

VIII. THE IMPACT OF INFORMATION TECHNOLOGY IN TRADE FACILITATION ON SMALL AND MEDIUM-SIZED ENTERPRISES IN THE PHILIPPINES

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Introduction

This chapter describes the impact of information technology (IT) in trade facilitation on small and medium-sized enterprises (SMEs) in the Philippines. The definition of SME varies across countries, and the Government of the Philippines has adopted one that includes micro- and cottage enterprises. The Government classifies establishments into four categories: (a) micro/cottage (1-9 persons in the workforce and with asset limit of P 3 million); (b) small (10-99 workers, with an asset limit of P 15 million); (c) medium (100-199 workers, with asset limit of P 100 million); and (d) large (more than 200 workers, and more than P 100 million in assets).

On that basis, micro/cottage enterprises have dominated the economy, accounting for a 92 per cent share in 2006, with small and medium-sized ones comprising another 7.3 and 0.4 per cent of all enterprises, respectively. In the Philippines, micro, small and medium-sized enterprises (MSMEs) employ 70 per cent of the total workforce (Department of Trade and Industry, 2009). A large concentration is found in the domestic sector, i.e., wholesale and retail trade, manufacturing, and hotels and restaurants, with 50 per cent in wholesale and retail trade alone. An estimated 70 per cent of the 1,000 firms engaged in exporting are SMEs (Berida, 2008), SME exports made up 19 per cent of SME output and 17 per cent of industry exports (National Statistics Office, 2003), and MSMEs accounted for 25 per cent of the country's total export, revenue, mainly through subcontracting arrangements with large firms or as suppliers to export companies (Department of Trade and Industry, 2009).

However, size is not the only factor that inhibits the internationalization of SMEs and their active participation in international trade. The Global Facilitation Partnership for Trade and Transport (2005) lists 14 barriers to internationalized SMEs.¹ Size, however, makes SMEs more vulnerable to such barriers, i.e., many of the barriers are correlated

¹ These are: (1) a lack of entrepreneurial, managerial and marketing skills; (2) bureaucracy; (3) difficulty in accessing information and knowledge; (4) difficulty in accessing financial resources/a lack of capital; (5) a lack of access to investment (technology, equipment and knowhow); (6) non-conformity in standardization, a lack of quality awareness and a lack of mutual recognition schemes; (7) product and service range, and usage differences; (8) language barriers and cultural differences; (9) risks in selling abroad; (10) competition from indigenous SMEs in foreign markets; (11) unfair behaviour of multinational companies against domestic SMEs/a lack of government supply-support programmes; (12) complexity of trade documentation including packaging and labelling; (13) a lack of government incentives for internationalization of SMEs; and (14) inadequate intellectual property protection.

with firm size. For example, specific concerns of SMEs in the Philippine have to do with their difficulty in accessing markets, finance, technology and information, and the widening technology gap in addition to their small and receding role and minimal share in industrial exports (Hernandez, 2005). Of these major constraints, market access or supply chain efficiency is most affected by policies and procedures governing the movement of goods.

Trade facilitation is defined by the World Trade Organization (WTO) as “the simplification and harmonization of international trade procedures”, where trade procedures are the “activities, practices and formalities involved in collecting, presenting, communicating and processing data required for the movement of goods in international trade”.² Such measures thus logically focus on requirements enforced by customs (i.e., the main border agency), although they include the requirements of other government entities that issue permits for particular goods, banks that accept payments, or transporters and cargo handlers, which are all subsumed under customs’ workflow.

SMEs are the main beneficiaries of trade facilitation because trade transaction costs fall disproportionately on them (United Nations Economic Commission for Europe, 2003). Compliance with direct and indirect transaction costs has been found to have an asymmetric effect on SMEs and little relationship to the value of goods they trade. Complicated trade procedures entail a greater need for manpower to undertake them, implying an adverse impact on SMEs because they typically do not have the manpower or their productivity, when complying, is low. Lengthy processing times affect costs, thus creating a larger burden for small capital-deficient firms. Unpredictable or non-transparent rules and procedures put SMEs at a disadvantage as they need to spend extra resources to obtain information. Unreasonable border delays and demands for bribes to expedite the movement of goods create costs that undermine their competitiveness. Since these costs do not vary with the value of output, they increase the unit operational costs of SMEs.

Information technology has an obvious significant role in simplifying and harmonizing border and administrative procedures that ultimately facilitate trade. Customs data validation, cargo inventory control, goods declaration processing, electronic notification of release, revenue accounting, and customs enforcement readily benefit from IT. From the viewpoint of government, IT secures revenue collection through various means, e.g., the reduction of fraud, remote access to information, improved reporting and collection of statistics, control of file transfers and automatic reconciliation of customs declarations. Automation connects the regulatory authorities involved in trade. Paperless declarations save time that is better spent inspecting high-risk shipments. Pre-arrival clearance, risk analysis and separation of release from clearance are made possible.

From the viewpoint of businesses, IT reduces the cost of doing business by (a) raising the efficiency of customs controls while ensuring the uniform application of legislation, (b) promoting transparency in the assessment of duties and taxes, and (c) improving predictability of clearance times. Automation reduces corruption by minimizing

² Such data comprise commodity characteristics, origin and destination, transport details, permits and issuing agency, trader/broker/supplier information, valuation, payments and exemptions, and packing information.

direct contact between customs officers and traders, and by significantly lessening the potential negative impact of physical inspections. "ICT applications can reduce waiting times at border crossings and at ports, secure appropriate processing of fees and customs duties, simplify formalities, and provide timely information to transport operators...(They) reduce transaction costs, enhance supply capacities and increase global market access" (United Nations Conference on Trade and Development, 2006a and 2006b).

Customs reform or modernization programmes thus inevitably include automation, which induces transparency, predictability and reliability, and allows alignment with international standards. Where other government agencies with border responsibilities such as the issuance of licences and permits, granting of certificates (e.g., origin and compliance), and other related functions similarly adopt IT in their procedures, the trade facilitating impact is enhanced. Hence, efforts towards national single windows and interactive feedback between customs and those agencies are likely to have a positive multiplier effect on efficiency. Therefore, increased emphasis on the wider use of IT in promoting trade facilitation,³ as reflected in many of the proposed measures in the WTO Negotiating Group on Trade Facilitation, can be anticipated. Since the transaction costs of complying with trade regulations and procedures are higher for smaller firms, this chapter attempts to ascertain whether the use of IT in trade facilitation inhibits or encourages participation in foreign trade by SMEs in the Philippines.

Collecting the required establishment-level trade transaction information through a survey of SMEs about their experience with customs procedures in the Philippines is not possible, as it is unavailable from the Bureau of Micro, Small and Medium Enterprise Development of the Department of Trade and Industry, and confidential in the case of the Bureau of Customs. The information was therefore collected from customs brokers since: (a) an estimated 90 per cent of importers, regardless of the size or frequency of transactions, use such brokers in dealing with the Bureau of Customs; (b) brokers make the necessary adjustments to procedural or system changes in order to maintain their clientele, thus determining how easy or difficult it would be for each of their clients to import/export; and (c) the majority of brokers are SMEs themselves.

Section A describes the use of IT in cargo clearance as the core IT-based trade facilitation measure confronting SMEs within customs automation and modernization programmes. Section B provides a brief background on customs brokers⁴ and the survey respondents.

³ Trade facilitation in general can lead to (a) more efficient production and allocation of resources as TF increases competition through reduced transaction costs of trading, i.e., allowing increased efficiency in the use of existing resources, encouraging specialization and activities that reflect comparative advantage, and making use of scale economies through exports; and (b) cheaper consumption as TF reduces inefficiencies and obstacles to trade, thereby lowering domestic prices (United Nations Economic Commission for Europe, 2003).

⁴ Additional information about customs brokerage can be found in annex 3 of ARTNet Working Paper No. 7409, available at www.unescap.org/tid/artnet/pub/wp.asp.

Section C discusses the results of the survey⁵ and the implied characteristics of SME traders. The discussion is guided by the following key questions:

- (a) What IT-based trade facilitation measures are implemented in the Philippines?
- (b) To what extent are they accessible and utilized, and by whom?
- (c) What are the barriers to the use of these measures, particularly by SMEs and new/small traders?
- (d) Did the operator/provider/regulator of these IT services undertake activities to reduce these difficulties and were these activities effective?
- (e) Did the institution of these measures result in increased trade and greater participation in trade by SMEs?

Section D provides the conclusion and recommendations in answer to the following questions:

- (a) Which components of the IT-based trade facilitation measures along the transaction chain seem to be most important in facilitating SME participation in trade?
- (b) What interventions related to the implementation of such components may be required to ensure that the IT-based trade facilitation measures do not discriminate against the participation of SMEs in international trade?

A. Use of information technology by the Bureau of Customs

The Bureau of Customs' first serious attempt at automation was through the installation of a mainframe computer system in 1976 to capture transactions data and generate databases of customs bonds, orders of payment and customs declarations for management information. The manifest clearance system remained in operation up to the 1990s, encoding paper cargo manifests into electronic files for posting declarations and cargo claims and generation of shipment reports. From 1992 to 1998, a Customs Reform and Modernization Programme was undertaken, initially to plug revenue leakages, and was later broadened through a "Blueprint for Customs Development" to cover such objectives as a better business and investment environment, protecting public health and the environment, and streamlining the bureaucracy.

Extensive use of information and communication technology during the programme was a major strategy, mainly to advance customs processes ahead of the arrival of cargo, automate processes and minimize human intervention. Systems and procedures were re-engineered in the following ways: (a) processes were automated to reduce intervention in 80 per cent of transactions; (b) controls were positioned at points where they would be most effective without obstructing business; (c) remote facilities were provided for lodging declarations; (d) paperless and cashless processes were introduced; (e) certain operations

⁵ The survey instrument may be found in annex 4 of ARTNeT Working Paper No. 7409, available at www.unescap.org/tid/artnet/pub/wp.asp.

were privatized; and (f) agencies participating in the system were linked electronically (Parayno, 2004).

