

GOVERNMENT ACTORS IN INTERNATIONAL SUPPLY CHAIN OPERATIONS: ASSESSING REQUIREMENTS FOR SKILLS AND CAPABILITIES

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Abstract

Over the last few years we have witnessed an avalanche of new policy initiatives that explicitly target supply chain security, trade facilitation and customs modernisation. Common to these programmes is the growing role of government actors in international supply chain operations. This paper builds on an extensive interview series conducted at UK ports and a survey of UK traders. It shows a complex cross-border environment in which government actors play a prominent part. Moreover, wasteful transaction costs arise in cross-border operations between business actors and government executive agencies. The resolution of these transaction costs places a wide range of requirements on skill and capability. At present much variance can be found in the observable skills and capabilities amongst individual businesses, their industries, locations and between different government agencies. This sets out a research agenda that considers the development of the skills and the capabilities necessary for efficient operations at the border and the development of meaningful relationships between business and government actors. The latter is of particular significance when defining and shaping the cross-border environment and international trade systems as they evolve in line with recent policy initiatives.

Introduction

Trade procedures controlling the movement of goods across national borders are currently receiving unprecedented attention by policy makers. Not only in the context of supply chain security initiatives that followed terrorist attacks in the USA on 11 September 2001, but also in the context of wider trade and customs modernisation initiatives, the WTO Doha Development Round and “aid for trade” programmes. While security focused initiatives play on immediate political fears, the simplification, harmonisation, standardisation and modernisation of trade procedures – often referred to as trade facilitation – promises significant transaction cost savings. The OECD calculate that the worldwide economic prize of trade facilitation can be worth up to US\$43 billion for each 1% reduction in trade related transaction costs (OECD 2003). Subsequent initiatives that follow this recent momentum in trade procedures include:

- An avalanche of supply chain security related programmes and regulations, including: the US-led CTPAT and CSI programmes; the European Union’s Security Amendment to the Customs Code; the ISO/PAS 28000 standard for supply chain security systems; the IMO’s security amendment to the SOLAS convention and the newly drafted ISPS code; various IATA initiatives including the *known shipper* concept; and, the WCO’s framework of standards to secure and facilitate global trade.
- The formal agreement by explicit consensus amongst WTO members to launch negotiations on trade facilitation, which explicitly look at the quality of trade procedures with reference to GATT Articles V (Freedom of Transit), VIII (Fees and Formalities) and X (Publication and Administration of Trade Regulations)
- The adoption of the World Customs Organisation’s revised Kyoto Convention in 2006 with contracting parties in most leading trade nations
- An estimated \$3 billion spent on wider trade facilitation capacity building and technical assistance programmes in 2004
- A significant overhaul of customs and trade procedures in the EU and its member states, scheduled for completion by 2013

(Grainger 2007b; 2007a)

At UK ports – the *de facto* UK borders – practitioner observations, interview and survey data identify a complex operational and institutional environment in which government actors play a prominent role.

Yet, their impact on supply chain operations and subsequent requirements for skills and capabilities has barely been considered in logistics and SCM research. The complexity of the cross-border environment and trade procedures generates substantial transaction costs. In managing these transaction costs there are significant variances in skills and capabilities between individual businesses, industries, ports and government agencies. Findings made at UK's ports provide an illustrative example that sets out a research agenda which considers the interface between business and government and its impact on cross-border operations. In view of recent policy momentum aimed at redefining the cross-border environment, one of the most pertinent questions is the requirement for skills and capabilities. This includes requirements for skills and capabilities in the day-to-day management of the cross-border operations as well as in shaping and influencing the form and shape of the governing trade procedures.

