

VI. THE IMPACT OF INFORMATION TECHNOLOGY-RELATED TRADE FACILITATION MEASURES ON SMALL AND MEDIUM-SIZED ENTERPRISES: AN OVERVIEW OF INDIA'S EXPERIENCE

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Introduction

In the early 1990s, India launched a comprehensive economic liberalization programme that was supplemented by the introduction of various trade facilitation (TF) measures, including efforts to improve cargo clearance, through the introduction of automation-related initiatives. The introduction of the Information Technology Act in 2000, which proposed institutional support to ensure commitment for e-governance, provided a major policy impetus for TF. This led to the establishment of a Certificate Authority for accepting electronic signatures, and boosted the growth of Information Technology services and IT Enabled Services (ITES) in the trade sector.

A further thrust for trade facilitation in India came through the budget speech of the Union Finance Minister (1999-2000) that articulated the necessary political will for launching various TF measures and announced the setting up of a Task Force on Indirect Taxes chaired by Mr. Vijay Kelkar (Kelkar Committee). The Task Force, in its report, suggested a major automation programme for the Customs Department. The Information Technology Act, 2000 empowered the Central Board of Excise and Customs (CBEC) to issue digital signature certificates, which makes it possible to provide legal validity to the electronic declarations (Standing Committee on Finance, 2005).

In 2004, the Ministry of Finance established a Working Group on Trade Facilitation to suggest a roadmap for developing a comprehensive action plan for trade facilitation. It suggested evolving specific policy instruments related to dwell time, greater automation and other issues in order to improve the effectiveness of the Indian trade facilitation measures. Since October 2004, when the Working Group released its report, CBEC has implemented several measures (Central Board of Excise and Customs, 2005 and Roy, 2004).

In the Indian context, several studies such as those by Chaturvedi (2007), Taneja (2004) as well as Sengupta and Bhagabati (2003) assessed the impact of adoption of TF measures on the government's functioning from various perspectives. There are apparently no studies on the implications of TF measures for the private sector, particularly for small and medium-sized enterprises (SMEs). In 2006, the Committee on Infrastructure chaired by the Prime Minister constituted an Inter-Ministerial Group (IMG) to suggest ways and means for reducing dwell time for cargo clearance (Planning Commission, 2006), but its

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focus was not on how SMEs or the private sector as a whole cope with the new working environment vis-à-vis customs and other agencies. In this context, the debate at the World Trade Organization (WTO) negotiations becomes equally interesting. The European Union (EU) and Switzerland have raised the issue of equal and transparent treatment for customs brokers, particularly for the new entrants (WTO, 2006 and 2008a, b, and Chaturvedi, 2006).

The EU, in another proposal with Mongolia, delineated specific criteria for authorized traders such as an appropriate record of compliance with customs requirements, a system of managing records to allow for necessary controls, financial solvency (including, where appropriate, provision of a sufficient security/guarantee), and an appropriate system of security and safety standards (WTO, 2008a).

Some of these issues are discussed in the following sections. Section A deals with the role of SMEs in exports while section B details evolution in the use of IT for cargo clearance. Section C examines the impact of IT trade facilitation measures on SMEs. Section D presents stakeholder interviews on the impact of information technology automation in trade facilitation. Section E concludes the chapter and proposes some recommendations.

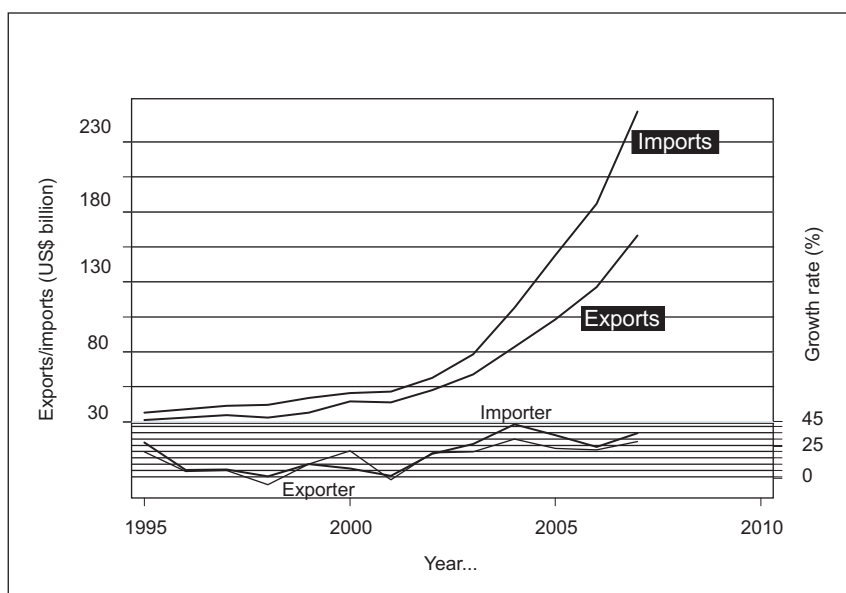
A. External sector and role of SMEs in India

The Indian economy embarked on a high growth path from the beginning of its reform programme in the early 1990s. India's external sector performance has been robust since the beginning of the economic reforms, and received further impetus during the early part of the new millennium. The overall growth performance of the sector was more profound in the present decade as shown in figure 1. The external sector expanded at an average rate of 25.6 per cent from 1999-2001 to 2005-2007 in US dollars terms, and at the rate of 20.9 per cent in rupee terms during the same period. The value of merchandise exports reached US\$ 162 billion in 2007/08 (figure 1). Similarly, merchandise imports grew by 24.5 per cent to US\$ 251.5 billion in 2007/08 (Chaturvedi and Mohanty, 2007).

In the Indian economy, SMEs play an important role in the country's economic growth and trade (Das, 2007, and Mohanty and Arockiasamy, 2008). Recently, the Government of India restructured the ministries dealing with SMEs by amalgamating the Ministry of Small-Scale Industry and the Ministry of Agro and Rural Industries.¹ The new establishment is known as the Ministry of Micro, Small and Medium Enterprises. As table 1 shows, micro, small and medium enterprises (MSMEs) are defined differently for the manufacturing and services sectors under the Micro, Small and Medium Enterprises Act, 2006.

¹ The President, under Notification of 9 May 2007, amended the Government of India (Allocation of Business) Rules, 1961.

**Figure 1. External sector performance of India,
1995/96-2006/07**



Source: India Trades, based on Directorate-General of Commercial Intelligence and Statistics, Ministry of Commerce and Industries.