The IT system first covered cargo processing from the assessment and collection of duties, taxes and fees, in order to control of cargo. This was achieved through the customization of the Automated System for Customs Data (ASYCUDA++) software developed by the United Nations Conference on Trade and Development (UNCTAD), the acquisition of computers and servers for the 21 ports across the country, and the establishment of electronic links between them through a wide area network. Additional systems were eventually developed for payment and online release in coordination with banks and port operators, respectively. These were then integrated into the Automated Customs Operations System (ACOS), the first IT-based system at the Bureau of Customs that sought to automate the entire cargo clearance chain. By 1997 almost all segments of cargo clearance were fully automated, and by 1998 the system was running at all major ports. The Bureau of Customs intended ACOS to have the following features:

- (a) Selectivity. To speed up cargo release, only high-risk goods would be subjected to the usual controls; low-risk goods would be given immediate clearance. This would entail the application of risk management in identifying cargo that required further document examination and/or physical inspection;
- (b) Post-entry audit. Delays in cargo movement would be avoided by postponing the exercise of some customs controls until after the goods had been released to the consignee. Shipments that would have otherwise required customs intervention would be released after guarantee requirements had been satisfied;
- (c) Advanced processing. It would be possible to initiate the clearance process prior to the arrival of cargo to reduce the time lag between the arrival and release of goods;
- (d) Client self-assessment. Traders would be allowed to self-assess their duty and tax liability to facilitate clearance as well as preempt opportunities for customs personnel to exercise discretion in valuation;
- (e) Electronic data interchange (EDI). Information technology would be deployed to eliminate face-to-face transactions between customs and clients, minimize the time required for clearance and provide convenience to traders. Thus, it would be possible to carry out most transactions with customs electronically.

Specifically, the Bureau of Customs introduced mandatory payment to banks as the first step in cargo clearance, and electronic lodgement of declarations through EDI and direct trader input systems. Computers calculated and collected duties and taxes, determined payments made, issued release instructions for shipments to the cargo handler, and kept document receipts and releases by various offices. IT also selected shipments for examination and assigned the examining officer. For these, the Bureau of Customs established the online release system in cooperation with freight forwarders, electronic transmittal of payment data from banks to the Bureau of Customs in cooperation with the Bankers' Association of the Philippines, and advance submission of manifest information

through port operators' computer systems and consolidators' data exchange centre. Lodgement of declarations was privatized and transferred to the Philippine Chamber of Commerce and Industry. Thus in addition to green lane processing and electronic manifest, there were automated matching of payments and payables, and post-release review.

A trade facilitation programme, called the Super Green Lane (SGL), was established in 2000 as a special customs clearance facility for the top tax-paying importers that did not compromise collections and, instead, generated service fees that went to a trust fund to enhance the efficiency of customs. SGL clients require accreditation and EDI for entry lodgement via an authorized value-added network service provider. SGL shipments are processed and cleared in advance, and are exempt from selectivity and physical or documentary checks, and the P 2,500 fee per declaration (versus P 40 for regular lane); however, if required, the goods are inspected after release at the importer's premises. To qualify for SGL treatment, shipments have to be: (a) in the pre-approved list of importable items of the accredited importer, freely importable or covered by proper import licences; (b) declared under formal entry thus subject to duties and taxes; (c) filed through EDI; and (d) non-agricultural or not requiring quarantine. To encourage the use of SGL, in 2003 the facility was opened to all importers who had transacted with the Bureau of Customs for at least one year and were willing to undergo post-entry audit, and who had good compliance records and imported regularly. The fees were graduated depending on the FOB value of the shipment.

Thus, by 2000, ACOS covered import processing with modules for electronic manifest, electronic encoding, assessment, selectivity, payment and online release. Export documentation was added in 2001. A computerization improvement programme was launched in 2005, comprising 33 major components that included software upgrades to ASYCUDA World, an import and assessment system, exports system, a transactional portal, a resource and operations management system, and a fund monitoring system. All of these are currently being developed.

Value-added service providers (VASP) offered electronic data interchange services and web-based applications for traders to transact electronically with the Bureau of Customs. The Philippine Chamber of Commerce and Industry managed the gateway infrastructure connecting VASPs to the Bureau of Customs. VASP software allowed remote electronic filing and processing of import entry declarations, so that these were prepared offline, lodged by batch and printed in customs-prescribed format, together with the final assessment notices. It also permitted electronic transmission of instructions to banks for payment of duties and taxes based on customs' assessment. However, this software entailed a subscription.

More recently, the Bureau of Customs embarked on an Electronic to Mobile Customs Project (also referred to as E2M or e-Customs System) that seeks to speed up the release of cargo to within 30 minutes by making the Bureau of Customs services available on the Internet and by using mobile phone technology. E2M is envisioned as allowing an end-to-end cargo clearance process covering an electronic manifest, import entries (consumption, informal, warehousing and transshipment), bonds management, export documentation,

online release, licensing and clearance, hold and alert, selectivity and payment. E2M consists of a number of enhancements to the current system: (a) online submission of declarations and manifests; (b) automatic advice on declaration status; (c) use of VASPs; (d) an automated process for other import transactions (informal, warehousing and transshipment); and liquidation of raw materials; (e) centralized management of bonds transactions; (f) links with government agencies; and (g) online access through the Bureau of Customs website.

Until late 2007, import entry declarations could be filed using any of four modes at ports where ACOS⁶ is in operation: (a) manually by taking paper forms for digitization to Entry Encoding Centres (EECs) located at the port; (b) direct trader input that required companies to lease telecommunications lines to connect with the Bureau of Customs through the gateway managed by the Philippine Chamber of Commerce and Industry; (c) EDI of accredited value-added network (VAN) service providers; (d) web-based applications of these providers that entailed subscription. Less than 10 per cent used the latter three modes due to the costs involved, and direct trader input subscribers stopped using the facility relatively quickly (Abrenica, 2006).

The EECs, which handled 91 per cent of the entries, were the main transformation point to digitized form for submission to ACOS. The entry encoding service contract was awarded to the Philippine Chamber of Commerce and Industry in 1995, under which all importers were required to have their import entry declarations converted into electronic files by EECs. The Bureau of Customs rented out a site for the community trade centre that housed EECs together with the software, while the Philippine Chamber of Commerce and Industry provided site development, encoders, equipment, support and maintenance, the investment costs for which were deducted from the rent. The Philippine Chamber of Commerce and Industry charged a P 40 encoding fee per entry (about 800,000 entries were processed annually). For ports not equipped with ACOS, entries are lodged at the Entry Processing Division or equivalent unit, and provisions pertaining to ACOS and selectivity do not apply.

In line with the E2M Customs Project, and to ensure a smooth transition from EEC to an Internet-based lodgement and clearance process for import and export entries, the Bureau of Customs adopted the use of VASPs in January 2007 to deliver front-end IT services and link the transacting public to it. VASPs were accredited⁷ to provide the following services:

- (a) Registration of Bureau of Customs clients;
- (b) Lodgement of import declarations (consumption, warehousing, transshipment and informal);

⁶ As of 2001, all 15 collection districts were ACOS-enabled, i.e., the Port of Manila, Manila International Container Port, Ninoy Aquino International Airport, Davao, Cebu, Cagayan de Oro, Subic, Legazpi, Batangas, San Fernando, Zamboanga, Surigao, Iloilo, Tacloban and Clark, while the three out of 37 sub-ports, i.e., Gen. Santos, Iligan and Mactan, had ACOS (Co and others, 2006).

⁷ Currently, there are three accredited VASPs: Cargo Data Exchange Center Inc.; E-Konek Pilipinas Inc.; and Intercommerce Network Services Inc.

- (c) Lodgement of export declarations;
- (d) Transmission of raw materials liquidation information;
- (e) Transmission of surety bonds information;
- (f) Transmission of payment information;
- (g) Transmission of online release information.

The Bureau of Customs provides and operates the gateway, which is the sole connection of VASPs to the Bureau of Customs e-Customs System for this purpose. Bureau of Customs clients are connected to the gateway via the accredited VASP of their choice. The VASPs have developed front-end IT systems, and have set up the necessary infrastructure and telecommunications facilities to allow electronic transactions. VASP facilities are available to duly registered importers, exporters and their designated brokers. VASPs also facilitate submission by freight forwarders, consolidators and brokers of inbound manifest data to the Bureau of Customs, and maintain a portal for traders to track containers, flight schedules and cargo reservations as well as to obtain advice on release instructions from the Bureau of Customs.

1. Cargo clearance procedures⁸

There are four sets of clearance procedures for cargo entering the Philippines: (a) formal entry, for imports for consumption or home use whose FOB value exceeds US\$ 500; (b) informal entry, for imports with a FOB value of less than US\$ 500; (c) warehousing entry, for imports stored in customs' bonded warehouses; and (d) transshipment. Procedures for formal entry are automated, those for warehousing entry are only partially automated, while those for informal and transshipment entry are manual. Formal entries are now filed using the web-based applications of VASPs.

The following are the general procedures for formal entry prior to E2M changes in October 2009, and where ACOS is available; however, there may be minor differences between ports. These are applied at seaports, where the majority of cargo is cleared (*italicized text* indicates those steps that involve IT):

- (a) Pre-numbered Import Entry and Internal Revenue Declaration (IEIRD) forms and documentary stamps are purchased by the importer/broker from the Administrative Division of the Bureau of Customs;
- (b) The importer/broker completes the IEIRD form, computes the applicable taxes and duties, and remits payment to an authorized bank;
- (c) On receipt of payment, the bank performs two steps. It "check-writes" the original copy of the IEIRD form to reflect the amount of payment received, *and sends a notice of receipt of payment to the Bureau of Customs through the Philippine Clearing House Corporation facility;*

⁸ Based on Abrenica, 2006.

