enquiries regarding the status and content of the electronic documents?

0 NO/ DONØT KNOW 1 YES

C10.Does your economy establish the message standard with the other economies?

0 NO/ DONØT KNOW 1 YES

If yes, which message standard is used in your economy?_____

C11. Does your economy complete the electronic data interconnectivity test with the other economies?

0 NO/ DONØT KNOW 1 YES

If yes, which technology is used in the electronic data interconnectivity test?

0 ebMS v2.0 messaging service handler 1 others, please list_____

Appendix B: Questionnaire (2)

Questionnaire on the Readiness of e-CO (Electronic Certificate of Origin) Implementation in APEC Economies

Certificate of Origin (CO) is compulsory document for cross-border trade regulatory compliance.

Electronic Certificate of Origin (e-CO) means the cross-border online exchange of electronic CO document. Cross-border exchange of e-CO is one of the pathfinder projects under APEC, with the objective to reduce the time and cost in international trade processing. This questionnaire aims to understand and assess the readiness of implementing the cross-border exchange of e-CO in APEC economies.

Part One: Basic Information

1.Member Economy:	2.Leading Agency for e-CO Implementation:
3. Liaison Officer:	4. Email:
5.Issuing /Certifying Bodies of CO:	

Part Two: Readiness of e-CO Implementation

1.Domestic e-CO implementation system	1.1 Has your economy implemented the online application of CO?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	1.2 Has your economy implemented the online issuance/certification of CO?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	1.3 If No, does your economy plan to implement the online application and issuance/certification of CO?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	1.4 If No, what do you think are the main reasons? (You can choose more than one options.)	<input type="checkbox"/> Technical Difficulties <input type="checkbox"/> Coordination Difficulties <input type="checkbox"/> Inadequate physical infrastructure <input type="checkbox"/> Others
	1.5 Please list the technical service providers for the online applying / issuing/certifying system of CO:	
	1.6 Has your economy succeed in exchanging CO online among different government agencies in the domestic?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know

	1.7 If No, what do you think (are) the main reasons are? (You can choose more than one options.)	<input type="checkbox"/> Technical Difficulties <input type="checkbox"/> Coordination Difficulties <input type="checkbox"/> Inconsistent Standards <input type="checkbox"/> Inadequate physical infrastructure <input type="checkbox"/> Others
2. Secure domestic exchange of e-CO data --Electronic Signature Law and PKI technology	2.1 .Does your economy have any laws or regulations on electronic signature?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	2.2 Does your economy use PKI technology?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	2.3 Does your economy have CA service?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
3. Cross-border transmission of e-CO data -- secure network systems and mutual recognition of PKI	3.1 Does your economy use secure network systems, such as VPN?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	If your economy use the other secure network systems , please list them:	
	3.2 Has your economy realized the mutual recognition of PKI / CA with other economies?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	3.3 If Yes, please list the economies:	
	3.4 Is your economy implementing the e-CO data interconnectivity test with other APEC economies?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	3.5 If Yes, please list the economies:	
	3.6 Has your economy realized the e-CO data interconnectivity test with other APEC economies?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	3.7 If Yes, please list the economies:	
	3.8 Has your economy realized the cross-border transmission of e-CO with other APEC economies?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	3.9 If Yes, please list the economies:	
4. Government Recognition to e-CO	4.1 How important does the government think it is to develop the e-CO?	<input type="checkbox"/> Very Important <input type="checkbox"/> Important <input type="checkbox"/> Not Important <input type="checkbox"/> Don't Know
	4.2 How is the attitude of the government on implementing the cross-border exchange of e-CO?	<input type="checkbox"/> Very Supportive <input type="checkbox"/> Supportive

		<input type="checkbox"/> Not Supportive <input type="checkbox"/> Don't Know
	4.3 Has your economy reached an agreement with other APEC economies on cross-border exchange of e-CO?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.4 Does your economy have the special agency to implement e-CO project? If yes, please list the agency.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	The special agency is:	
	4.5 Does the economy carry out any reforms of governmental administration system for e-CO implementation?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.6 Does the government recognize e-documents with electronic signatures which are submitted by the enterprises or individuals?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.7 Does the e-documents with electronic signature are recognized among government departments?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.8 Does the government recognize e-documents with electronic signatures from other economies?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.9 Does your economy have any laws or regulations to recognize the legal validity of electronic documents?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.10 Does your economy have any laws or regulations on e-CO -related dispute settlement?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	4.11 Does your economy have any laws or regulations on prescribing the responsibilities in the errors or negligence of electronic data transmission?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
5. Online CO data Access and Check	5.1 In your economy, has the e-Co data can be accessed easily ?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
	5.2 And has e-Co data can be checked and verified online?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know

Part Three: Benefits and Difficulties

1. Benefits of implementing e-CO	1.1 The following are benefits of implementing e-CO, please rank them according to the degree of importance from high to low.
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	①Improve efficiency ②Strengthen supervision ③Reduce corruptions ④Enhance competitive advantage Y our Answer: _____		
2.Difficulties of implementing e-CO	2.1 The following is the possible difficulties when implementing e-CO, please make choice according to your economy.		
	Awareness of government and traders	2.1.1 To change the existing practices / awareness of relevant departments	<input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Not difficult <input type="checkbox"/> Don't Know
		2.1.2 Incentives for traders to use e-CO	<input type="checkbox"/> Greatly inadequate <input type="checkbox"/> Inadequate <input type="checkbox"/> Adequate <input type="checkbox"/> Don't Know
	Cooperation and coordination	2. 1. 3 Coordination among domestic government departments	<input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Not difficult <input type="checkbox"/> Don't Know
		2. 1. 4 Coordination and operation between relevant public and private organizations.	<input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Not difficult <input type="checkbox"/> Don't Know
		2. 1. 5 Coordination and operation between economies	<input type="checkbox"/> Very difficult <input type="checkbox"/> Difficult <input type="checkbox"/> Not difficult <input type="checkbox"/> Don't Know
	Capacity-building	2. 1. 6 Physical infrastructure	<input type="checkbox"/> Greatly inadequate <input type="checkbox"/> Inadequate <input type="checkbox"/> Adequate <input type="checkbox"/> Don't Know
		2. 1. 7 Technical support	<input type="checkbox"/> Greatly inadequate <input type="checkbox"/> Inadequate <input type="checkbox"/> Adequate <input type="checkbox"/> Don't Know
		2. 1. 8 Trained personnel	<input type="checkbox"/> Greatly inadequate <input type="checkbox"/> Inadequate <input type="checkbox"/> Adequate <input type="checkbox"/> Don't Know

Appendix C: Contacts Information

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Appendix D: Glossary

1. GATT: General Agreement on Tariffs and Trade
2. CCC: Customs Cooperation Council
3. WCO: World Customs Organization
4. NAFTA: North American Free Trade Agreement
5. EU: European Union
6. CTI: Committee on Trade and Investment
7. ECSG: Electronic Commerce Steering Group
8. SCCP: Sub-Committee on Customs Procedures
9. SMEWG: Small and Medium Enterprises Working Group
10. PSU: Policy Support Unit
11. GSP: Generalized System of Preference
12. FTA: Free Trade Agreement
13. RTA: Regional Trade Agreement
14. ROO: Rules of Origin
15. CO: Certificate of Origin
16. ECO: Electronic Certificate of Origin
17. TEU: Twenty-foot Equivalent Unit
18. TFAP I : Trade Facilitation Action Plan I

Appendix E: References

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