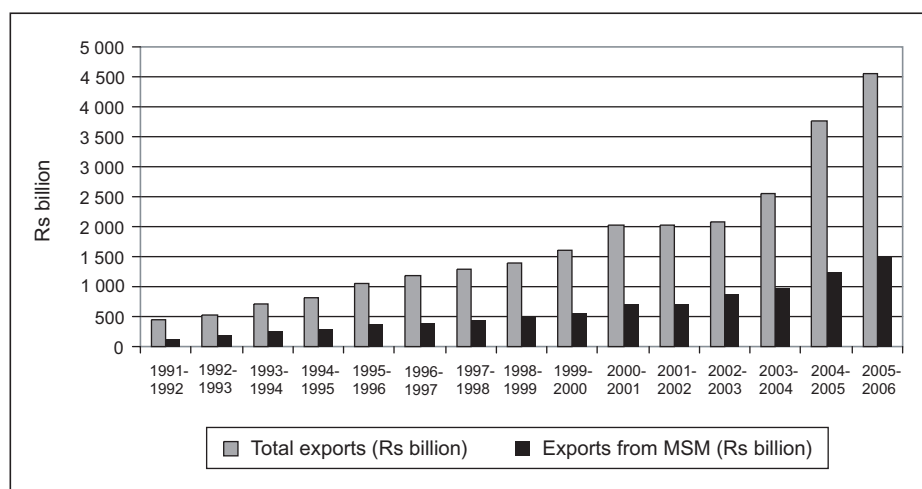
Table 1. Definition of micro, small and medium enterprises

Investment in plant and machinery/equipment (excluding land and buildings)		
	Manufacturing enterprises	Service enterprises
Micro	Up to US\$ 56,000	Up to US\$ 20,000
Small	More than US\$ 56,000 and up to US\$ 1.12 million	More than US\$ 20,000 and up to US\$ 45,000
Medium	More than US\$ 1.12 million and up to US\$ 2.25 million	More than US\$ 45,000 and up to US\$ 1.12 million

Source: Ministry of Small-Scale Industries, 2007.

The MSMEs are playing an important role in the Indian economy. It is estimated that, in terms of value, the sector accounts for about 39 per cent of the manufacturing output and around 33 per cent of the total export of the country (Ministry of Finance, 2008). The sector has also shown a higher growth rate compared with the overall industrial sector.² A major advantage of the sector is in terms of employment potential, as it is estimated that 31 million persons are employed by 12.8 million enterprises. As indicated in figure 2, MSMEs have continuously contributed towards the expansion of exports from these units.

Figure 2. Share of micro, small and medium enterprises in Indian exports



Sources: Ministry of Finance, 2008, and Ministry of Micro, Small and Medium Enterprises, 2007.

Further, MSMEs have continued to enjoy exclusive manufacturing rights over several items during the past several years. However, during the period of liberalization the list with exclusive areas for MSMEs has been reduced. Initially, there were more than 800 items listed but this has been reduced to 21 items including such products as PVC pipes, rolling shutters, steel furniture, padlocks, laundry soaps and utensils (*Economic Times*, 2009).

² The present policy of the Government allows the bigger players to set up units even in the sectors that are reserved for SSI. As per paragraph 2.18 of the Handbook of Procedure issued by the Directorate-General of Foreign Trade, this is allowed, subject to fixing of some export obligations on those units. Originally it was 75 per cent then later reduced to 50 per cent, i.e., 50 per cent of total production was to be exported. The provision still stays, but the percentage is now no longer uniform and will be decided by a committee. Therefore, even a large-scale factory can be setup in such sectors if the company accepts the export obligation.

B. Evolution in the use of IT for cargo clearance

The Central Board of Excise and Customs (CBEC) is the nodal agency under the Ministry of Finance, which is spearheading the customs' automation programme in a major way. CBEC maintains a comprehensive website that contains detailed information on all the acts, rules, regulations, circulars and CBEC notifications issued from time to time. More than 30,000 pages covering these details are posted on the website. In addition, there is a powerful search facility for extracting relevant information on the site. CBEC released a "Vision and Strategy Document" in 1998, emphasizing commitment to TF through a practical and pragmatic approach. Adoption and application of information communication technology (ICT) is the major plank of the Indian Customs' initiatives to expedite the clearance of import and export cargo, and to provide a fool-proof paperless system of assessment and clearance. India has launched trade enabling policy reform. In this context, it has initiated various efforts, including the setting up of the Indian Customs and Excise Electronic Commerce/Electronic Data Interchange Gateway (ICEGATE), "eTrade" and "eBiz" under the national e-governance programme (table 2).

Table 2. Various trade automation initiatives in India

Initiatives	Parent department	Year	Coverage
Indian Customs EDI System	CBEC, Ministry of Finance	1992	Specific customs locations
ICEGATE	CBEC, Ministry of Finance	1995	Integrated customs network
eTrade	Ministry of Commerce and Industry	1997	Compatibility between various trade agencies
ACP/RMS*	CBEC, Ministry of Finance	2005	Compliant large traders
Port Community System	Indian Port Association, Ministry of Shipping	2008	Integration of all the major ports and major actors at those ports

Source: Compiled by the author.

* Accredited Clients Programme/Risk Management System.

1. Initiatives by CBEC

CBEC received approval of a budget of US\$ 134 million in December 2007 from the Cabinet Committee on Economic Affairs for a major IT consolidation programme. The programme covers the creation of a consolidated computing infrastructure for customs, central excise and service tax applications, leading to the establishment of a centralized server instead of separate servers for each of the automated centres.³ At present, there are 40 automated centres. The scheme envisages the establishment of central servers and storage area networks together with disaster recovery infrastructure, with the capacity to handle all transactions related to customs, central excise, service tax and a data

³ *Hindu Business Line*, 19 February 2009.

warehouse. The benefits of the scheme include better service levels to trade and will assist CBEC in maintaining a more comprehensive information system. As of 2010, the new system is expected to integrate different agencies, such as the Directorate-General of Foreign Trade (DGFT), the Directorate-General of Commercial Intelligence and Statistics (DGCIS), the Container Corporation of India (CONCOR), the Central Board of Excise and Customs, carriers and custodians for ports/airports/ ICDs, among others.

(a) *Indian Customs EDI System*

The customs automation programme was initiated in 1995 with the launch of the Indian Customs EDI System (ICES) at Delhi, and was later (1996-1997) extended as a stand-alone facility at 23 locations. At present, it is functioning at 40 customs' locations covering more than 85 per cent of country's foreign trade. These include customs stations at various airports, seaports, land customs stations and Inland Container Depots (ICDs). At the automated locations, 96 per cent of the export documentation and 97 per cent of the import documentation is processed (submitted and approved) electronically. According to the data provided by CBEC, more than 6.5 million documents are processed annually through the system, which constitutes almost 85 per cent of the total trade transactions. Several novel features have been introduced as a part of the ICES programme. For example, the filing of a separate drawback claim by exporters is not required, as the claim is credited to the exporter's bank account anywhere in India.

(b) *Indian Customs and Excise Electronic Commerce/Electronic Data Interchange Gateway*

CBEC further took steps to improve connectivity and achieve compatibility within the custom's stand-alone locations by launching ICEGATE in 2002. This facilitates remote filing of import and export declarations by importers/exporters/CHA through the ICEGATE portal.⁴ On average, 18,000-20,000 import and export declarations are filed daily using the ICEGATE facility. All the airlines file their import and export manifests using this system. Manifests are also filed by forwarders. The facility of "round-the-clock" electronic filing of customs documents for the clearance of goods is now available to 40 customs EDI locations.

There are also options for a document tracking system, which enables users to check the latest status of their documents on the Internet. CBEC has also launched E- payment and online registration for intellectual property rights through this portal. Exporters, importers and CHA can also check their IEC and Duty Entitlement Pass Book Scheme licence status at the portal. The release advice and IGM data is transferred from one customs house to another using this facility. The inter-agency data are automatically transferred by the system to the concerned agency. A 24-hour helpdesk is also available to ICEGATE users.