- (d) The importer/broker verifies whether the form has a check-write and lodges the IEIRD through the web-based application of his VASP. No import entry is accepted without the check-write;
- (e) Once encoded, the import entry data is sent to ACOS, which responds with the outcome of the selection process. The selectivity system determines which channel of processing is to be applied on the import entry (green for immediate release; yellow if documentary review is necessary prior to release; and red if a documentary review and physical examination are required);
- (f) The importer/broker prints out the ACOS response (called the Temporary Assessment Notice);
- (g) The importer/broker submits the Temporary Assessment Notice and import documents to the Entry Processing Unit of the Bureau of Customs, which segregates the documents according to the selection results. Import entries that have been selected green are sent to the Collection Division; those selected as yellow and red are sent to the Formal Entry Division;
- (h) The Formal Entry Division has 21 sections, each assigned to specific types of commodities identified through their HS code. The documents are received by the relevant commodity section. The section clerk manually logs all documents received and forwards them to the head of the section;
- (i) The section head assigns a Customs Operations Officer (COO III) to review the entry;
- (j) The assigned COO III retrieves the entry from ACOS and reviews it. If a physical examination is required, a report of the findings is written on the IEIRD form. Otherwise, the officer reviews the documents and requests the importer/broker to present additional documents if necessary. The officer writes his evaluation on the IEIRD form and forwards it to the COO V;
- (k) The COO V reviews the evaluation of the COO III, and encodes the findings of the COO III in ACOS, if he concurs with them. Only the COO V is authorized to make the entry amendment in the system. The entry is then technically "rerouted" to the green lane, i.e., ACOS assesses the amended declaration and determines the duties and taxes due. A registration and assessment number for the entry and an assessment notice are automatically generated by ACOS. At this stage, the entry is considered to have been "assessed";
- (l) The COO V prints the assessment notice and attaches it to the import declaration documents. The documents are then hand-carried by a messenger to the Collection Division;
- (m) At the Collection Division, a clerk downloads the encrypted file from the Philippine Clearing House Corporation network, decrypts the file, prints the electronic abstract of payment, and uploads the decrypted file to the Payment System;
- (n) ACOS automatically downloads the assessed file through the Automated Matching of Payments and Payables System, which is the interface between ACOS and the Payment System, and this, in turn, uploads it to the latter;

- (o) *The Payment System matches the assessed file downloaded from ACOS with the decrypted payment file received from the banks through the Philippine Clearing House Corporation. If the payment matches the assessed duties and taxes, the Payment System converts the matched file to a flat file and sends it back to ACOS using another interface called the Online Release System (OLRS);*
- (p) *A release instruction is automatically generated by ACOS and transmitted to the port operator/transhipper;*
- (q) *The port operator's system matches the release instruction received from the Bureau of Customs with its Arrival of Goods database, using the bill of lading number as the reference key. If it matches, the system sends a feedback message to the Bureau of Customs. The feedback message is uploaded to ACOS using the OLRs interface. ACOS automatically updates the status of the import entry from "paid" to "release";*
- (r) *The importer/broker checks the ACOS Verification Counter at the office of the port operator to determine if the entry has been cleared by the Bureau of Customs and can be released;*
- (s) *The importer/broker pays the transshipping and wharfage fees to the port operator. The port operator issues an official receipt for the arrastre fee, while the Philippine Port Authority issues its own receipt for the wharfage fee. The Data Control Officer of the port operator issues an equipment interchange receipt (EIR), also called the container interchange receipt, which indicates the condition of the container that will be turned over to the importer;*
- (t) *The shipping line issues the Delivery Order and sends a message to the Bureau of Customs lifting its hold on the cargo through the OLRs;*
- (u) *The importer/broker verifies the container details against the EIR at the common video terminal of the port operator;*
- (v) *The importer/broker arranges for a truck to carry the container out of the port. The trucker presents the EIR and Delivery Order to the gatekeeper;*
- (w) *At the gate, the gatekeeper of the port operator scans the EIR and checks the Delivery Order;*
- (x) *The yard equipment operator, upon presentation of the EIR, checks the container location using a radio data terminal. The container is then loaded onto the truck chassis;*
- (y) *As it exits the port, the trucker presents the EIR to the gatekeeper, who then scans it to record the actual release of goods.*

Cargo may be FCL or LCL. The latter entails a few more procedures compared with the former, as the port operator has to establish the volume of the cargo and check it against the cargo description in the Bureau of Customs' OLRs message. Figure 1 illustrates the above cargo clearance procedures for FCL.

Figure 1. Flowchart of formal entry procedures

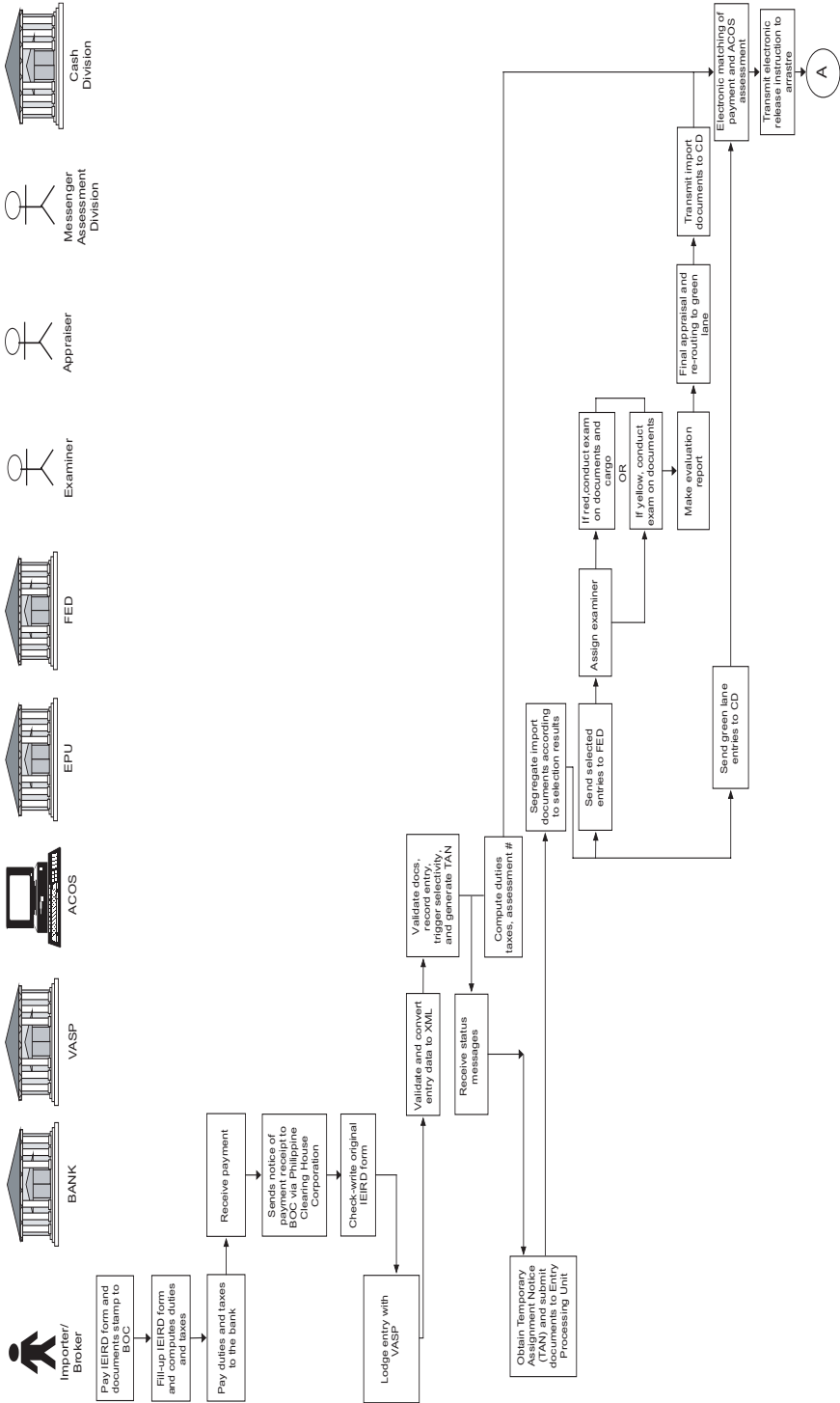
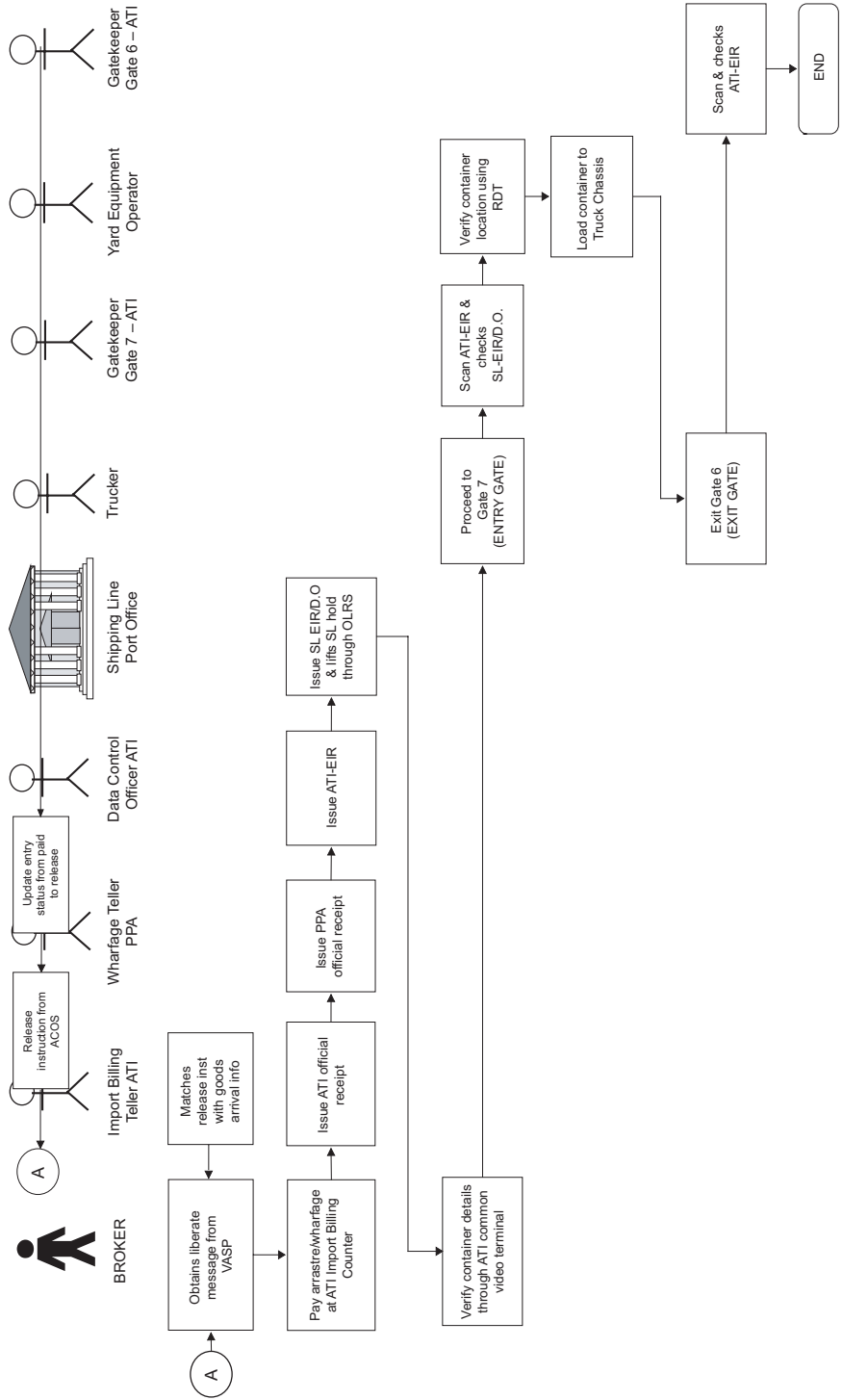


