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ELECTRONIC TECHNOLOGY AND SIMPLIFICATION OF CUSTOMS REGULATIONS AND PROCEDURES IN AIR CARGO TRADE

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ABSTRACT

One of the biggest barriers to air cargo trade is cumbersome customs regulations and procedures that have failed to keep up with the rapid development of the sector. This paper attempts to contribute to a better understanding of (a) the issues surrounding the application of electronic technology and the simplification of customs procedures to air cargo trade and (b) why the issues are important. The current measures and practices are discussed, both generally and in the Asia Pacific Economic Cooperation (APEC) context particularly. The paper further examines regulatory lag and reforms. Finally, the requirements and factors that would affect a successful application of e-technology to customs and related administrative practices are discussed.

INTRODUCTION

With the successful reduction of typical trade barriers such as tariffs and quotas, countries are now in a position to turn their attention to other practical obstacles to the free flow of goods and services across borders. Administrative barriers, which include barriers arising from customs and related administrative procedures, seem particularly prominent for the Asia Pacific Economic Cooperation (APEC) region, given the diverse character of its member economies and their different levels of development in regulative and administrative systems and in technology. In order to effectively expand trade in the region, APEC economies must take full

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advantage of the recent advancement in information technology and simplify customs regulations and procedures.

At the same time, with individual shipments decreasing in volume but increasing in value and with more frequent shipments as a result of globally integrated, just-in-time (JIT) systems, a greater move towards the use of airfreight and air express services eventuates. In effect, for the last decade, the JIT process has made air cargo in general, and air express in particular, the fastest-growth area in the dynamic cargo industry. The international air cargo volume has grown faster than the international trade volume; consequently, it has grown at about twice the rate of worldwide GDP (gross domestic product) growth. Average annual growth in freight-ton kilometers on international scheduled services during the last decade is 7.9%. In addition, both the JIT pressures and the vertical integration of the logistics industry, along with the increasing trend towards outsourcing distribution, have led to much faster growth in the air express market than the total air cargo market. Annual growth in international express has averaged nearly 24% since 1992 (Zhang & Zhang, 2001). Finally, e-commerce is likely to generate further increased demand for air cargo, particularly the time-definite, express market.

While continuing to fulfill their legal duties (tackle drug smuggling or collect value-added tax and duty), customs administrations need to react to this development by facilitating faster customs clearances. Studies have shown that delays as a result of customs procedures was the biggest problem faced by the integrated air express industry in Association of Southeast Asian Nations (ASEAN) countries (ASEAN, 2000). Integrators, airlines and a number of general cargo handlers identified time-consuming customs clearance procedures of several APEC economies as a key constraint on the development of freer and more efficient APEC trade (Ching, Kao, Leung, Wong & Zhang, 2000; Bridges, 2001). For instance, trans-shipment goods are in general still subject to the usual import-export procedures during transfer, unnecessarily increasing the turnaround time of trans-shipment business. Another obstacle to the integrated express industry was the restrictions on investment in ground transport operations, resulting in higher costs of doing business. The primary reason for these obstacles is because integrated, door-to-door express service as a way of movement is still relatively new in Asia. On the other hand, customs regulations or procedures are set mainly in the context of traditional ways of cargo movement, in which customs played a relatively passive role.

This paper attempts to contribute to a better understanding of (a) the issues surrounding the application of electronic technology and the simplification of customs procedures to air cargo trade, and (b) why the issues are important. The current measures and practices are discussed,

both generally and in the APEC context particularly. The paper further examines regulatory lag and reforms. Finally, the requirements and factors that would affect a successful application of e-technology to customs and related administrative practices are discussed.

CUSTOMS ADMINISTRATION AND NEW DEVELOPMENTS IN TRADE AND PRODUCTION

One of the biggest administrative barriers to trade is cumbersome customs regulations and procedures that have failed to keep up with the expansion and increased complexity of trade. Customs regulations or procedures may not directly impede services trade. However, some service sectors, such as distribution and transport, are very much contingent upon customs regulations and procedures. As indicated above, customs simplification and harmonization have become a major issue for companies that find their operations and profits severely affected by administrative delays at borders. Small and medium-sized companies (SMEs) are among the most affected.