⁴ See www.icegate.gov.in.

In order to ensure the privacy, authenticity, integrity and reliability of the transactions, CBEC has introduced the public key infrastructure technology popularly called digital signature. The Licensed Certifying Authority (iCERT) established by CBEC makes the public key infrastructure available to its trading partners and departmental staff. CBEC is also establishing a Customs Data Warehouse (CDW) for storing data that may be made available in a standard format for any enquiry/investigation or analysis, reporting etc.

(c) *Accredited Clients Programme*

In 2005, CBEC initiated a major programme to achieve a balance between trade facilitation and compliance through voluntary compliance. As a part of the programme, the CBEC launched a Risk Management System (RMS) to enable self-assessment of low-risk consignments. The system is fully operational for imports at 23 major customs locations; it also became operational for exports in 2009.⁵ This initiative offers a greater measure of facilitation to credible traders and will contribute towards reduction in the dwell time of cargo and thus transaction costs.

With the introduction of RMS, the practice of routine assessment, and concurrent audit and examination of almost all Bills of Entry was discontinued and the focus is now on quality assessment, examination and post-clearance audit of the selected bills. This is helping the Customs Department to utilize its resources more effectively. The purpose of RMS is to facilitate a large number of Bills of Entry that are considered compliant with the customs laws and regulations. The self-assessed bills will be processed by the system to evaluate the risk, if any. Duty is calculated and the duty-payment document would be generated by ICES.

Under the Accredited Clients Programme (ACP), which works through RMS, importers with an exemplary compliance record are given assured facilitation. The qualifying criteria that are specified under ACP are that: (a) the value of imported goods should be above Rs 100 million (US\$ 2 million) in a financial year or customs' duty paid in a financial year should be more than Rs 10 million (US\$ 200,000); (b) there are at least 25 bills of entry in a financial year; (c) no cases have been booked for tax violations during previous three years with the department; and (d) the company should have a reliable system of record keeping and internal controls. The implementation of ACP is part of India's commitment towards the International Convention on Simplification and Harmonization of Customs Procedures, popularly known as the Revised Kyoto Convention, Standard 3.32, which provides special Customs clearance procedures for authorized persons who meet the criteria specified by the respective customs authority.

However, there are certain unresolved issues concerning this scheme in the case of SMEs. The requirements are much too high for micro and small-sized enterprises to meet, and the expectations concerning duty paid are very difficult to attain even for medium-sized enterprises. The SMEs therefore are excluded from this scheme. It is only available to importers; CHAs cannot participate in ACP, although they can file on behalf of ACP-qualified importers. Currently, ACP status has only been granted to 256 companies.

⁵ Personal communication with DG Systems (Customs Department).

2. Ministry of Commerce and Industry initiative

(a) *eTrade initiative*

It was felt that apart from automation of customs, other agencies involved in the trade process should also participate in the automation initiatives. In that context, in 1997 the Ministry of Commerce and Industry launched an eTrade initiative, which is a special project for coordinating various trade-related automation programmes. Operating on a pilot basis, the initiative focused on the automotive sector in response to the problems generated by a lack of compatibility between different value-added network operators (VAN) being used by large automotive players to source inputs from component suppliers that are largely SMEs. The eTrade initiative could provide a common platform for all the operators. However, after the pilot phase, the project was extended in 2003 with a larger mandate. This included inter-agency coordination for facilitating e-filing and e-payment as per international standards and, if required, undertaking process re-engineering for obtaining inter-agency message formats in a compatible manner.

The objective is to provide an electronic interface between various trade regulatory and facilitating agencies and the trading community to ensure delivery of better services. The regulatory and facilitating agencies involved (as indicated in figure 3) include customs, Directorate-General of Foreign Trade, the Reserve Bank of India (Central Bank) and export promotion organizations. Transport-related agencies are also involved, such as Indian Railways, various airlines, the Airports Authority of India (AAI), the Indian Port Authority, CONCOR and the Directorate-General of Commercial Intelligence and Statistics. CHAs and trading community members are also being served by the eTrade project. The major areas that are being addressed under the project are detailed below.

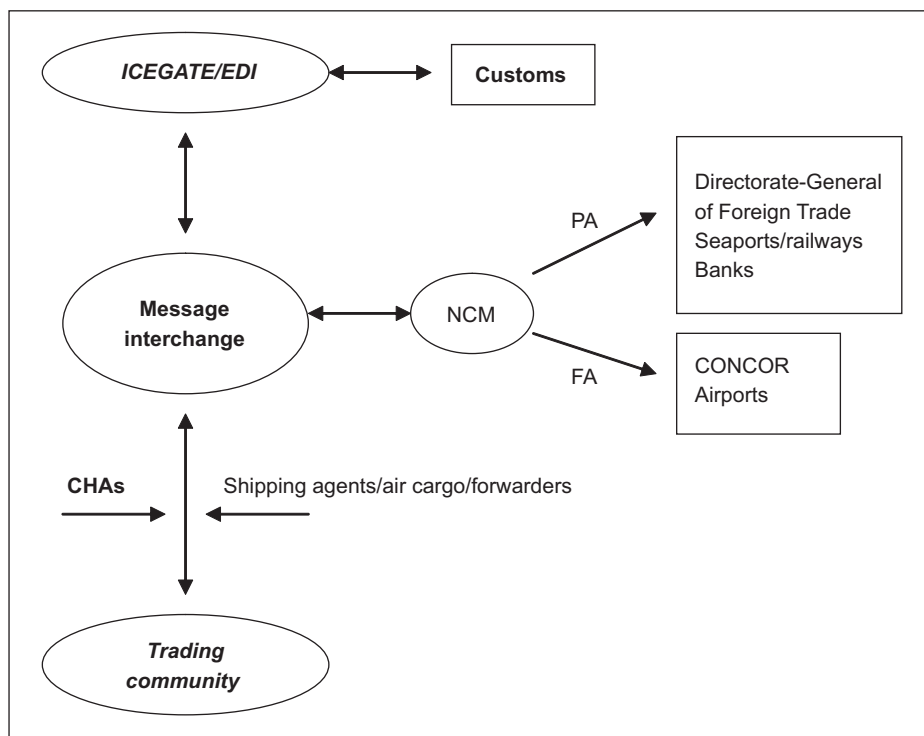
(i) *Process re-engineering*

A process re-engineering committee was formed, which submitted its report for streamlining the processes leading to effective and efficient information flow between customs, AAI, ports, Directorate-General of Foreign Trade, CONCOR and their associated agencies. The report formed the basis for adoption and implementation of new processes.

(ii) *Services covered*

The three main categories of services covered under the project include: (a) electronic filing and clearance of export/import documents by participating agencies (i.e., customs, ports, airports, CONCOR, the Directorate-General of Foreign Trade, exporters, importers and agents); (b) e-payment of duties and charges (handling/freight etc. by ports, airports, CONCOR, the Directorate-General of Foreign Trade and customs; and (c) electronic exchange of documents between community partners, i.e., customs, ports, airports, the Directorate-General of Foreign Trade, CONCOR, banks, agents, exporters, importers.