Figure 1 (continued)



2. Client Profile Registration System

At the heart of this process is the recently implemented Client Profile Registration System (CPRS),⁹ a prerequisite for clients undertaking transactions with the Bureau of Customs by electronic means. It is an Internet-enabled application under the E2M customs project. It replaces the manual submission of application forms and documentary requirements for client accreditation, and electronically validates and stores them in a central database; it then automatically notifies clients on renewals due. Clients identify the VASP of their choice and provide their company profile. When their registration is approved, the CPRS issues permanent Customs Client Numbers and digital signatures needed for acceptance of e-documents. Clients use these numbers to register with their bank, which then sends bank reference numbers to the CPRS.

All clients and stakeholders are required to register with the CPRS annually, especially those who need to submit electronic documents for clearance of inbound and outbound goods or move such goods from one jurisdiction to another. They include importers, exporters, customs brokers, surety companies, port operators, warehouses, sheds and wharves being used by the Bureau of Customs as temporary storage and clearance facilities for imported goods, airport transit facilities and off-dock container yards/container freight stations, which must directly register with the CPRS. Transactions by other entities with the Bureau of Customs (e.g., airlines, shipping lines, exporters, port operators, authorized agent banks, forwarders and consolidators) register with the CPRS through the accrediting government agencies. E2M systems depend on the CPRS in validating clients' transactions.

Importers and brokers registering under the CPRS are accredited by the Customs Accreditation Secretariat. In the case of warehouse operators accreditation is done by the Assessment and Operations Customs Group's Customs Bonded Warehouse Committee, while for surety companies it is done by the Revenue Collection Monitoring Group and for container yard/container freight station operators by the Office of the Commissioner.

Bureau of Customs clients that are accredited by the Bureau of Customs offices must apply and register through their VASP. Brokers must register ahead of importers, since their Customs Client Number (CCN) is a requirement for the latter to register. Registration for brokers follows four steps:

- (a) Lodgement of the broker's CPRS profile through the VASP;
- (b) Receipt by the Customs Accreditation Secretariat of the accreditation application and required documents;
- (c) Approval of the submitted profile;
- (d) E-mail notification by the system with attached Certificate of Registration indicating the assigned Customs Client Number.

⁹ From *Information on the BOC Client Profile Registration System (as of January 2009): Frequently Asked Questions*, available at www.philexport.ph/competitiveness/FAQ-CPRS.pdf.

Registration for importers follows three steps:

- (a) The importer lodges his CPRS profile via the VASP, indicating his nominated broker by encoding the broker's CCN;
- (b) The Customs Accreditation Secretariat approves the submitted profile;
- (c) The system generates an e-mail with an attached Certificate of Registration indicating the assigned Customs Client Number as proof of accreditation.

Clients whose accreditation under the manual procedures has not expired must lodge their profiles in the CPRS. This submission is part of the registration process under the Imports and Assessment System. Newly accredited stakeholders must do the same. An importer/broker may start lodging import entries only after obtaining the Certificate of Registration with Customs Client Number and bank reference number from their nominated authorized agent bank; this is issued only after presentation of the Certificate of Registration.

Warehousing entry procedures differ from formal entry, mainly in that they do not require payment of duties and taxes; however, a bond must be posted by the importer/broker to be liquidated if the goods are taken out of the Customs bonded warehouse either for re-export or domestic consumption. From the Entry Processing Unit, green-lane entries are sent to the Bonds Division, while red- and yellow-lane entries are first sent to the Warehousing Assessment Division and then rerouted to the green lane if satisfactory. The bond is applied against the cargo, the transaction is posted, quota balances of the importer/broker verified, and the declared import commodity is checked against the list of imports that may be placed in the designated bonded warehouse to which the cargo is moved.

B. Profile of customs brokerage and survey respondents

Customs brokers have been in operation since the early years of the Philippine Customs Service,¹⁰ although their role was not explicitly defined in the tariff law of the time, nor did they operate as a distinct profession or train formally in tariff and customs matters since these were only learned from experience. Most imports were handled by importers themselves. Through the years, as the need for a thorough knowledge of the complicated tariff structure and import procedures increased with import requirements, importers sought the services of brokers because of their accumulated expertise on these matters. It was also cost-efficient for most importers who imported infrequently, did not have the resources to maintain full-time experts and did not want to risk making errors in

¹⁰ The Philippine Customs Service was constituted in 1902, although the Customs Service of Manila was established as early as 1573 by the Spaniards and existed continuously up to the late 1800s with a brief interruption immediately before the Americans came in 1898 and reopened it. The Philippine Commission adopted the Tariff Act, 1902, and a Customs Service Act was passed in the same year, making the Philippine Customs Service a counterpart of the American Customs Service. Later, it became the Bureau of Customs and Immigration under the supervision of the Department of Finance and Justice. Subsequently, the latter was split, and Customs remained under the Department of Finance. In 1957, the Republic Act No. 1937 (Tariff and Customs Code) of the Philippines was enacted; this was the first official expression of an autonomous tariff policy.

their declaration. Although the use of their services was not mandatory, brokers' operations came under customs administrative orders approved by the Department of Finance. Sometime around the end of World War II, the Bureau of Customs introduced an accreditation examination for brokers, as their task in the import process had become established. This mainly comprised: (a) receipt of shipping documents, bills of lading, invoices and packing lists; and (b) preparation of the entry or internal revenue declaration describing the article(s), the value and weight, and the estimated tariff and duties. Thus, brokers had a dual obligation to represent the importer while protecting government revenue.

Customs brokering became a profession in 1957,¹¹ when the Republic Act No. 1937 (Tariff and Customs Code) was passed. This put into law the licensure examination for a broker to be registered and to practise the profession. Thus, brokers were recognized as professionals, defined in the Philippine context as persons who had passed a licensure examination conducted by the Professional Regulation Commission. According to the Chamber of Customs Brokers, this set apart Philippine customs brokers from their counterparts in other countries where examinations to become customs brokers were conducted by the Customs Administration. This law also specified the academic requirements as being the completion of a four-year collegiate course with at least 18 academic units in tariff and customs and/or taxation, substitutable by actual experience of customs brokerage and tariff, and related matters. Nevertheless, it still allowed an importer, any other holder of a bill of lading, a customs broker acting under authority from the holder of the bill of lading, or an agent or attorney for such holder, to make the import entry. Corporations, associations or partnerships could also engage in customs brokering as a business, and could obtain licences from the Bureau of Customs to operate as customs house brokers.

By that time, an estimated 90 per cent of importers were making use of brokers. Large companies that undertook regular import transactions employed in-house brokers and offered brokerage services themselves. Over the years, multinational corporations that had forwarding and cargo departments set up their own brokerage arms, a trend followed by shipping lines and logistics companies. Some offered not only cargo clearance but delivery of the shipments as well, while consolidated service companies comprehensively covered loading at the port of origin up to delivery to the importer's premises. Brokers also specialized in types of commodities such as foodstuffs, chemicals, textiles, paper products and machinery, in view of the wide variation in tariffs across sub-types or quality of the commodity. Brokers' roles expanded even more with the implementation of the WTO Transaction Valuation System as well as the establishment of bonded warehouses and other industry incentives that had an impact on dutiable values.

In 2004, the first law specific to customs brokers, Republic Act No. 9280 (Customs Brokers Act), was passed to regulate the practice of the customs broker profession through the creation of a Professional Regulatory Board for Customs Brokers. The law standardizes

¹¹ The information in the following three paragraphs is based on an interview with Atty. Armand Padilla, one of the earliest accredited customs brokers, who began practicing in 1954.

customs administration education, provides for licensure examination and registration, and supervises and controls the practice. The academic requirement to take the licensure examination is a Bachelor's degree in customs administration, while holders of a Master's degree in customs administration were qualified within five years from the law coming into effect. The new law imposes a highly specialized course requirement, in contrast to the previous law.