Customs administrations perform two basic functions: trade facilitation, and customs control. The latter includes prevention of the infiltration of illicit drugs or other hazardous substances, intellectual property rights protection, and in particular, tariff collection. Historically, tariff collection (revenue raising) was a major function. For developing countries, revenue-raising appears still the main function of customs. Correspondingly, manifest acquittal prior to delivery remains the norm for their cargo clearance process. As a consequence, their customs suffer from information overload, with its consequential delays.

However, as tariff barriers come down, the customs revenue-raising function has diminished in relative importance, especially for developed countries. Since customs regulations or procedures are no longer tied closely to the revenue objective, streamlining customs procedures, via the application of modern electronic technology, becomes predominantly a measure of trade facilitation. If doing so generates net social benefits, the governments would have an incentive to undertake it.

Apart from the continuing reduction of tariff, another important development is the emergence of globally integrated, JIT production and distribution systems. Specifically, companies manufacture to order and have to source their raw materials. They need to reduce inventories and cut down the time it takes to move a product to the market. Product life spans are also shortening in many industries (e.g., computers, pharmaceuticals, and designer clothes). While some companies have turned to virtual warehousing—keeping goods in transit as a substitute for holding goods in

storage—a growing community of e-commerce retailers have begun to rely on strategically located fulfillment centers to enable speedy and economical delivery of goods bought on-line. Furthermore, as a result of continuous declines in tariffs and other trade barriers, *international fragmentation*, that is, outsourcing various production blocks to countries that possess a comparative advantage in that type of productive activities, becomes a major economic force for firms to remain competitive. These increase the demand for international service links, in the form of distribution, logistics and transportation services.

For these international service links, customs becomes an increasingly important component. It is important in many ways, such as, including clearance time, predictability, and transparency (ICC, 1999). Any customs administration that can provide reliable, timely customs clearance, or immediate release based on pre-clearance, creates a competitive advantage in attracting foreign direct investment and foreign manufacturing/distribution/transportation and third-party logistics companies. Arbitrary or unpredictable customs clearance delays are incompatible with efficient manufacturing and distribution. Arbitrary or unexplained changes in classification or valuation of goods also can disrupt logistical flows.

In addition to distribution, transport and logistics services, efficient customs services are imperative to electronic commerce. E-business, that is, transactions involving electronic information exchange, has been growing exponentially for the last ten years and has fundamentally changed the way in which companies do business. For example, the booming e-procurement enables buyers to source distant suppliers and SMEs, and to choose the best suppliers (based on low price, high service level). Another growing e-commerce market is one where goods are ordered on-line and imported through normal channels, often involving inter-modal transport and distribution services. Demand for speedy and efficient logistics and transportation services is much greater in such e-commerce trade than in traditional trade. Since these goods need customs clearance, customs administration remains one component of the supply chain of the e-commerce firms.[1] Application of e-technology to the simplification of customs procedures-shipment, customs clearance, and so on-is therefore imperative for these firms to optimize functions over the supply chain. The streamlined e-customs procedures will also help alleviate the negative trade-diverting effect arising from the current asymmetric treatments for e-commerce products (see footnote 3; Mattoo & Schuknecht, 2001).

AGREEMENTS AND MEASURES ON CUSTOMS AND RELATED PROCEDURES

Given the importance of an efficient customs and administrative system to international trade, significant efforts have been expended on establishing multilateral agreements that deal with barriers related to customs and other administrative procedures. Examples include the following General Agreement on Tariffs and Trade/World Trade Organization (GATT/WTO) agreements.

Agreement on Sanitary and Phytosanitary Measures

In order to harmonize sanitary and phytosanitary measures on as wide a basis as possible, WTO members are encouraged to base their measures on international standards, guidelines, and recommendations where they exist. It is expected that WTO members would accept the sanitary and phytosanitary measures of others as equivalent if the exporting country demonstrates to the importing country that its measures achieve the importing country's target level of health protection. The agreement includes provisions on control, inspection, and approval procedures. Governments must provide advanced notice of new or changed sanitary and phytosanitary regulations and establish a national enquiry point to provide information.