Figure 3. Various stakeholders in the eTrade project



Note: FA = fully automatic; PA = partially automated; NCM = non-customs messages

(b) Standards

The United Nations Centre for Trade Facilitation and Electronic Business (UN/EDIFACT) standards were declared as the national standards in 1996 for EDI developments in India. The message development groups were constituted for customs, ports, airports, banking and the private sector. In 1995, the article numbering and bar coding institution GS1 India was also established. Earlier, it was known as the EAN India. As per UN/CEFACT recommendations, a subcommittee was formed to work out the UN/LOCODE (for global locations). The Government is also planning to extend the advantages of these standards to the wider trade community, including SMEs, by introducing new and integrated technologies such as UNEDocs.⁶

There have been several salient achievements by this initiative, such as speedy electronic issuance of licences using digital signature and electronic payment, the implementation of the customs electronic interface with the custodian at Delhi airport for the import cycle and the Centralized Port Community System for major seaports. The

⁶ Available at the website <http://electronics.ihs.com/news/2006/uncefact-india-ebusiness.htm>.

eTrade meetings are also attended by traders and CHAs who detail the various impediments they face due to a lack of coordination among various agencies. Minutes of these meetings⁷ indicate that due to the participation of senior officers of the Ministry of Commerce and Industry, several operational limitations are addressed in a timebound manner. The initiative was launched as a Mission Mode Project, with an advisory committee headed by the Commerce Secretary and a project review mechanism to be undertaken periodically by the Cabinet Secretary to the Government of India. With this high-level participation, any budgetary constraints and inter-agency disputes can be overcome with much less effort. The project in phase I covered about 80 per cent of India's foreign trade and 35 customs points. In phase II, launched in December 2008, another 30 customs points were to be added, meaning that trade coverage would increase to 92 per cent (Ministry of Commerce and Industry, 2008).

3. Container Corporation of India initiative

In cargo clearance, the IT programme of public sector enterprise CONCOR also plays an important role (Ministry of Shipping, 2006). CONCOR was established during 1988-1989 under the Ministry of Railways. Initially, it had a stand-alone automation programme that was consolidated over the course of a decade, with a major effort being made only in 2000.⁸ Subsequently, in 2001, CONCOR established a centralized computer system and enhanced its VSAT-based network, which now covers 61 locations. CONCOR has also introduced electronic filing of documents by commercial systems at select locations, which enables customers to file their documents electronically from their own offices (this facility is available only for containers in an ICD). CONCOR has a wide network of ICDs and nine domestic container terminals with more than 8,500 wagons, that is, more than 150 rakes.⁹ CONCOR formulated a strategic alliance for air cargo in 2008, with plans to establish five air freight stations. The firm also expected to finalize a strategic alliance for shipping to be implemented in 2010.

Among the severe criticisms that CONCOR has faced is one regarding compatibility with other border agencies, particularly customs. In order to address this issue, CONCOR has established seven regional servers for better connectivity with EDI of customs. The data are being used online in processing various export-import functions. It has also initiated a joint trial for ensuring programme compatibility at one of the major locations, Dadari.¹⁰ One major CONCOR achievement has been to establish a centralized pre-deposit account (PDA) system where customers can carry out transactions with CONCOR at various ICDs with just one PDA. Customers can find the available balance in their PDAs at any of the terminals online.

⁷ Available at the website <http://etrade.gov.in>.

⁸ Personal communication with Mr. Anurag Mathur, Executive Director (MIS), CONCOR India, 3 December 2008.

⁹ Number of coupled railway wagons.

¹⁰ Personal communication with Mr. Anurag Mathur, Executive Director (MIS), CONCOR India, 3 December, 2008.

4. Port Community System

In November 2008, the Indian Port Association, an agency under the Ministry of Shipping, Road Transport and Highways, launched a centralized Port Community System that covers all the major ports and involves all the stakeholders (such as exporters, importers, custom house agents, shipping lines, shipping agents, stevedores, transport operators, banks, ports, terminal operators, customs, and other organizations/companies) in the maritime logistics chain.¹¹ The system will facilitate exchanges of vital information needed by each member of the community to perform their functions effectively as well as improve the overall efficiency of maritime trade and the transportation cycle.

5. Facilitating electronic coordination with other agencies

Coordination between the automation programme of the Customs Department with that of other agencies continues to remain a major hurdle for the trading community. There are several agencies involved at the border and each one of them is at a different level of automation. In addition, at times a completely different format for information filing is required. Moreover, adding to the prevailing confusion, conversion packages are also unavailable for most of the transactions. The digital divide between public and private operators is highly visible. For example, in the air sector, AAI is at a very low level of automation, while the new private airports such as Delhi International Airport Ltd., Mumbai International Airport Ltd., Bangalore International Airport Ltd., Hyderabad, and International Airport Ltd. are highly tech-savvy.

Most Indian exports/imports (more than 90 per cent) are routed through 12 major ports and 139 minor or intermediate ports. The 12 major ports are managed by the Port Trust of India (central Government) and they handle 90 per cent of the all-India port throughput. Most of the ports in India are administered by the Ports Authority of India and there are very few private ports; however, each port possesses its own software and has in place its own procedures for cargo clearance. With the growing practice of appointing operators for managing Container Freight Stations (CFSs),¹² the number of people in the cargo clearance chain has expanded further. For example, the Jawaharlal Nehru Port Trust has 39 CFSs while Chennai port has 30 CFSs. Then there are carriers of cargo

¹¹ See website at <http://ipa.nic.in/pcs/Pcs.asp#Introduction>.

¹² With the new modes of transportation and increases in international trade and containerization, the ports were becoming congested. To ease this problem, the concept of Container Freight Stations (i.e., an off-dock facility to handle international and national cargo) was born. Container Freight Stations (CFSs) – also referred to as dry ports – provide various services for handling container/cargo outside the port. They also facilitate in-transit container handling, examination and assessment of cargo with regard to regulatory clearances for both imports and exports. A CFS is an integral part of the logistics chain in relation to the movement of containerized cargo.

such as MLOs, shipping lines and steamer agents, which have to file EGMs and IGMs. ICD¹³ operators and the Central Warehouse Corporation are also key actors.

It is also important to have e-compatibility of banks, otherwise major challenges may be created for the trading community in the cargo clearance process. CBEC has changed the policy of "one port-one bank" to a more accommodative policy allowing at least two or three banks at a given location. At least four banks are designated at a particular location for e-payments. A proposal for identifying 14 banks through which e-payment may be made at any location was under consideration as of early 2009.

The mismatch of software programmes between the Customs Department and the Directorate-General of Foreign Trade has created many problems for traders. The Bill of Entry and Shipping Bill for any goods imported or exported under any export promotion scheme requires details of licences issued by the Directorate-General of Foreign Trade to be mentioned in the electronic format. As the Directorate-General of Foreign Trade does not issue electronic licences, this remains a major limitation of the EDI facility. However, on 1 September 2005, the Directorate-General of Foreign Trade began issuing, on a trial basis, licences with a digital signature for EDI Shipping Bills. Initially, the customs EDI was unable to recognize the entries in the abstract and descriptive form (Planning Commission, 2006), but the problem was resolved in early 2007 when the scheme was officially launched. However, a few non-EDI ports remain where Duty Entitlement Pass Book Scheme Shipping Bills have to be filed manually (e.g., Raxaul Land Customs Station and Petrapole Land Customs Station).