Republic Act No. 9280 also specifies that documents can only be signed¹² by customs brokers, except those brokers who are employees of companies. It disallows agents or attorneys-in-fact from transacting business at the Bureau of Customs. Brokers are prohibited from advancing and financing the payment of any duties, taxes and other charges on behalf of their clients. Corporate practice or the direct or indirect practice by juridical persons/entities such as corporations of the profession is also forbidden, and customs broker licences to practice may be issued only to natural persons. The new law, however, does not proscribe brokers from forming professional partnerships to practice their profession.

Amendments to the new law are under discussion, mainly with regard to the above-mentioned provisions considered objectionable by various stakeholders, that is: (a) the scope of practice of licensed customs brokers and their exclusive right to sign entry and export declarations; (b) prohibition against corporate practice; and (c) prohibition against financing of payments. Also under discussion are the varied interpretations of the implementing rules and regulations and customs administrative orders. At the time of the study, the provisions of the previous law were being enforced pending the resolution of these issues.

At present, there are some 4,800 brokers licensed by the Professional Regulation Commission, of whom 1,700 had been accredited by the Bureau of Customs as of 2006. The Chamber of Customs Brokers is the national accredited organization and has more than 3,000 members engaged in brokerage either as individual professionals, in partnership with other customs brokers, or as principal or alternate customs brokers of brokerage companies.

A total of 67 licensed customs brokers responded to the survey conducted as part of the study reviewed in this chapter. The majority have brokerage companies either as a partner or sole proprietor. About six are also in freight forwarding and logistics, and the same number have offices outside Metro Manila. A profile of their experience, number of employees and client size is given in tables 1 and 2.¹³ The average number of years in the brokerage profession is 12, with half of the brokers being relatively new compared with this average. They typically employ 12 persons and have 7 clients, with 4 employing more than 50 and one having 100 clients. Taking employment size as a proxy for firm size, most

¹² Republic Act No. 8792 (E-Commerce Law, 2000) provides for legal recognition of electronic documents and signatures.

¹³ One respondent was excluded from this table for lack of such information but was included in the rest of the tabulations. A number of respondents did not provide answers to all the questions, hence the varying totals in the tables that follow.

(60 per cent) of the respondents are small companies with a small number of clients, i.e. SMEs. Clients could, of course, range from large corporations to small irregular importers, and their import transactions could be few in number but large in value as well as the reverse. Hence there are extreme cases of companies that employ a few persons but have a large number of clients, or employ many but have few clients. Those with no reported employees or regular clients of their own are just starting out in the profession.

Table 1. Respondents' profiles

	Years in brokerage	Number of employees	Number of clients
Average	12	12	7
Range: low/high	1/50	0/250	0/100
Up to 9	n = 36		
10 to 19	n = 10		
20 and over	n = 20		

Table 2. Distribution of respondents by number of employees and typical client size

Number of employees	Typical number of clients				Total
	0	1 to 9	10 to 19	20 and over	
0	4	4			8
1 to 9		40	4		44
10 to 19		4	2	1	7
20 to 70			2	4	6
250			1		1
Total	4	50	7	5	66

By assembling the survey data according to number of employees as an indicator of company size, table 3 shows that almost half (48 per cent) of all respondents lodged entries on a weekly basis and filed four entry declarations per week on the average. Most of these weekly filers were companies with one to nine employees and lodged four entries weekly. A quarter of the respondents lodged entries daily, averaging six entry declarations per day. Companies with numerous employees tended to lodge more frequently or file more entries weekly. Entry lodgements on a monthly basis were calculated from the respondents' actual monthly estimates as well as extrapolated from their daily/weekly figures. The monthly averages show that large brokers file more than triple the number of entries filed by small brokers. In general, 38 entries were lodged every month, regardless of employment size.

Table 3. Frequency of entry lodgement by employment size

Number of employees	Brokers that lodge daily		Brokers that lodge weekly		Average number of entries lodged per month
	Number of brokers	Average number of entries lodged	Number of brokers	Average number of entries lodged	
0			5	2	7
1 to 9	8	7	23	4	32
10 to 19	4	3	2	16	36
20 and over	5	8	2	6	104
(excl. 250)	(4)	(8)			(85)
Total	17	6	32	4	38
(excl. 250)	(16)	(6)			(35)
Range		2/30		1/28	2/600

The tabulation based on size of clientele in table 4 shows the same pattern as the one in table 3. The only difference is the weekly average lodgements of brokers with numerous clients, which, at 19 per week, is the highest among the categories, compared with the low (6 entries) weekly average of brokers with numerous employees.

Table 4. Frequency of entry lodgement by client size

Number of clients	Brokers that lodge daily		Brokers that lodge weekly		Average number of entries lodged per month
	Number of brokers	Average number of entries lodged	Number of brokers	Average number of entries lodged	
0			2	3	8
Up to 9	8	6	26	3	28
10 to 19	5	4	2	10	62
20 and over	4	8	2	19	115
(excl. 100)	(3)	(7)			(86)
Total	17	6	32	4	38
(excl. 100)	(16)	(6)			(35)
Range		2/30		1/28	2/600

C. Survey results and discussion

Section A described the various IT-based procedures at the Bureau of Customs. For purposes of gauging whether any improvement in the survey respondents' operations was directly attributable to an IT-based measure, the study focused on the electronic lodgement of import entry declarations through the web-based applications of VASPs, referring in particular to the fourth step in the cargo clearance process outlined in section A and excluding the preparatory steps of obtaining the relevant documents.¹⁴ Web-based lodgement through VASPs started in October 2007, replacing the previous modes of entry submission, i.e., manually through EECs, and electronically through EDI-VAN and director trader input EECs, which served 91 per cent of importers/brokers, were phased out starting with the major ports in the final quarter of 2007, while use of the other modes was constrained from the start by high costs. Separating web-based lodgement through VASPs from previous automation efforts is useful in establishing the connection with SMEs, which has not yet been studied. It also allows better recall by respondents, recognizing that the timing of the survey during the global recession makes it difficult to establish benefits clearly.

Lodgement of entries through VASPs was stipulated by Customs Administrative Order 2-2007 in January 2007 and by Customs Memorandum Order 19-2007¹⁵ in July 2007, taking effect upon the issuance of port-specific directives indicating the date of implementation. Order 19-2007 covers consumption and warehousing entries or Phase 1 of the implementation of the E-Customs System. It specifies that VASP tasks will include:

- (a) Validation of captured entry declaration data from importers and brokers in accordance with the validation rules to be provided by the Bureau of Customs;
- (b) Conversion of data to XML format that is compatible with the requirements of the Bureau of Customs-VASP gateway;
- (c) Receipt of error or status messages from the gateway;
- (d) Notification of clients of messages such as status of lodgement, disposition of the entry, advance duty payment, final payment, statement of settlement of duties and taxes, and release.

Under this mode of submission, the entries are registered in the ACOS/ASYCUDA database. This is currently done at 11¹⁶ out of 17 ports, including the three major ports in Manila that handle more than 50 per cent of total imports. The newer scheme called the E2M Imports and Assessment System (IAS) is also utilized through web-based applications

¹⁴ The commercial invoice, bill of lading or airway bill, packing list, ATRIG, certificate of origin, health certificate, licences/permits/clearances, among others. The import entry is also referred to as the Single Administrative Document.

¹⁵ Annex 2 in ARTNeT Working Paper No. 7409, available at www.unescap.org/tid/artnet/pub/wp.asp.

¹⁶ Port of Manila, Manila International Container Port, Ninoy Aquino International Airport, Cebu, Davao, Clark, Subic, Batangas, Limay, Mariveles and Cagayan de Oro. E-lodgement is not available in the ports of San Fernando, Legazpi, Tacloban, Iloilo, Zamboanga and Surigao.

of VASPs, but entries are lodged instead with IAS.¹⁷ This was implemented initially in three provincial ports,¹⁸ with roll out to all other ports completed in 2010. Both have basically the same workflows except for the payment of duties and taxes, which is done prior to the filing of the declaration under ACOS and, at the final assessment stage, through a debit of the importer's bank account under E2M-IAS; thus, under the latter, there is no forced matching of payment with assessment nor a second payment for deficiencies.

The requirement to lodge declarations electronically was formalized under Customs Memorandum Order 40-2008 of March 2009, which imposes sanctions for non-compliance. It covers all types of goods declarations for imports, exports, transshipment, transit and other transactions under the E2M Customs Project, although implementation will be in phases, starting with formal entries for consumption and warehousing. Manual processing is not allowed except when there is a computer systems breakdown, power failure or, in authorized cases, accompanied by a clearance from the Commissioner. However such shipments will still be electronically lodged when practicable. Failure to comply with any of these requirements is grounds for suspension of accreditation.

To be eligible for IAS, importers/brokers must have:

- (a) A valid and active Client Customs Number from the CPRS;
- (b) Bank account information and bank reference numbers for payment of duties and taxes;
- (c) Appropriate licences/clearances/permits from the relevant agencies;
- (d) Applicable non-cash payment instruments;
- (e) Other supporting documents.

Under full implementation of E2M, the procedures will flow as follows:

- (a) The Port Operations/Inspection Division encodes the arrival schedule;
- (b) Shipping lines and consolidators submit the electronic manifests and bills of lading through their VASP prior to the arrival of the vessel;
- (c) Importers/brokers secure licences to import regulated or prohibited goods;
- (d) Importers/brokers file their Single Administrative Document giving bank account information and non-cash instructions electronically through their VASP;
- (e) The Port Assessment Division examines, appraises, and performs final assessment of the entry and cargo declaration;
- (f) The E2M System sends payment instructions to the importers/bank for debiting the final payment from their account;

¹⁷ IAS is a set of application components that handles the flow of import processing, which includes electronic manifest clearance, import declaration entry, risk assessment, regulatory clearances and release of cargo.

¹⁸ Batangas, Limay and Mariveles ports.