Agreement on Technical Barriers to Trade

The agreement encourages countries to use international standards where appropriate. Innovative features of the agreement are that it covers processing and production methods. The coverage of conformity assessment procedures is enlarged, and disciplines are made more precise. Notification provisions applied to local government and non-governmental bodies are elaborated in more detail. A Code of Good Practice for the Preparation, Adoption, and Application of Standards by standardizing bodies is included.

Agreement on Pre-shipment Inspection

The obligation placed on pre-shipment inspection (PSI) by user governments include non-discrimination, transparency, protection of confidential business information, avoidance of unreasonable delay, the use of specific guidelines for conducting price verification, and the avoidance of conflicts of interest by the PSI agencies. The obligations of exporting members towards PSI users include non-discrimination in the application of domestic laws and regulations, prompt publication of such laws and regulations, and the provision of technical assistance where requested.

Agreement on Import Licensing Procedures

The revised agreement strengthens the principle of transparency and predictability. With respect to automatic licensing procedures, the agreement sets out criteria to reduce trade restrictive effects. As for non-automatic licensing procedures, administrative burdens for importers must be limited to what is absolutely necessary. It also sets a maximum of 60 days for applications to be considered.

Customs procedures have been covered by the disciplines of GATT from its inception. Given the recent developments outlined in the previous section, governments, firms, and users have become increasingly aware of the urgency of customs modernization. The first ministerial conference of the WTO in Singapore in 1996 marked a breakthrough when governments for the first time placed customs facilitation on the agenda of the WTO. In addition, member customs administrations of the World Customs Organization (WCO) invested four years in updating and modernizing the Kyoto Convention, a comprehensive set of practices that should characterize all modern customs administrations. In June 1999, all 151 WCO members unanimously adopted the revised Convention (Kyoto, 2000). Furthermore, the International Chamber of Commerce (ICC), which represents the business community, and the WCO have been working together under a formal cooperation agreement since 1996. One of the ICC efforts is to develop the ICC International Customs Guidelines (ICC, 1997).

At their 1994 meeting in Bogor, APEC leaders declared the target of achieving free trade in the region by 2020, with an earlier date of 2010 for the developed economies. The next year in Osaka they agreed on the Action Agenda and in 1996 adopted the Manila Action Plan for APEC (MAPA). Parallel with the Collective Action Plans (CAPs), individual APEC members announced their liberalization and facilitation plans (Individual Action Plans, or IAPs) unilaterally, and implemented IAPs according to their domestic legislatures. A quantitative assessment of 1997 IAPs and CAPs has been done by Yamazawa (1998).

In the area of customs and related administrative procedures, the Osaka Action Agenda set nine concrete objectives for CAPs: (a) Harmonization of tariff structure with the Harmonized System Convention; (b) Transparency of customs procedures, including information on customs laws, regulations, administrative guidelines, procedures and rulings; (c) Simplification and harmonization on the basis of the Kyoto Convention; (d) Adoption and support for the UN/EDIFACT, using the standard UN electronic messaging format for automated reporting systems; (e) Adoption of the principles of the WTO valuation agreement; (f) Adoption of the

principles of the WTO Intellectual Property Agreement; (g) Introduction of clear appeals provision, in case of potentially erroneous or inequitable customs decisions; (h) Introduction of an advance classification ruling system; and (i) Provisions for temporary importation, for example, acceding to the A.T.A. Carnet Convention or the Istanbul Convention (Yamazawa, 1998).

In 1997, the APEC Sub-Committee on Customs Procedures (SCCP) added the following three objectives to the list: (a) Harmonized action of APEC data elements in order to develop a comprehensive directory supported in United Nations Rules For Electronic Data Interchange for Administration, Commerce and Transport (UN/EDIFACT); (b) Focusing risk management techniques and customs enforcement efforts on high risk goods and travelers (of high probability of inappropriate reporting); and (c) Introduction of guidelines on express consignments clearance (Yamazawa, 1998).

These twelve objectives aim for promptness, transparency, predictability, and harmonization in customs and related administrative procedures. They differ in their difficulty of actual implementation. Many are setting rules and procedures, while some require technology and administrative capability of individual customs.