The Customs Department and the Directorate-General of Foreign Trade are currently working on electronic transfers for Export Promotion Capital Goods Scheme licences. Various matters related to software compatibility are still pending with regard to the issuance of advance licences between the two agencies.

6. Dwell time

In a submission to IMG on "Customs Procedures and Functioning of Container Freight Stations and Ports", the Ministry of Shipping suggested that the EDI facility for filing IGMs and EGMs at customs should be extended to all holidays to facilitate easy transaction of trade (Planning Commission, 2006). The ministry also suggested that as customs at most ICDs do not have provisions for accepting EDI, implementation of the EDI facility should be expedited at all ICDs and ports where it is not yet available. The trading community pointed out to IMG that the customs automation programme should consider

¹³ Functionally, there is no distinction between an ICD and a CFS as both are transit facilities that offer services for containerization of break-bulk (packaged but non-containerized) cargo and vice-versa. These could be served by rail and/or road transportation. An ICD is generally located away from the servicing ports, outside the port towns. A CFS, on the other hand, is an off-dock facility, located near the servicing port, which helps in decongesting the port by shifting cargo and customs-related activities outside the port area. CFSs are largely expected to deal with break-bulk cargo originating/terminating in the immediate hinterland of a port, and may deal with rail-borne traffic to and from inland locations.

e-payment of duties and should encourage importers to file prior Bills of Entry and electronic transfer of licences from the Directorate-General of Foreign Trade. This led IMG to recommend that the customs message exchange with ports, airports, CFSSs, CONCOR, banks and the Directorate-General of Foreign Trade should be implemented under the extended automation programme while the manual system should be gradually discontinued. However, no time frame was suggested.

A detailed discussion was held at IMG on e-payment of duties, and a deadline of 31 March 2006 was suggested. According to the trading community, however, it is still not in place.¹⁴ In the context of extending the working hours at major ports and ICDs, IMG pointed out that it was important for relevant staff to be made available from other agencies such as ports, banking, security, customs house agents and shippers if CBEC decided to extend customs facilities. Growing attention is being paid by CBEC to cargo dwell time.

As table 3 indicates, there is a total dwell time of 345 hours at Nhava Sheva, Mumbai Port, 320 hours at Chennai Customs and 165 hours at ACC, Sahar, Mumbai. The customs' procedures comprising steps 3 and 6 (i.e., filing of a Bill of Entry, assessment and goods registration, and out-of-charge) accounts for 7.31 per cent of this total time at Nhava Sheva, 22.42 per cent at ACC, Sahar and 21.64 per cent at Chennai. This huge difference in performance at the customs stations is due to various factors. While performance at Nhava Sheva has improved tremendously due to the introduction of RMS, which has resulted in much less cargo having to be examined, at Sahar (which is an air cargo point) it takes longer as much larger consignments have to be physical examined. The nature of goods received at Sahar is also a contributory factor, as it involves high-value critical items for which no customs officer would accept the risk.¹⁵

Another important reason for the delay is the limited capacity of the customs server. Since more and more people are using ICEGATE, they generally file their documents at night (when usage is much lower) and wait for clearance the following day. This contributes to a higher dwell time. The number of customs' officials is also an issue in this context.

There is a considerable degree of difference in the dwell time taken by various procedures. For example, the time taken from filing a Bill of Entry to assessment is 10.1 per cent of the total dwell time in Nhava Sheva, whereas the same procedure takes more than double that time in Chennai. There are noticeable variations among the three major ports in terms of the relative time taken from payment of duty to goods registration. The level of deviation varies from 5.8 per cent in Mumbai to 20.7 per cent in Chennai. In this category, the variations noticed between Mumbai and Nhava Sheva are significant despite the fact that both of them belong to the same province and have close geographical proximity. The overall position at the three ports indicates that the major portion of the dwell time is taken up by entry inwards up to submission of the Bill of Entry by an importer.

¹⁴ Personal Communication with Mr. Raman Raj Sood, President, Delhi Customs Clearing Agents Association (DCCAA), New Delhi.

¹⁵ Personal communication with Mr. Dushyant, CHA, Mumbai.

Table 3. Dwell time data at selected points in India, 2007-2008

Stage	Parties and automation		ACC, Sahar, Mumbai		Chennai Customs		Nhava Sheva, Mumbai	
	Parties involved	Status of automation	Time taken (hours)	Percentage of total dwell time	Time taken (hours)	Percentage of total dwell time	Time taken (hours)	Percentage of total dwell time
IGM to entry inwards	Carrier	Filing of IGM to customs automated	0*	0*	0*	0*	0*	0*
Entry inwards to submission of Bill of Entry by importer	Importer/CHA	Automated	79.05	47.78	163.45	51.01	181.52	52.61
Filing of Bill of Entry to assessment	Customs	Automated	23.41	14.15	49.80	15.54	23.21	6.73
Assessment to payment of duty	Importer/CHA	Manual and automated option	48.13	29.09	65.45	20.43	90.10	26.12
Payment of duty to goods registration	Importer/CHA/bank/Octroi	Partially automated	1.18	0.71	22.20	6.93	48.17	13.96
Goods registration to out-of-charge	Customs	Examination is a physical exercise, but recording it is an automated process	13.68	8.27	19.54	6.10	2.00	0.58
Entry inwards to out-of-charge	Port/customs	Not automated	165.45	100.00	320.44	100.00	345.00	100.00

Source: Based on personal communication of the author with the Systems Unit of the Customs Department.

* Previously, IGMs were filed after arrival of the vessel, and only then could the Bill of Entry be filed. This added to the dwell time. As per amendment to Section 30 in 2003, an IGM must now be filed before the arrival of the vessel. Hence, the dwell time attributable to IGM filing has become nil.

The relative dwell time taken in payments of duty, goods registration and filing of Bills of Entry, and assessment is somewhat similar, while the relative dwell time involved from assessment to payment of duty is relatively greater than the other two categories; however, the amount of time taken by goods registration to out-of-charge is the least among all categories. The process involving customs shares close to 20 per cent of the total dwell time (i.e., filing of Bills of Entry to assessment, and goods registration to out-of-charge).

It is increasingly being realized that further simplification of the import general manifest filing system is required. Accordingly, instructions for correct and complete filing of import manifests with necessary flexibility for amendments have been issued. This allows seamless transfer of import data on cargo, thus enabling expeditious clearance of cargo by customs and other authorities.

C. Survey of the impact of automation on SMEs

A survey of SMEs was carried out in collaboration with *SME Times*, a major weekly newspaper for SME enterprises. Thirty SME firms in New Delhi were given a questionnaire,¹⁶ with responses being received from 15 firms. Interviews with seven firms were held as a follow up. Almost all were found to be processing their trade documents through CHAs, due to the complexity despite partial automation. Many of the respondents mentioned that customs and other trade-related agencies were based in different locations, which was very inconvenient as the firms had to go to the different offices with the required documentation.