- (g) Importers/brokers receive an electronic Statement of Settlement of Duties and Taxes from the Bureau of Customs through VASP;
- (h) The E2M System generates and transmits online release instructions to the temporary storage facility for the final release of the cargo (Bureau of Customs, 2009). The Department of Finance/Bureau of Internal Revenue must also submit electronically a Tax Exemption Certificate and Authority to Release Imported Goods to the Bureau of Customs.

One of the objectives of electronic lodgement is to promote "paperless" transactions. Under the present circumstances, paper versions of the IEIRD and support documents must still be submitted for green-, yellow- and red-lane processing prior to the release of their shipments; for SGL entries, the IEIRD and supporting documents must be submitted after the release of the shipment.

1. Accessibility/utilization of IT-based trade facilitation measures, and barriers to the use of these measures, particularly by SMEs

The respondents' manner of filing entries is shown in table 5. Of the 67 respondents, the majority (82 per cent) use their own computer, with 33 per cent of the total using it exclusively. Two-thirds (64 per cent) use other terminals, with more than 11 per cent of the total using them solely. Slightly more than half (52 per cent) use both their own and other terminals.

Table 5. Method of entry lodgement

Number of employees	Manual	Electronic				
		Total	Using own computer		Using other terminals (VASP, CCBI, PUC, cafe, encoder)	
			Total	Exclusively own computer	Total	Exclusively other terminals
0	2	6	+ 7	1	7	1
1 to 9	1	23	8+26	13	29	6
10 to 19		2	+6	4	3	1
20 to 70		4	+7	3	4	
250			1	1		
Total	3	35	55	22	43	8

Table 6 shows that most of the 67 respondents (82 per cent) had their own computers with Internet connectivity at least; a smaller proportion also had software that calculated due taxes. Almost 18 per cent did not have their own IT system; those respondents comprised small brokers with zero to nine employees. About 70 per cent did not invest in any IT system, either because they already had one or were unable to do so.

VASPs charge P 45 to P 60 per lodgement; this charge is shouldered by the brokers rather than by their clients.

Table 6. Ownership of IT system

Number of employees	Does not have own IT system	Has own computer/IT system with:			Did not invest
		Internet connectivity	Software that computes tax due	System with e-purchase	
0	5	4			6
1 to 9	7	36	6		34
10 to 19		7	3		4
20 to 70		7	2	2	3
250		1	1	1	
Total	12	55	12	3	47

As a direct result of the electronic submission requirement, around 30 per cent of the 67 respondents invested in IT (table 7). These investments took the form of computer purchases, capital expenditures ranging from P 30,000 to P 1 million and Internet service provider subscriptions ranging from P 900 to P 5,600 per month.

Apart from investing in IT systems, brokers adapted to electronic lodgement in a number of ways (table 8), the most common of which was to train personnel in remote filing of entry declarations. This was accompanied by adjustments in company procedures for one-third (33 per cent). Organizational changes were also made by some (23 per cent), while others (13 per cent) set aside some funds or configured their IT systems to accommodate the new steps and obtained internet connectivity. One-tenth did not have to make any adjustments

An overwhelming majority of brokers reported connectivity problems (table 9). This could have been due to poor service provision or poor infrastructure, and thus not within the control of the brokers. The high cost of IT investments made adjusting difficult for 31 per cent. Procedural or organizational changes, or costly skills upgrades, affected only a small proportion.

Other difficulties expressed by the respondents were: (a) explaining the new measures to conventional clients; (b) a lack of regular clients; (c) frequency of technical/

Table 7. IT investment due to electronic lodgement

Number of employees	Invested in IT because of electronic lodgement	Examples of IT investments		
		Average number of computer units	Capital expenditure	Subscription
0	3		P 30 000	P 9 00/month
1 to 9	9	1 unit	P 35 000	P 1 000/month; DSL upgrade
10 to 19	3		P 100 000	P 5 600/month
20 to 70	4	2 units	P 50 000	
250	1		P 1 million	
Total	20			

Table 8. Adjustments to electronic lodgement

Number of employees	Organization and staffing	Training	Procedures	Budget	Equipment	System configuration/ connectivity	None	
								0
1 to 9	7	29	12	3		3		3
10 to 19	2	5	2	2	2	3		
20 to 70	2	6	2	2	1	1		1
250	1	1	1	1	1	1		
Total N = 61	14	45	20	8	4	8		6

Table 9. Difficulties in adjusting to electronic lodgement

Number of employees	Costly investment	Major adjustment in office procedures	Costly training of staff	Major adjustment in organization	Connectivity problems	None	
							0
1 to 9	11	2	3	1	34		6
10 to 19		1	1		4		2
20 to 70	4	2	2		4		1
250							1
Total N = 61	19	5	6	1	48		10

systems breakdown; (d) additional costs that were difficult to pass on to clients; and (e) a lack of preparation by the Government and less than full implementation of the measure, which resulted in the need for personal follow-up after electronic lodgement. The last problem implies that face-to-face interaction has not diminished, giving rise to opportunities for corruption.

According to one VASP, previous requirements did not affect traders directly; however, now that CPRS and e-payment of duties and taxes were being implemented, several of its clients had expressed reservations because direct involvement was required. This confirmed the fact that brokers served as the buffer between the Bureau of Customs and importers when it came to adjusting to procedural and system changes, and that they absorbed all adjustment costs. Since the majority comprises self-employed small-scale entrepreneurs, the effect of electronic lodgement on them is a fair representation of the impact of IT-based trade facilitation measures on SMEs.

An interview with a CCBI staff member who oversees electronic submissions by members at CCBI premises revealed that about 30 per cent used the CCBI computer because they did not have their own; most of them also used the PUC computer or Internet cafes as alternatives since there was only one computer at the CCBI office connected to the Internet. Usually, it is the older brokers or those who have their own brokerage companies that have the capacity to invest in their own computers with connectivity. Brokers who lodge on a daily basis have multinational or large companies for clients, e.g., petroleum and food conglomerates.

CCBI members have adjusted gradually to electronic lodgement, by studying the procedures themselves or by assigning their representatives to study the Bureau of Customs requirements, because there is no option but to learn the entry declaration procedures. They make use of training provided by their VASP or they study either the Customs Memorandum Order or the manual of procedures issued by the Bureau of Customs. At the start, difficulties with the use of electronic lodgement created anxiety among the older brokers who were overwhelmed by the use of IT, but this was overcome as they learned to use the computer. VASPs provided training and seminars, and even personal tutorials, upon brokers' requests. CCBI did the same to help its members adjust, despite having to deal with difficult ones. The Bureau of Customs partnered with CCBI in explaining the new procedures and reassuring members that they would be advantageous to everyone.

The ease and low cost of web-based lodgement also benefits SGL importers. Designed for the top 17 per cent of 6,000 importers who contribute 50 per cent of the revenue, huge EDI and unit entry lodgement costs discouraged potential SGL users and offset its clearance time benefits. The Management Systems International study (2006) found that only 90 importers were SGL-accredited as of 2006, i.e., a mere 10 per cent of the targeted 1,000. Less than three quarters (74 per cent) of accredited SGL importers/brokers used the facility and experienced markedly improved clearance times. However, the benefits were confined to a small number due to the high cost of EDI capability relative to the insignificant clearance time advantage. Thus, while speedy "ship-to-truck" release was provided by SGL, this facility was limited to a small number who qualified or who

opted to bear the costs. Now that EDI has been replaced by web-based filing, more clients can take advantage of SGL.

2. Effectiveness of activities undertaken by operators/providers/regulators of IT services to reduce difficulties

Table 10 shows how the VASP, CCBI and the Bureau of Customs have assisted clients in adjusting to electronic lodgement more smoothly, especially in the case of those clients who experienced initial difficulties. In general, most brokers obtained assistance from VASPs, mainly in encoding, e.g., an explanation of data fields and how to fill them up, one-on-one tutorials and the availability of a helpdesk. This was followed by training and orientation assistance, then free use of computers at VASP premises. VASPs also sponsored seminars upon brokers' requests. Under CCBI, computer use and encoding help were almost equal in importance. Although CCBI also provided training as well as disseminating information through reminders, it mainly acted as a go-between for the Bureau of Customs and the public. Support in these areas was given by the Bureau of Customs in only a few instances, but brokers acknowledged their help in troubleshooting systems problems. One broker, who is also a CCBI officer, noted that personal interaction with the Bureau of Customs was useful in keeping open the lines of communication.

Table 10. Measures to reduce adjustment difficulties

Measure	Encoding assistance	Free computer use at premises	Staff training
VASP	45	28	34
CCBI	39	41	30
Bureau of Customs	10	6	4

Respondents generally found VASP support effective, with 25 per cent explicitly saying so; in fact, one broker rated his VASP a "9" on a scale of 1 to 10. Effectiveness covers:

- (a) The increase in the number of personnel who are knowledgeable in electronic lodgement;
- (b) Reduced lodgement time;
- (c) Assurance that information in the entry is precise;
- (d) Flexibility in lodging at VASP premises in case the client lacks funds needed to pay the import processing fee;
- (e) Accommodation of online queries;
- (f) Step-by-step coaching on electronic lodgement;
- (g) Troubleshooting assistance by telephone in dealing with system and connectivity problems.

Two brokers (3 per cent) said that VASP assistance had had no effect and they had to wait a long time before getting assistance.

3. Impact of IT-based trade facilitation measures on SME participation in trade

Table 11 summarizes the impact of electronic lodgement on respondents' customs transactions. The majority (65 per cent) experienced a reduction in lodgement time to one hour or less. Compared with the pre-electronic lodgement period where lodgement took a half or one full day, this is an improvement, although some respondents commented that lodgement was "sometimes fast and at other times slow". The effect on clearance time varied widely, with roughly equal numbers of brokers waiting for less than one hour and 1 to 2 days to clear their goods. One respondent's succinct observation was that clearance time was "the same, and (electronic lodgement) did not really expedite the Bureau of Customs procedures, but just saved time", i.e., lodgement was easier and faster but the overall clearance time was still unchanged. Another broker with a large employment and client base emphasized that the impact of electronic lodgement was slight at best, since the clearance time of 1 to 2 days had not changed. In addition, informal facilitation fees were reported to have remained unchanged at P 800 to P 1,500 per entry.