APPLICATION OF ELECTRONIC TECHNOLOGY

These agreements and action plans have so far yet been fully implemented in APEC economies. Barriers arising from customs delays and red tape involve cross-sector, horizontal issues such as standardization of administrative procedures, coordination among government agencies of different economies, transparency of laws and regulations, and timely and accurate provision of information on regulations and administrative procedures. These are complicated issues that touch upon a number of areas. A useful way is to treat customs and administrative barriers as a trade facilitation issue; as such, they should be included in the broader agenda on trade facilitation of the General Agreement on Trade in Services (GATS) Services 2000 Round.

The discussion in this paper is narrower in scope, however. It examines the application of the full benefits of modern information technology to customs and related administrative procedures. As the role of customs administrations evolves more towards trade facilitation, the focus is on how to improve the speed of goods and services across borders. For instance, they need to rely more on pre-clearance of shipments, scanning of source documents such as airway bills, and greater utilization of risk management techniques for targeted examinations and audits. Here, the recent

advancement of electronic technology has provided important opportunities and tools. As discussed earlier, e-business has made possible global transactions in a seamless environment, and has revolutionized the way we trade and do business. Many government agencies, including customs administrations, have become important users of e-business based facilities. They will continue to take their place alongside larger multi-national organizations at the leading edge of developments in electronic communications media.

An important form of e-business is computer-to-computer exchange of business information, or Electronic Data Interchange (EDI). EDI consists of standardized electronic message formats (transaction sets) for business documents such as requests for quotations, purchase orders, purchase change orders, bills of lading, receiving advises, and invoices. These transaction sets allow computers in one organization to talk to computers in another organization without producing paper documents. EDI is important because it enables organizations to exchange information faster, more cheaply, and more accurately than is possible using paper based systems.

Governments in the APEC economies have been quick to understand the potential benefits and importance of e-technology to their work and are developing EDI-based administrative systems. In Hong Kong, for example, the Government has been proactive in promoting EDI through a partnership approach with private business. One initiative is the Community Electronic Trading Service (CETS), which is a joint venture between the Government and Tradelink Electronic Commerce Limited (Tradelink) to introduce public service EDI for the handling of trade transactions.[2] Typically the trading and cargo industries are driven by high information demands of government agencies, banks, handling agents, port and airport companies, shippers and carriers, with much of the work being undertaken via fax, e-mail and, in more developed economies, EDI-enabled computer systems.

As part of the CETS project, Tradelink and the Hong Kong Government's Trade Department jointly launched, in 1999, an EDI service—Electronic Visa Information System (ELVIS)—for textiles exports subject to U.S. visa requirement. ELVIS is a system whereby the key data on export visas are electronically transmitted from the exporting authority of the U.S. customs for the purpose of customs clearance. By replacing the paper visa copy with electronic message under ELVIS, textiles traders exporting to the U.S. can save time and avoid any possible loss of visa copy during transit or postal delay. Other textiles exporting APEC economies such as China, Singapore, South Korea, Malaysia, Indonesia and the Philippines have also implemented ELVIS.

ELVIS is just one example of the e-technology based initiatives undertaken by individual APEC governments. Of various government

agencies, customs administrations have, in particular, responded vigorously to the challenges and opportunities of EDI, and are today some of the leading users of EDI technology in the trade area. A number of intra-regional EDI pilot initiatives are under way between selected participants under the APEC and Asia EDIFACT Board umbrellas. It is noted, however, that some of the initiatives have simply been developed to prove that the concept of international exchange of clearance information is a possibility. Much work remains to be done for the extensive commercial use of such systems in the next few years.

REGULATORY LAG AND REFORM

The recent advancement of electronic technology provides governments a good opportunity to re-engineer and simplify their administrative procedures. In this regard, it serves as a catalyst for change. The aim of the change is to have e-technology enabled administrative procedures that can fulfill the need for an easily accessible and efficient trading system.