Methodology

This paper draws on research data collected by Andrew Grainger as part of his PhD thesis: "Trade Facilitation and Supply Chain Management: a case study at the interface between business and government" (Grainger 2007b). The data includes extensive interview and survey findings made between 2002 and 2006 as well as practitioner insights gained through Andrew's role as Deputy Director for SITPRO (the UK trade facilitation agency) and as Secretary for EUROPRO (the umbrella body for European trade facilitation committees and other like-minded, non-profit-making bodies). In total 41 individuals at manager, senior manager and director level were interviewed. These interviews took place at the ports of Felixstowe, Southampton, Liverpool, Portsmouth, Heathrow and Manchester Airport and involved a cross-section of selected freight forwarders, stevedores, cargo handlers, importers, shipping- and airlines, shipping agents, port health officers and customs officers. They were facilitated through the agency of local port user groups and SITPRO's port procedures policy group. Interviews enabled insight into the activities of the respondent's organisations as well as map the operational steps, examine the different types of regulatory procedures and the functionality of systems at UK ports. Moreover, interviews yielded a total of 223 specific comments on the nature and quality of trade procedures and their institutions. These were categorised into eight groups and include: Behaviour; Technology, Performance of Government; Capabilities; Procedures; Cooperation; Performance of Business; and Uncertainty.

To help further substantiate interview findings specific to UK import procedures, a web survey was conducted in late 2004 with the help of the Chartered Institute of Logistics and Transport, the British International Freight Association (BIFA) and SITPRO. The survey was hosted on the SITPRO Web-server and a link to it was circulated to the members of these three organisations via e-mail and their in-house print publications. This yielded a total of 136 valid responses, which were analysed with specific consideration to the survey sample and the performance and capabilities of government and businesses actors.

Port and trade procedures: a complex operational environment

Although international trade in goods constitutes a significant and growing element of British economic activity, most practitioners directly involved in day-to-day cross-border operations will, due the commercial and regulatory complexities, struggle to give a bird's eye (or system) account of the cross-border environment. Depending on the Incoterms used, commercial and regulatory obligations can lie with the buyer (EXW), the seller (DDP) or both (any of the remaining 11 Incoterms). In most commercial relationships a wide range of intermediary and agency services will be used to enable the transaction. The form and shape of a supply chain can vary from one transaction to the next. Subsequently, most actors operate within narrow parameters that do not extend beyond their own organisations. For example, amongst business actors a business selling goods may have knowledge of what is in a container, a freight forwarder may know on what ship the container has been booked, the shipping line will know where the container is, and the port will know whether Customs have intercepted it or if it has been cleared.

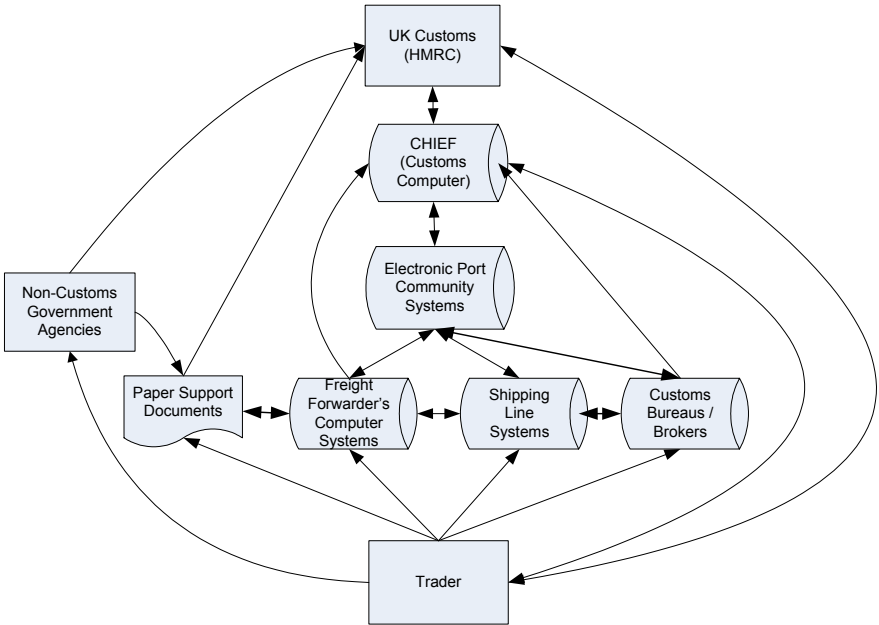
Government actors tend to be similarly organised around "silos" of subject expertise. At Customs this includes functional division focusing on areas like VAT, customs duties, excise duties and anti-smuggling, while other controls regimes (e.g. dangerous goods, quota applications, plant health controls, forestry controls, vehicle registration, immigration and many more) are applied by a wide range of specialist executive agencies sponsored by a range of different ministries. In total, it is