Table 11. Impact of electronic lodgement

Period	Lodgement time	Clearance time	Facilitation fees	Number of entries
Less than 1 hour	15	2	Few responses:	Increase (14)
1 hour	13	1	Increase (0)	Decrease (29)
1 hour 30 min	6	3	Drop by 50% (1)	No change (8)
2 hours	2	1	No change (2)	No response (16)
2 hours 30 min	2			
3 hours	2	1		
3 hours 30 min	1			
4 hours	1	1		
8 hours	1	1		
1-2 days		2		

About 90 per cent of respondents said that electronic lodgement had facilitated trade for them. They perceived the benefits to be:

- (a) Remote lodgement is possible, at own VASP or wherever there is Internet access;
- (b) Ability to lodge 24 hours, seven days a week, and to save the entry at any time;

- (c) Fast and easy lodgement, and convenient, efficient, systematic and quick processing;
- (d) No need to queue for ACOS;
- (e) Ease of obtaining an entry number as long as there is no problem at lodgement or in the schedule;
- (f) Reliable information on the declaration, and less paperwork;
- (g) Less manpower used;
- (h) National pride in having electronic lodgement.

Of particular interest is that e-lodgement allows brokers to learn the outcome of the selection process much earlier (e.g., whether or not the cargo has been selected for physical inspection), enabling them to take measures to ensure that cargo are processed and released with fewer hitches.

Despite a clear reduction in lodgement time for about 60 per cent of respondents, the impact on the volume of entries was mixed, although the global downturn in economic activity undoubtedly had an adverse effect on trade. A total of 14 respondents said that their lodgements had increased (16 did not respond to this question). Of 29 respondents who had suffered a reduction in the number of entries filed, 17 experienced a halving of their previous volume of declarations. Eight respondents said they had not experienced any change in import volumes.

Several CCBI brokers confirmed the ease of lodgement in terms of facility and speed in addition to the ability to view immediately the results of their lodgement, all of which saved time. However, monetary costs have not changed since several "barriers" still exist that block cargo clearance at various stages in the process. Other cases of delay are due to documents not being in order or the need to undergo X-ray inspection. Web-based lodgement has meant reduced time spent in the submission of the import entry.

Web-based lodgement through VASPs is a continuation of modernization efforts at the Bureau of Customs, and is an improvement over a previous mode of electronic submission. The impact of procedural changes brought about by such IT applications may be better appreciated in the context of system reforms instituted simultaneously, such as transaction valuation, selectivity and risk management, post-entry audit or the SGL facility. A number of assessments undertaken on the effects of these reforms have examined clearance time, a proxy for transaction costs, as the indicator of impact.

Abrenica and Tecson (2003) concluded that the shift in 1996 from manual to automated processing of import documents changed Bureau of Customs operations significantly, particularly in the case of trade facilitation such as simplified and harmonized procedures (10 copies, 90 steps, 40 signatures), shortened release time (10 days to less than 3 hours) and elimination of traditional opportunities for fraud and rationalized the use of manpower and other resources. However, some of these gains are perceived to have been lost over time. Where modern customs administrations are expected to reduce clearance time, primarily by intervening only by exception, the reverse characterized the

Bureau of Customs, i.e., intervention became the rule rather than the exception. By 2002, 71 per cent of entries were selected as yellow or red, compared to 26 per cent in 1996 when ACOS was first deployed. The average clearance time was 29.9 hours in 2003, compared with 21.6 hours in 2000.

The impact on clearance times found in the JICA-UPEcon Foundation (2003) study of 16,770 entries compared with theoretical clearance times is shown in table 12. Actual mean time from lodgement to release was 28.5 hours, more than four times the benchmarked time for the quickest red lane (physical inspection) entry. Actual processing time for yellow lane (documentary inspection) entries was almost 35 hours, compared with the longest theoretical benchmark time of 26 hours. Curiously, green lane entries took 36 hours to clear compared with 29.5 hours for red lane entries.

Table 12. Customs clearance times in 2003 (hours : minutes)

Step	Green	Yellow	Red
Lodgement to assessment			
Theoretical	00:07 to 00:33	01:07 to 24:33	04:07 to 72:33
Actual	–	31:06	24:40
Assessment to clearance			
Theoretical	00:51 to 01:45	00:55 to 01:50	00:55 to 01:50
Actual	36:16	3:41	4:49
Lodgement to clearance			
Theoretical	00:58 to 02:13	02:04 to 26:13	06:04 to 74:13
Actual	36:16	34:47	29:29

Source: Abrenica and Tecson (2003), who obtained the theoretical times from the Bureau of Customs and actual times from the UPEcon Foundation (2003).

Clarete (2004) calculated significant time savings of 1 to 5 days from the arrival of goods at the port to their release, after the shift in the valuation system from home consumption value to transaction value. Such time savings occurred in the interval between arrival and lodgement because the pre-shipment inspection document that was previously required for lodgement was no longer needed. However, the total cargo processing time was still 5.4 days.

The overall findings of a Management Systems International (2006) study were mixed on the efficiency, effectiveness and anti-corruption impacts of the shift to transaction valuation, SGL and post-entry audit. Nearly half (47 per cent) of the importer/broker survey respondents experienced faster release of their shipments under the new valuation system while 67 per cent of SGL-accredited traders attributed faster clearance to SGL. However, several other studies demonstrated no appreciable improvements during the lodgement-to-clearance interval subsequent to reforms. Only SGL showed slightly faster release times. Risk selection increased from 26 per cent in 1997 to 44 per cent in 2000, 71 per cent in 2002 and 90 per cent in 2004, causing efficiency to drop.

“The IT reforms conducted between 1992 and 1998 appear to have produced a major reduction in cargo clearance times, reducing the bulk of paperwork and signatures that fostered opportunities for corruption. These efficiencies occurred primarily in the early stages of cargo processing, when goods arrive at port through lodgement. These early steps appear to be more amenable to automation and streamlining reforms. However, none of the later stage EGTA-assisted reforms seem to have had additional effects in reducing clearance times; in fact, just the opposite is indicated. This apparently resulted from counter-reform actions that have increased the selection of shipments for documentary and physical checks – offering opportunities for corrupt transactions. While importers generally perceive that clearance is now faster, they believe that customs procedures are still plagued by corruption, insider dealing and lack of openness” (Management Systems International, 2006).

More recent evaluations of customs procedures undertaken by worldwide surveyors show the same unfavourable picture. On a scale of 1 (for extremely slow and cumbersome) to 7 (for rapid and efficient), Philippine respondents to the 2008-2009 *Global Competitiveness Report* (World Economic Forum, 2008) gave a rating of 2.9 to customs procedures (defined as formalities regulating the entry and exit of merchandise). In terms of the burden of customs procedures, the Philippines ranked 105 out of 134 with a mean score of 3.9, compared with top-ranked Singapore’s score of 6.5. This means the indicator constitutes a disadvantage. The overall global competitiveness rank of the Philippines was 71 with a score of 4.09, somewhat midway between the top-ranked score of 5.74, and the lowest-ranked score of 2.85.

Similarly, the 2008 *World Competitiveness Yearbook* (International Institute for Management Development, 2008) placed the Philippines at 40 out of 55 countries. On the question of whether customs facilitated the efficient transit of goods, a ranking of 51 placed the Philippines almost at the bottom. Previous scores for business sector perception of corruption were 2.57 in 1999, 2.7 in 2000, 3.5 in 2001, 2.6 in 2002, 3.0 in 2003 and 2.7 in 2004.

The observation that substantial improvements had taken place in the interval between shipment arrival and entry lodgement, whereas there had been none between entry lodgement and cargo release, is substantiated by the results of the broker survey reviewed in this chapter. A cursory examination of cargo processing would appear to suggest this to be inevitable, since the majority of the steps between lodgement and clearance had apparently been automated for some years and were therefore unlikely to yield any further improvements in efficiency. However, a closer look reveals some manual steps that apparently take time:

- (a) Step vii, where the Entry Processing Unit segregates the import documents;
- (b) Step viii, where paper documents are received at the Formal Entry Division commodity section;
- (c) Step ix, where an officer is assigned to review the entry;

- (d) Step x, where the officer reviews the entry and makes a report;
- (e) Step xi, where the entry is amended; and
- (f) Step xii, where the documents are carried by messenger to the Collection Division.

Thus while web-based electronic lodgement is a major improvement from manual to IT-based procedure, having reduced lodgement time and costs, speedy clearance is still constrained by manually-performed tasks, particularly in assessment.

Other factors not within the control of the Bureau of Customs have been known to cause delays, and must therefore be dealt with. These include, for example:

- (a) Late arrival of the original documents required for lodgement;
- (b) Late submission by shipping lines of the inbound manifest used to validate entry declarations, and which must be done before entry lodgement;
- (c) A preference for afternoon lodgement at airports, leading to release in the evening, attributed to the truck ban from 6 a.m. to 9 a.m., and from 6 p.m. to 9 p.m.;
- (d) The use of "backdoor release" facilities.

These factors were among the reasons for the long wait between discharging the cargo and lodgement (reckoned upon ACOS acceptance of the declaration) in the 2003 study. These pre-lodgement requirements took from 1.5 to 2.9 days to fulfill and occupied the longest segment in the total processing time at any port, thus accounting for about two-fifths of the total time between the arrival of the vessel and the release of cargo to the consignee (JICA-UPEcon Foundation, 2003).