When e-technology is applied to customs and other administrative procedures, a regulatory lag occurs. To illustrate, consider paper-based customs operations: customs clearance must wait until the paper documents arrive at border offices, sometimes at about the same time of cargo arrival. In some economies, a physical signature is required on customs declaration documents, and manual approval is required for customs clearance. In China, for instance, customs clearance requires manual approval (customs chop). Customs brokers and customs often have offices in the same building. Brokers can connect their computers to the customs' system via EDI. For every deal, they are required to first send an electronic form for the statistics of cargoes. Then their staff needs to take all the documents to the customs office. Customs staff check whether the value reported conforms to the specification of the cargo and then verify the documents. If there is no problem (including duty and foreign exchange payment), then customs officials sign and chop the bill of entry/exit. In the case of airfreight shipments, customs clearing must be finished during a working day (from Monday to Friday) before the flight. With paperless, electronic customs procedures, early arrival of cargo information ready for customs pre-clearance, electronic signatures, and automated customs clearance are all possible. But some countries still view paperwork as creating jobs. This is narrow and short-sighted, because it ultimately reduces jobs as it discourages trade and foreign investment.

More generally, e-customs, together with the developments outlined in a previous section, call for customs procedure reforms. Customs administrations and other organizations involved in the movement and

clearance of international freight have historically adopted transaction-based processing philosophies and procedures. The increased airfreight shipments, with individual shipments decreasing in volume but increasing in value, have put much more work pressure on customs clearance procedures at airports (as compared to ports), mainly because such historical clearance procedures remain transaction based. Furthermore, it is noted that many historical customs activities are typically performed at the border, when such activities can be better handled after the event, as part of post-event company audits (TLIAP, 2000). Tasks such as valuation, classification, testing or sampling, are all capable of being undertaken as part of a regular post-entry audit program. By removing some of these activities from front-line operations, and supported by appropriate computer-based systems capable of providing details about past shipments, customs clearance procedures can be simplified, become system based, and help ease pressure on existing facilities and resources.

In fact, as indicated in the previous section, e-technology (in the form of EDI and e-commerce) has already become an important tool for customs administrations as they seek to reconcile the two seemingly contradictory trends between more facilitation to traders, logistics companies and shippers, and more control. If the benefits of e-technology applications were to be maximized, a fairly detailed review of national customs legislation would be required. Such a review is useful in determining the extent of flexibility that exists for the procedural reforms to take place without the need for further legislative rewrite.

Often such legislation is found to be rigid and very specific in relation to document contents, duty payment prior to delivery, examination prior to de1ivery, hours of operation, and other issues (TLIAP, 2000). In many economies, local customs management remains unable to implement procedure reforms, such as clearance prior to arrival, clearance on minimum or no paper documentation, deferred payment of duty, and other risk management initiatives, without first obtaining some form of legislative amendment. In our context and for illustration, the following two points should be accommodated to ensure maximum flexibility for future e-technology based simplification initiatives. First, reference to the extent of supporting documentation should be avoided so that customs can reduce the volume of documents required in support of each shipment, while retaining the authority to call for further documentation on a selective risk management basis (TLIAP, 2000). Second, any specific requirement for a physical signature on a customs declaration and requirement for manual approval should be abandoned. The elimination will then enable future systems to be introduced that support use of bulk clearance of multiple low-risk shipments, use of periodic returns, developments of high

technology clearance systems using scanners with minimum human intervention, use of electronic signatures, and other e-commerce based initiatives.

The application of e-technology to customs and other administrative practices may quickly expose internal weaknesses and constraints. Dealing with them may mean sweeping changes to historical procedures. Such an environment demands that senior government officials ensure the implementation team is adequately empowered to implement organization-wide changes and that the team leaders and project managers are also experts in managing changes. For instance, there are many architectural variations to the implementation of e-commerce trading systems. Each implementation is different. There are different drivers, different circumstances, different expectations, and different investment sources. They all require active participation and support of government agencies such as customs, immigration service and information technology (IT) service to ensure the success. It is also important for governments to smoothly manage the transition from historical procedures to new procedures. Installation of appropriate administrative and management reporting and evaluation capabilities and interfaces to existing systems are often needed.

REQUIREMENTS FOR BETTER APPLICATION OF E-TECHNOLOGY TO CUSTOMS PROCEDURES

There are several factors that affect the application of e-technology and the simplification of customs and other administrative procedures. Some examples are discussed below.