At this stage, a two-pronged strategy was adopted for capturing the missing information concerning this study. It was decided to cover CHAs as well in the survey. Eleven CHAs based in Delhi and Mumbai, the two major trade centres in India, were interviewed. When various cargo clearance units are located in different places coordination is a major challenge. In this study, a few Delhi-based firms were interviewed in addition to an assessment of whether locating all the services in one place through the policy of Special Economic Zones (SEZ) had helped traders in terms of improving their access to the cargo clearance system. The Ministry of Commerce and Industry has initiated a major programme of promoting SEZ across the country to encourage exports through legislation enacted in 2006.¹⁷ The SEZ units are exempt from taxes such as customs duty, excise duty, central sales tax, State VAT, and income tax, and have all the cargo clearance facilities in one place. Permission and approval for setting up a unit are provided under a "single window clearance" scheme. Although 531 SEZ units have been formally approved, only 260 are operational. India's first Greenfield SEZ, located at Pithampur in Madhya Pradesh, was selected for this study, where 16 SME firms were

¹⁶ See annex 1 of ARTNeT Working Paper 66, available at www.unescap.org/tid/artnet/pub/wp6609.pdf.

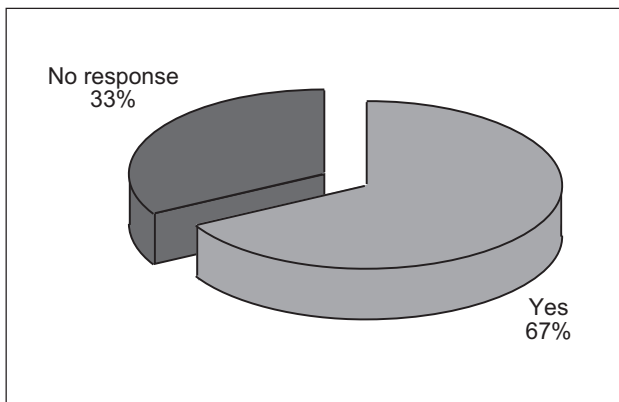
¹⁷ The main objectives of the SEZ Act, 2006 are: (a) the generation of additional economic activity; (b) the promotion of exports of goods and services; (c) the promotion of investment from domestic and foreign sources; (d) the creation of employment opportunities; and (e) the development of infrastructure facilities.

interviewed. Thus, in total, this study covers 23 SMEs and 11 CHAs in addition to key trade agencies such as CONCOR, the National Informatics Centre and customs (systems), among others.¹⁸

1. Results of the field survey

The survey focused on SME participation in the automation initiative of the Customs Department. Initially, 46 SMEs were contacted, of which 31 responded and 23 were interviewed. It is worth noting that almost all the firms that were contacted directly said they did not utilize direct filing of customs documents. They continued to depend on customs house agents despite the fact that some of them were aware of the launching of initiatives such as ICEGATE. According to 67 per cent of the SMEs interviewed, they were aware of the advantages of EDI and even of RMS; however, they felt that they could not handle the system and that only CHAs could do so (figure 4). One of the reasons given by most of the SMEs was the complications inherent in the process, as it was only partially computerized and automated. This required carrying papers to various offices for clearance and the release of cargo. On further inquiry, most of the SMEs felt that because the classification of goods and the time required for doing so were two important challenges to SMEs, they preferred to outsource work to CHAs. In their view, dealing with customs and cargo clearance was mainly something that only CHAs could handle.

Figure 4. SMEs' awareness of automation system



Many of the SMEs held the opinion that the cost of operations had increased since the introduction of various automation initiatives. CHAs charge private companies an additional amount for electronic filing, on the basis of per document. In the survey, only 33 per cent of SMEs were unaware of the new changes introduced in cargo clearance. Most of the SMEs were of the view that it was uneconomical for them to file their own documents as it required specialised knowledge and was time-consuming.

¹⁸ ARTNeT Working Paper 66, annexes 2 and 3, available at www.unescap.org/tid/artnet/pub/wp6609.pdf.

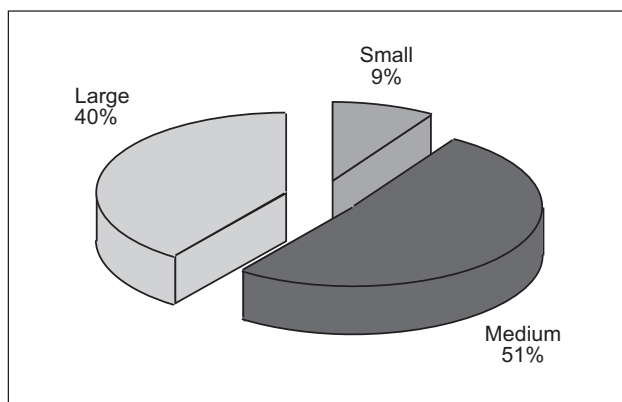
One SME in New Delhi pointed out that very little value was attached to the importance of SMEs in the trade sector, despite their high contribution. Thus, while the recent introduction of the ACP had improved dwell time and speeded up the cargo clearance process, somehow the ACP provisions had not covered SMEs. The ACP structure favours large companies whose value of imported goods is more than Rs 100 million (US\$ 2.25 million) while the maximum limit to qualify in the SME (MSM) category is Rs 100 million (US\$ 2.25 million) or payment of customs duty of more than Rs 10 million (US\$ 220,000). Very few SMEs reach such an amount even in two consecutive financial years.

It is becoming increasingly evident that the automation drive under the trade facilitation programme may not be the complete panacea for the salvation of the trading community. It needs to be supplemented by greater synchronization of various capacity-building plans and programmes. There are various efforts to expose SMEs to different facets of e-trade. In India, ITC/UNCTAD and WTO launched the e-Trade Bridge Programme (ETB) for SMEs in 2002, which is aimed at helping to bridge the digital divide by empowering SME managers to make rational decisions on where and when they should be using the digital tools for building competitiveness. Some of the SMEs interviewed for this study suggested that there was no link between the e-Trade project launched by the Ministry of Commerce and Industry, and ETB. Moreover, the attention of the National Informatics Centre in particular needs to be drawn to the requirements of SMEs, as they are responsible for a sizable share of India's exports.

(a) *CHA Survey: Focus on SMEs*

Most CHAs, freight forwarders and shipping agents covered by the survey had predominant dealings with large and medium-sized firms; there were very few who did not deal with large firms but focused on medium and small-sized firms. Figure 5 shows that 40 per cent focused exclusively on large firms, 51 per cent on medium-sized firms (which formed the focus of the current study) and 9 per cent on small-sized companies. Due to

Figure 5. Focus of CHAs, freight forwarders and shipping agents



enhanced transactions, it came as no surprise that nearly all of them lodged customs declarations almost everyday.

In India, 96 per cent of import documents and 94 per cent of export documents are filed through the EDI system. According to CHAs and others agencies, most of their clients including SMEs were aware of the possibility of lodging customs declaration electronically while a sizeable number of the companies interviewed denied any knowledge of increasing automation of trade procedures. The lodgement fee does not depend on the size of the firm or industry but on the size of the shipment.