possible to count at least 60 trade procedures which target goods, the vehicles that move them (e.g. ships, planes, trucks) or their operators (e.g. drivers, seafarers, flight crew) (Grainger 2007b). These procedures are defined at international (eg. WTO, WCO, UN), Regional (EU), bilateral (eg. EU/UK and USA) or national (UK) policy levels. They fall into five regulatory areas: revenue collection, safety and security, environment and health, consumer protection and trade policy. Examples of regulatory activity related to these categories are provided in Table 1. Each of these regulatory regimes poses its own reporting, declaration and control requirements.

Regulatory Category	Examples of related activity
Revenue Collections	Collection of customs duties, excise duties and other indirect taxes; payment of duties and fees; management of bonds and other financial securities
Safety and Security	Security and anti smuggling controls; dangerous goods; vehicle checks; immigration and visa formalities; export licences
Environment and Health	Phytosanitary, veterinary and hygiene controls; health and safety measures; CITES controls; ships' waste
Consumer Protection	Product testing; labelling; conformity checks with marketing standards (e.g. fruit and vegetables)
Trade Policy	Administration of quota restrictions; Agriculture refunds

Table 1. Regulatory Categories and Examples of Related Activities

Despite a reasonably well established electronic infrastructure designed to speed up and automate the collection of data necessary for customs and port clearance, the environment remains very complex. Figure 1 shows how some of the identified systems fit together. However their efficient operations are frequently challenged by the legacy of paper based control document (especially in the non-customs area), the lack of interoperability and subsequent transaction costs.



Source: consolidated interview findings

Figure 1. Electronic systems used in the UK to achieve port and customs clearance

Transaction costs

Transaction costs arise as a direct result of collecting information and submitting declarations or follow on as an indirect consequence of border checks in the form of delays and associated time penalties, forgone business opportunities and reduced competitiveness (OECD 2001). All interviewed parties were able to give detailed accounts of transaction costs. These were usually attributed to vested and conflicting interests, non-system thinking and lack of supply chain management awareness, poor

relationships between business and government actors, a legacy of paper and manual trade procedures, lack of standards to enable interoperability between systems, IT system disruptions and their implications, poor IT products and services, specific requirements for IT systems and physical handling equipment, the cost of IT systems and access to IT infrastructure, errors in declarations and trade documents, and legally defined procedures that are incompatible with modern supply chain management practices.

To provide a slightly more illustrative account, let us consider a few examples in more detail. For instance, all interviewed traders reported of instances where customs and veterinary controls are enforced to different levels or in different ways, depending on the port and the officers on the ground. Subsequently, some interviewed parties gave accounts of where traffic had been actively diverted to an alternative port. This practice was also confirmed by a later survey of UK importers in which 19% (N=131) of respondents admitted to actively diverting traffic cargo to an alternative port because of actual or perceived differences in the enforcement of rules and procedures. Similar concerns about rules and regulations were also shared by some of the government inspectors. For example, a port health officer complained that he had to regularly check consignments of tinned tuna from a reputable food importer because of legislatively set inspection quotas – even though, from his point of view, the public-health risk was negligible when compared to other food categories or types of traffic. Traders and government inspectors also reported of instances where official controls were uncoordinated, with each inspection requiring separate handling, opening and closing of the same consignment.