Private Sector Initiative and Government-Business Partnership

Private investors can lead the way in bringing innovation and change at customs procedures. The ICC has a long history of promoting the benefits of trade facilitation and customs modernization on behalf of the global business community. One of the ICC efforts is to develop the ICC International Customs Guidelines (ICC, 1997), which set up some of the international best practices. The Guidelines particularly encourage customs authorities to use automation and e-information systems as extensively as possible (Cattaui, 1998).

In the air transportation industry, leading integrated express operators and International Express Carriers Conference have been active in bringing innovation and change at customs procedures. For example, a study cited earlier was conduced in cooperation with United Parcel Service (UPS), Federal Express, and DHL International Ltd. (DHL), as well as express

service shippers in the ASEAN region (ASEAN, 2000). The study was very comprehensive and made constructive recommendations for changes. Another case is one where DHL went paperless with its customs clearance at Changi Airport Free Trade Zone checkpoint in 1998. The new customs clearance procedure was the result of the joint efforts by Singapore Customs and the air express industry to streamline and enhance Singapore's import procedures and improve its competitiveness.

Close collaboration between government agencies and business community is essential for achieving the objective. On one hand, governments need to know about state-of-the-art business technology and needs and thereby develop compatible automated customs and administrative systems. On the other hand, when governments are investing in the modernization and automation of their national customs administrations, significant future capacity exists for using electronic documents in all aspects of trade (either in goods or in services). However, not only must government agencies be willing and legally able to accept and process such documents electronically, but the commercial sector must also be prepared to make the necessary investment and commitment to introduce complementary process reforms to operate in such an e-environment. Both aspects require a strong partnership between government and business, including, among others, mutual trust and all parties working to agreed time schedules and receiving additional support when needed.

It is also noted that many smaller organizations in the cargo industry appear fearful of customs administrations introducing e-commerce based initiatives as they believe their corporate viability would suffer as a result (TLIAP, 2000). When such systems are contemplated, therefore, they should be preceded and/or accompanied by extensive public education campaigns so as to reduce industry concerns and ensure maximal industrial participation, if successful implementation of the system is to be assured.

The following is an example of a productive public-private partnership. At the beginning of 2001, China's southern Guangdong province, following the suggestions/proposals of business communities in Hong Kong and the Pearl River Delta (PRD) region, introduced a new customs system for vehicles coming overland. Cross-border trade in Guangdong province has been developing rapidly for the last decade. A significant portion of such trade is part of Hong Kong air cargo flows. In fact, about 78% of Hong Kong air cargo business is traffic originating from, and/or destining to, the PRD region. About 25 thousand trucks cross Guangdong-Hong Kong borders each day and the figure is increasing by 15 to 20 percent each year. In the past, trucks coming from Hong Kong had to be inspected at every customs checkpoint they passed before reaching their

destination. Now firms can use a 24-hour computer system to make their customs declarations rather than having to renew their declarations at every checkpoint they pass. The twelve step customs procedure has also been reduced to five steps. Cars are also scanned electronically and drivers no longer need to stop to be checked. Customs transfer, a job that used to take more than an hour to complete, has been reduced to a two- or three-minute process. The reform has greatly increased the customs' efficiency and boosted the province's cross-border trade.

Coordination Among Domestic Government Agencies

Although tariff barriers have come down over the years, there appears a continued expansion of non-tariff trade barriers that typically involve some form of quota control, additional license/permit requirement, or an increased level of surveillance activity. Such barriers bring additional burdens on clearance procedures. Often they require customs administrations to rely on other government agencies to issue appropriate documentation before clearance can be effected. However, these agencies often do not apply the same degree of urgency to the issuance of such documentation, or they are located some distance away from border control points, resulting in delays in the clearance of shipments. E-technology enabled clearance methods, while ensuring adequate safeguards, require constructive relationships between customs and other government agencies.