(b) CHA survey: Level of automation

The questionnaire asked CHAs to rate India's trade automation programme. It is interesting to note that most of the CHAs placed the level of automation of the export-import procedures in the range of 50 per cent to 100 per cent. During further interviews, they explained that there were several agencies that were either not automated or their programmes are not compatible with customs. These agencies include the Plant and Quarantine Office, the Central Food Laboratories, the Additional Drug Controller, WLRO, the Textile Committee, the respective municipal corporations, stamp authorities, the Directorate-General of Foreign Trade and the Agricultural and Processed Food Products Export Development Authority. As indicated in the response to question B.1 on exports, a minimum of five documents are required and for imports minimum of seven documents are required.

Most CHAs indicated that there was almost no electronic linkage between the agencies. Better coordination between them would help to streamline the work and avoid duplication. The Directorate-General of Foreign Trade issues import licences under various schemes (such as the Export Promotion Capital Goods Scheme, the Duty-Free Credit Entitlement Certificate, Standard Financial Information Structure and Duty Entitlement Pass Book Scheme) that may be made available for online debit. This would reduce the threat of forged licences and may help in communicating necessary instructions for shipments and imports at the ports. If complete automation were achieved, most of the respondents suggested that almost all the agencies would benefit from greater transparency, better and faster communications, and the speedy movement of cargo clearance.

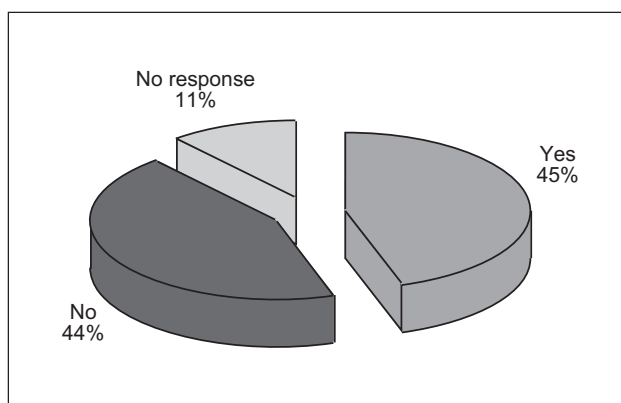
(c) CHA survey: Cost of automation

Most CHAs and shipping lines have invested in upgrading staff (through training and IT orientation), additional equipment and the establishment of high-end connectivity in their offices. Most CHAs had their own work stations from where they could expedite declarations electronically track cargo movements and communicate with their clients. As is evident from their response to question C.1 of the survey, almost all of them had their own IT systems for trade transactions, which included computers with Internet connectivity and the usual software required for necessary compatibility. However, most of them were silent on the cost of these additions. In the transition phase, most CHAs faced the following problems: (a) changing the mindset of the workforce; (b) frequent breakdowns in electric supply; and (c) breakdowns of the customs server and interruptions in electronic

connectivity. Some CHAs also stated that there were instances when customs servers had crashed for a long period, affecting huge transactions.

However, 45 per cent of CHAs pointed out that they had received support from EDI service providers and government agencies in terms of software (hardware was their own expenditure). Support was also provided in the form of personnel training and frequent software updates, while 44 per cent of CHAs mentioned that no support had been received from the Government. Almost 11 per cent did not respond to the question (figure 6). It appears that the leading CHAs in 1995 received initial support for automation and connectivity while the latecomers were only provided with free software for filing documents. This may be one explanation for the divided opinion among CHAs.

Figure 6. Percentage of support received from the Government and EDI service provider



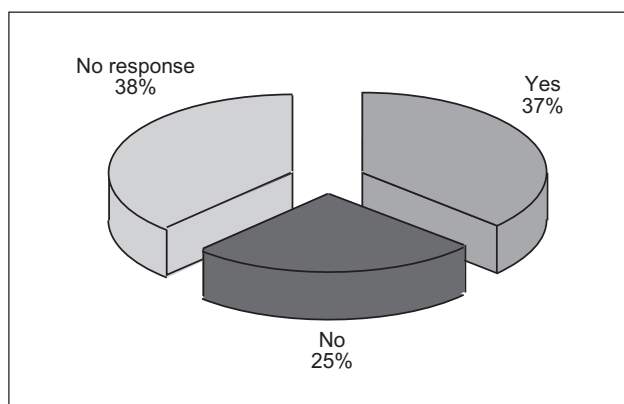
(d) CHA Survey: Impact on SMEs

There was great convergence in the views of almost all the CHAs and shipping line agents surveyed on whether automation had increased participation by SMEs in the trade process. However, it appears that CHAs had only been marginally affected, if at all, since most SMEs still relied on CHA services. Most CHAs did not respond to the survey section related to benefits and cost of automation. However, 37 per cent said that SMEs had been positively affected by the programme, while 25 per cent expressed a negative view (figure 7).

2. Case study of Pithampur, SEZ

In a special economic zone, trade facilitating services are expected to be structured with utmost proficiency and in such a way that the traders do not have to approach different agencies for necessary clearances. It was with this objective in mind that a special case study was undertaken of India's first Greenfield SEZ at Pithampur in Madhya Pradesh.

Figure 7. Increase of SME participation in trade since the launch of automation of systems



The Pithampur SEZ is spread over 17 acres given by MPAKVN¹⁹ on a 99-year from 1993 to 2092. It is 45 km from Indore and does not have a rail-linked ICD. It has a road to Ratlam that provides a link with major ports such as Mumbai. There are almost 72 firms exporting Rs 9,540 million (US\$ 214 million) worth of material from Pithampur in 2007/08. The growing economic contribution by this area can be assessed from the fact that CONCOR's Pithampur ICD recorded an increase in throughput from 25,568 TEUs in 2005/06 to 27,384 TEUs in 2006/07 while air cargo exports crossed the 5,000-mt mark for the first time with an increase of 19 per cent from 4,542.4 mt in 2005/06 to 5,404.2 mt in 2006/07. The impact on revenue collection was equally interesting. In 2006/07 it surged by 25 per cent from Rs 356 million (US\$ 7.97 million) in 2005/06 to Rs 444.7 million (US\$ 9.96 million) in 2006/07.

In the recent past, adequate infrastructure has been provided to support expanding trade linkages. CHAs and almost 50 shipping lines with container facilities and FCL services by road and train to gateway ports have shown major growth.²⁰ The Reserve Bank of India has issued an offshore banking policy. Three banks – the State Bank of India, Bank of India and Punjab National Bank – have signed MoUs for setting up offshore banking units at SEZ. Bank of India has also created a SEZ cell for providing finance to the prospective units of SEZ in the form of foreign currency loans. There are two private ICDs operating in Pithampur – M/S Al Cargo and PICASO. Some of the companies are doing extremely well in terms of developing diversified export destinations. For example,

¹⁹ Madhya Pradesh Audyogik Kendra Vikas Nigam (Indore) Ltd., which is a State Government of Madhya Pradesh undertaking and a subsidiary of the M.P. State Industrial Development Corporation.

²⁰ The available major shipping lines include Maersk India, American Presidential line, Mediterranean Shipping Company, NYK line, Shipping Corporation of India Ltd., Samsara Shipping and Mitsui OSK line.