D. Conclusion and recommendations

The survey revealed that web-based electronic submission shortened lodgement time but did not affect total clearance time; the majority of submissions experienced a drop in lodgement time to one hour or less, an improvement over the pre-electronic submission time of half to one day, but clearance time of one to two days remained unchanged. Manually performed tasks within the lodgement-to-clearance interval may be slowing down overall procedures. Nevertheless, there are IT solutions to these steps as well, making it possible to shorten the interval. In early 2009, test implementation of the E2M system took 15 to 52 minutes to complete at a particular port¹⁹ from the submission of the manifest by the shipping line to the release of the shipment. This could become the initial benchmark for cargo processing, if not for the lodgement-to-clearance interval, since the Bureau of Customs has a self-imposed target of 30 minutes. Other causes of delay prior to lodgement must also be addressed.

¹⁹ As reported by Josephine Nagallo, Customs Director, during her presentation at the Regional Policy Forum on "Trade Facilitation in Times of Crisis" on 20 May 2009 in Beijing. See http://www.unescap.org/tid/artnet/mtg/tf_sme.asp for details.

Electronic lodgement allows clients to use any computer with Internet connectivity; thus, this particular measure is more easily accessible by a greater number. The only prerequisite is to be CPRS-registered and have a Customs Client Number, indicating that one is enabled to transact electronically with the Bureau of Customs – a requirement with which it is also relatively easy to comply. Indeed, one third of the survey respondents filed entries through their own units exclusively while two thirds used both their own and other computers.

In contrast, prior to web-based submission, traders and brokers either had to go to EEC for lodgement or be EDI- or direct trader input-enabled. Although theoretically open to any client, in practice the costs of subscribing to the software, and investing and maintaining hardware and connectivity for EDI and direct trader input deterred clients with few resources from accessing and using such IT procedures. Similarly, the EDI-capable requirement for SGL users limited its accessibility by effectively disabling resource-constrained firms from pursuing accreditation with the facility. The benefits were thus limited to a small number of clients and the full impact of such a trade facilitation programme, as it was called, could not be realized. SGL requirements also precluded SMEs from participating, putting them at a further disadvantage. Electronic lodgement now makes it easier and cheaper for all importers/brokers, regardless of size, to submit entries. Given the fact that small importers (those who make one to two shipments a year) are estimated to account for more than half of the 800,000 import entries lodged annually (Donald Dee, quoted in Gulane, 2007), the number of importers and entries affected by electronic lodgement is substantial.

The trading volume of firms, regardless of size, is determined by the demand for their products and their capacity to supply the products. At the time of the study, the global economic downturn was the single overriding reason for depressed trade overall. The trading capacity of SMEs is thus currently a result of poor demand rather than access, technology, or other size-related or procedural difficulties. This makes it difficult to establish the extent to which IT-based cargo processing improvements increased SME participation in trade, whether in terms of greater trading volumes of particular SMEs or of a larger number of SMEs entering trading. Nevertheless, 20 per cent experienced an increase in filed entries while the number did not change for 12 per cent.

Since micro/cottage businesses and SMEs account for 25 per cent of the Philippines' total export revenue, together with the fact that approximately 70 per cent of exporters are SMEs, export growth is likely to be partly attributable to SMEs. The contribution of exports to gross national product increased from 10.9 per cent in 1970, 19.4 per cent in 1980 and 27.1 per cent in 1997 to 39.09 per cent in 2007. Despite the current economic slowdown, the export sector grew by an average 4.4 per cent in late 2008. Non-electronic goods such as wearables, food, home furnishings, marine, mineral and petroleum products, metal components and coconut products gained strength, while automotive parts, agricultural products and minerals showed good potential. SMEs engaged in exporting agricultural and forest-based products made headway, with the majority exporting fashion accessories, gifts and houseware, holiday dácor and food

products (Berida, 2008). Hence, the strong likelihood is that growing exports of food, home furnishings and agricultural products at least originate from SMEs.

Apart from the convenience and speed of electronic submission, the ability to view immediately the results of lodgement reduces transactions costs. About 90 per cent of the survey respondents (most of whom were SMEs) confirmed that web-based lodgement made transacting more efficient, lowered time and resource expenditures and ensured reliable information. Since compliance costs for SMEs are disproportionate to their size, IT-based lodgement benefits them by lowering unit operational costs and total cost burdens enough to make them more competitive with their large counterparts; the manpower required to undertake import procedures is lessened, financial outlay is reduced by the shorter wait, and uncertainty is eliminated with online information about the status of entries and Bureau of Customs announcements. In view of their substantial share in export revenue earnings and outstanding performance in the face of the global recession, lowered transactions costs and more efficient trading imply that the contribution by SMEs to exports would be enhanced.

Components of IT-based measures along the transaction chain that facilitate SME participation in trade, and interventions required to ensure this:

The survey results point to several bottlenecks or deficiencies encountered by respondents in complying with import requirements, including:

- (a) Connectivity problems, cited by an overwhelming majority, are a huge problem. Reliability and speed/bandwidth of Internet connections provided by telecommunication firms and Internet service providers, affects the ability to encode or download electronic document information. Competition among private providers ensures better service, but a poor telecommunications infrastructure is the binding constraint;
- (b) The frequency of technical/system breakdowns on the Bureau of Customs' side must be addressed by ongoing improvements such as the E2M Project;
- (c) Inadequate implementation of electronic lodgement, which results in a continuous need for personal follow-up, was due to the lack of preparation by the Government, according to the respondents. Glitches in the system, a likely outcome of infrastructure and connectivity problems, disable clients from lodging their entries properly, thus requiring them to seek information or intervention from Bureau of Customs personnel;
- (d) Costly IT investments, as cited by one-third of the respondents, are more likely to affect brokers with little capital and few clients. Web-based electronic lodgement allows them to use any computer, however, thus eliminating the need to invest in software or hardware for purposes of complying with import procedures. Apart from the VASP, CCBI and PUC computers, numerous Internet cafes in the port areas provide the required services.

A number of interventions were suggested by the survey respondents for making electronic lodgement more effective. IT system improvements appear likely to have the greatest impact, such as:

- (a) Adjusting the system to accommodate the large number of entries lodged during office hours or making the system available on a 24-hour, seven-day basis. Currently, while preparation of entries and lodgement with VASPs can be done 24 hours a day, the Bureau of Customs servers are only in operation from 8 a.m. to 6 p.m. (except NAIA, which operates up to 10 p.m.). Furthermore, the Payment Application Secure System – under which duties and taxes payable are transmitted to the authorized agent bank via a payment gateway, through a secure communication channel, and collected by debit from designated bank accounts – is available only during banking hours or from 9 a.m. to 3 p.m. To access the system and take advantage of processing and bank hours, entries are lodged during this period, thus contributing to heavy traffic that slows down the system;
- (b) Additional computers for free use by clients at the Bureau of Customs are needed;
- (c) User-friendly software, which is preferred;
- (d) An IT infrastructure that supports this system at all ports. E-lodgement under ACOS is currently available at 11 of 17 ports,²⁰ accounting for 92 per cent of import value. E2M-IAS has been implemented in the three ports of Batangas, Limay and Mariveles, which account for 23 per cent of total import value. However, E2M-IAS has not yet been tested for its ability to handle a large volume of entries. For example, at Batangas port where it was pilot tested, there are less than 200 entries per month compared with Manila International Container Port, which receives 1,000 entries daily;
- (e) Ensuring fast and easy access to the system and immediate response, and providing back-up for the system.

Information/education is another area that respondents find important, including:

- (a) Providing proper information to brokers;
- (b) Immediately publication of clear guidelines in line with the fast-changing customs clearance process;
- (c) Free innovative training for staff;
- (d) Organizing seminars for stakeholders on, for example, adapting to e-lodgement and related procedures. Moreover, a few procedural interventions could enhance the positive effect of electronic filing;

²⁰ Manila, Manila International Container Port, Ninoy Aquino International Airport, Cebu, Davao, Clark, Subic, Batangas, Limay, Mariveles and Cagayan de Oro.

Moreover, a few procedural interventions could enhance the positive effect of electronic fining:

- (a) Application of less stringent measures for errors in lodgement. Flexibility on this point would be reasonable during the early stages of its implementation, but standards must be imposed once clients have become used to the system;
- (b) Strict implementation of self-lodgement by brokers to eliminate the practice of using unofficial assistance or outside encoders. This will uphold professionalism and accountability in the workplace.

Based on the study results, the following IT-based interventions are recommended in the transaction chain in order to facilitate SME participation in trade:

- (a) Complete the computerization improvement programme and implement the new procedures at all ports;
- (b) Address the reasons for delays during the lodgement-to-clearance interval, such as (i) selectivity criteria that are outdated or unrealistic, (ii) HS nomenclature that causes confusion, (iii) hardware and software deficiencies in assessment and online release, and (iv) inadequate facilities for physical inspection;
- (c) Address constraints occurring between the arrival of cargo to lodgement, e.g., delayed submission of manifests and other documents;
- (d) Implement fully a national "single window", defined as a system that enables a single submission of data and information that is synchronously processed, and is a single point of decision for the release of cargo by the Bureau of Customs, based on decisions of other agencies that are communicated to the Bureau of Customs. This initiative has already been discussed for some time, as the Association of Southeast Asian Nations agreed to adopt this approach at the national and regional levels years ago, while an Executive Order to create the Philippine NSW Task Force for Cargo Clearance was created in 2005. The groundwork has already been done on the process and technical requirements with assistance from various multilateral institutions. Difficulties must be confronted by decision makers, particularly the mindset among some stakeholders that they will have to relinquish control of what they perceive to be their respective jurisdictions, with consequent resistance against moving forward.

Finally, statistics on SME trading must be generated on a regular basis for baseline purposes to enable a deeper understanding of the SMEs' contribution, needs and potential. Data on establishments collected by the National Statistics Office does not include information on trade while foreign trade statistics do not relate to the enterprises engaged in it. The directory of SMEs at the Department of Trade and Industry only indicates the import or export activity of those enterprises that provide the information; it does not contain indicators of magnitude or scale.

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