Adequate Infrastructure and Funding

Successful implementation of e-technology administrative systems requires basic infrastructure such as communications capabilities, significant process reforms and other support expertise. It also requires active participation of business community and local e-business community. For instance, if e-technology makes quality information arrive prior to physical cargo shipments, then customs authorities will be able to analyze the information and conduct risk assessment analysis with respect to whether to inspect the shipments when they pass through customs. This practice can shorten the boarder crossing time significantly. This, however, requires that logistics agents (traders, forwarders, etc.) be IT equipped. Many of these companies are SMEs that still employ totally manual and paper-based historical systems. Where such organizations have invested in some form of automation, it is often only for administrative and financial activities together with international e-mail. Furthermore, the compatibility of their systems is likely to be a problem. Since SMEs may not have enough financial resources especially at the beginning stage of systems

development and standardization process, some form of governmental support (subsidy) and coordination may be required.[3]

In these situations, the implementation of a nationwide cargo community system typically involves substantial investment of public funds in telecommunications, computerization, process reform, extensive public and staff education programs and marketing. However, for developing and emerging economies, typically funding is limited, basic infrastructure is lacking and technical expertise is scarce. A more likely solution for these economies would be to rationalize administrative procedures in one or two isolated areas first. In addition, technical assistance and support from developed economies, coordinated through the APEC, may be required.

Coordination Between National Governments

By streamlining procedures and improving transparency, standardization improves the efficiency of government administrations. Here, the advantage of an e-technology based administration system is that the technology can facilitate standardization. But standardization of policies and procedures requires close coordination among governments of different jurisdictions: for example, they need to agree on common standards, processes and technology to be used. Coordination between customs administrations in exchanging information on the track record of shippers and traders would allow expedited clearance to low-risk shippers and maximize the efficiency of the trading process.

Significant effort is now being made by some countries to develop systems and procedures whereby customs administrations in exporting countries can receive import clearance notification from the importing country prior to granting approval for export. If import clearance is denied due, for example, to quota restrictions, then approval to export should also be denied. Such close cooperation between nations is obviously time sensitive, and will eventually change the way in which certain export consignments are processed in the future. Again e-technology can play a very useful role in facilitating such cooperation.

Standardization and cooperation would also ensure an active participation from the business community. When commercial organizations are multi-national in nature, the introduction of information processing systems must be viewed on a global basis. In such situations the pace of change to core business systems is typically slower and the cost of initiating such change is significantly higher if countries adopt different systems. For governments to successfully influence the private sector participation, it is necessary to ensure that multi-nationals are offered standardized, coordinated and simplified facilities and administrations in a

number of economies concurrently, to justify the significant investment involved by firms in changing their information processing systems. In short, only when the modernization of administrative procedures is conduced by all trading partners, can the full realization of negotiated trade benefits be ensured.

International Organizations

As indicated in an earlier section, a number of initiatives have already been taken at the international level, including work by the WTO, WCO, and ICC on customs. International organizations can do a lot more in reforming and standardizing customs (and other administrative) procedures. Binding rules on trade facilitation should be established in the current round of WTO negotiations and be administered by the WTO. Naturally, such rules would draw upon relevant facilitation work undertaken by other international organizations such as the WCO, the United Nations Center for Trade Facilitation and Electronic Business, the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO) and ICC. In particular, the WCO's revised Kyoto Convention should be adopted and may be given obligatory and enforceable status.

Regarding developing countries, both the WTO and the World Bank now recognize how essential efficient customs and transport regimes are for trade facilitation and sustainable development, and are incorporating these concerns into their core policy objectives. The World Bank, which lends funds to developing countries with the goal of achieving sustainable development, has established a Global Facilitation Partnership, with the objective of disseminating customs and transport expertise and establishing public-private logistics liaisons in World Bank client countries. Measurements of customs efficiency, transport improvement, and integrity are proposed conditions for future lending programs.

Other international forums, such as APEC and Asia-Europe Meeting (ASEM) also play an important role. For example, in the third ASEM attended by ministers for economics, trade and industry from 10 Asian and 15 European countries in September 2001, the ministers agreed that in 2002 they would focus on customs reform toward the paperless customs procedure. An action plan will simplify customs procedure and create favorable conditions for goods circulation between the two regions.

ENDNOTES

1. Note that this is in contrast to another e-commerce market, in which goods are bought and delivered on-line. These goods do not go through customs. In effect, electronic delivery of products is at the moment exempted from customs duties.

2. Tradelink, a consortium involving a number of Hong Kong's leading banks, trading houses and transport companies, was granted seven years exclusivity in operating the Government EDI gateway.

3. Given that they create positive external effects, these supports can be viewed as national investments.

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