Shakti Pumps India Ltd. exports to 52 destinations and has completed in record time the setting up of a 200,000-pump manufacturing plant at SEZ, Pithampur.²¹

During the survey field visit, it was found that although industry turnover and exports from the SEZ had expanded at an exponential growth rate, the trading community was the least aware of any trade facilitation-related programmes, and particularly measures related to automation. Of the 12 company representatives interviewed, none was aware of the eTrade initiative. All the companies that participated in the meeting, were operating through CHAs, and did not know that they could file export and import documents from their premises. They had never accessed EDI/ICEGATE online options. Although all the facilities in SEZ were under one roof, dependence on CHAs remained largely due to the lack of information and limited awareness of both the initiatives by the Customs Department and the trade automation programme of the Ministry of Commerce and Industry. In Pithampur, the hardware installed for automation was already quite dated and, after being declared obsolete, was removed from Mumbai. The server was extremely slow. Many CHAs filled up the forms manually. The network did not include any other peripheral agency except CONCOR, with which some issues had been pending for a long time.

Five types of messages for exchange between customs and CONCOR existed, but in the case of three major messages related to shipping bills, let export order and entry of goods, there was no compatibility, which required automated processing to be backed by hard copies of documents that traders have to take in person to the relevant officers at different agencies. The Ministry of Commerce and Industry in the eTrade initiative meeting of 28 May 2008 instructed customs and CONCOR to decide on compatibility for message formats by 31 July 2008 for Pithampur and a few other places, but implementation was delayed. The local industry has strongly requested the Ministry of Commerce and Industry to organize trade facilitation-related industry capacity-building seminars in order to make the industry aware of various automation-related programmes.

D. Conclusion

India has launched several initiatives for the automation of various trade-facilitating components. The process, spearheaded by the Customs Department and duly supplemented by other agencies such as CONCOR, is yielding significant results for the trading community.

However, the benefits from these advances are not equally distributed among traders. The bigger companies with adequate resources and sufficient manoeuvring ability to adapt to new situations are likely to enjoy greater returns with the automation programme under the current trade facilitation programmes. The SMEs have to spend a large amount of time and resources in coming to grips with the changes. This dissuades many firms from undertaking new possibilities offered by the TF measures. It is interesting to note that despite the automation drive by the Customs Department and other frontline agencies,

²¹ Personal communication with Mr. Atul A. Janawade, Shakti Pumps, 3 October 2008, Pithampur.

the SMEs prefer to rely on CHAs for their customs-related operations. One reason is the high cost in terms of manpower requirement and time – and, to some extent, electronic infrastructure – since full automation and one-time submissions are not in place.²² Another reason is that SMEs believe that they lack the specialized knowledge to file their own documentation efficiently.

The survey revealed that between 2 per cent and 3 per cent of firms were switching back from CHAs to conducting their own handling of trade procedural formalities. Many SMEs have identified factors such as a lack of knowledge of computation of goods, the lack of information on various notifications being issued by various agencies as well as several obstacles related to non-compatibility of software programmes among various agencies. The changing tariff structure has also been listed as a factor responsible for continuous dependence on CHAs. In this situation, CHAs appear to be the most practical special-purpose channel as they know best how cargo clearance is to be completed within a relatively short time frame. Despite the continuing need for reduced physical inspections, reduced documentation and data requirements as determined by domestic legislation, the right to submit a document for processing that covers all goods in each consignment as well as a shorter release time, the practical situation has not changed as agencies require physical verification. Thus, again traders prefer to rely on CHAs in order to avoid becoming involved in the processing chain. Several steps for improving the situation are proposed below.

1. Automation at ground level

This area continues to be of concern among the trading community as the Customs Department has yet to improve inter-agency connectivity with its software and improve the capacity of its servers apart from periodically removing obsolete computer hardware. This means providing a greater budget allocation to the Customs Department for improving infrastructure and connectivity. The idea of installing a centralized server at the Customs Department may largely address this problem. However, at the same time, efforts for continuous updating of information related to various changes as published by customs are also highly important. This should be done as soon as CBEC makes any change in the existing legislation. Due to slow automation and the lack of alternative channels for information dissemination, the ground staff only learns of changes much later. This also creates problems for the trading community. CBEC has introduced some initiatives for organizing short-term training courses that focus on automation initiatives to bridge the gap, but this approach needs to be expanded.²³

²² CHAs charge SMEs an additional amount on a per document basis for electronic filing. In the survey, this amount was found to be 33 per cent.

²³ See section II.3 for further details.

2. SME-friendly legislation

The customs automation programme does not distinguish between small and large companies, despite the fact that the contribution share of SMEs to India's trade has consistently been above 30 per cent. At present, in certain schemes, requirements are structured in such a way that SMEs are not included under the relevant legislation (e.g., the recently introduced Accredited Clients Programme, which focuses on the requirements of large firms only). The criteria for SMEs in India is a ceiling of Rs 2 million (US\$ 40,000) to Rs 100 million (US\$ 2.25 million) while the minimum turnover required for ACP is Rs 100 million (US\$ 2.25 million). Even the duty payment criteria requirement to qualify for ACP is Rs 10 million (US\$ 220,000), an amount that virtually no SME is likely to reach.

Similarly, the Customs Department support programme favours CHAs. For example, when the automation programme was launched in 1995, it initially supported selected CHAs across Delhi and Mumbai by providing them with free software and subsequent updates. If a similar facility can be extended to at least selected SMEs, it may encourage other SMEs to file their own trade documents directly with the department.

3. Tariff classification

Despite greater automation, the percentage of error in the World Customs Organization's Harmonized Commodity Description and Coding System (HS) classification is as high as 30 per cent while the error in quantity is 41 per cent as far as exports are concerned. This is a major area of concern, not only for exporters and importers but also for various government agencies including the Ministry of Commerce and Industry. In the case of imports, wrong product classifications have been found in 11 per cent of the cases.²⁴ The problem continues between Directorate-General of Commercial Intelligence and Statistics and the Directorate-General of Foreign Trade, as each follows different levels of classification. This is eventually reflected in the data being generated from customs points. This requires SMEs to depend on CHAs for pursuing their cases to gain the right interpretation.

4. Inter-agency automation linkage

As has emerged in this chapter, inter-agency coordination among the frontline agencies is a major challenge in India. The Customs Department, the Directorate-General of Foreign Trade, Port Trust, airports and airlines, CONCOR, other private agencies, banks, ICDs and CFSs need to have a common connecting e-network for facilitating faster implementation of the e-trade project as initiated by the Ministry of Commerce and Industry.

5. Replacement of obsolete technology

The Pithampur case study revealed that computers were obsolete in most of the locations. A long-term vision is needed, given the growing trade volume, to ensure the

²⁴ *Business Standard*, 25 August 2005.

replacement of these machines, so that SMEs that use the services of private operators, as provided by the Customs Department, are at least able to file the required documentation on their own.

Overall, the study reveals that seamless and “end-to-end” automation has yet to take substantial shape, compatible across different transportation means, and has to incorporate the larger logistic chain that involves the private sector. This is a significant barrier to direct filing. However, whether this is the main reason for the continued reliance by SMEs on CHAs is difficult to untangle from other issues.

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