To give another example, many interview respondents reported that procedures and systems do not always align. Although most UK customs declarations can be submitted and processed electronically, the vast majority of non-customs procedures still rely on paper documents. Subsequently, many paper documents need to be laboriously matched to entries in electronic systems – especially in instances where non-customs procedures take place while under customs control and Customs needs to verify that the other government department has met its control obligations (see the requirement for paper support documents in Figure 1). One further problematic area cited by an interviewed port health officer was the use of seals. The officer explained that he is often bound by regulation to take samples of goods and submit these to laboratories for further analysis. However, to open the consignment this officer must not only break the veterinary seal, he must also break all other seals that prevent him from taking the sample – such as a customs seal, which can have immediate fiscal consequences for the trader.

Variances in performance and capabilities

Transaction cost are not constant and variances in the performance amongst individual businesses, industries, types of ports, locations and regulatory regimes can be found. Moreover, some commercial actors will use trade and port procedures to seek strategic benefits. For instance the investment into electronic IT systems was found to yield considerable benefits for many port users. However, these systems also carry a cost which competing users with smaller operational scales are unable to meet.

It was also found that less experienced traders appear to rely heavily on the services of customs agents and brokers. This group is also less likely to take advantage of customs procedures that confer certain operational advantages (e.g. like inland clearance) or fiscal advantages (e.g. customs warehousing). To give some figures from the survey of UK importers, it was found that within the sample close to 70% (N=37) of those foregoing operationally advantageous customs procedures were customers of agents. Similarly, 81% (N=41) of those within the surveyed sample who do not utilise customs procedures conferring fiscal benefits are also customers of customs agents' services. Perhaps unsurprisingly, when considering requirements for fixed cost investments into costly IT systems, survey respondents with high volumes of customs declarations showed themselves to be less likely to rely on customs agents. The median number of customs declarations of those who make their own declarations is almost 12 times higher than those who rely on agents (7800 entries per year, N=48, as opposed to 675 entries per year, N=68).

Another finding was that controls are not always consistently enforced. As outlined earlier, interview reports and the survey provided evidence of traders and operators diverting cargo to alternate ports because of actual or perceived differences in the enforcement of trade procedures. The rerouting of traffic often appeared to be associated with frustrations experienced with the procedures enforced by port health authorities. Unlike Customs – which is a national organisation, port health authorities are

managed and funded locally by the local councils. Amongst the surveyed traders exposed to port health procedures, 43% (N=56) described port health authorities as the most troublesome. Taking second place was Customs, where 34% (N=94) of those exposed to their procedures described them as most troublesome. Ranking third place were import licensing requirements. Many interview accounts also suggested that EU wide trade procedures are often enforced in the UK differently when compared to other member states. While 19% (N=131) of the survey respondents admitted to diverting cargo to alternative ports, 14% (N=98) admitted to diverting cargo to alternative ports outside of the UK.

Interview findings also gave accounts of cooperative arrangements between individual operators (not all) and Customs (e.g. to gain more favourable treatment). Different levels of technological capabilities have also been reported. For instance large container ports are usually able to capture multiple sources of information from its various user groups electronically in one system (the so called port community system). At airports this degree of sharing has not quite been achieved. For instance one air-cargo handling agent explained that airline systems do not interlink with those maintained by UK airports. As a result, one of the first operational steps when an aircraft lands is to retrieve paper documents (Air Waybills) from the aircraft and then type the information by hand into the airport's cargo inventory system. Only once this data is keyed onto the airport's system are local agents able to lodge customs declarations and seek clearance. At other ports, where the volume of customs declarations is not so high (e.g. where the majority of cargo is bulk) there may be no electronic port system at all.

Requirements for skills and capabilities in improving the cross-border environment

The selected material presented so far illustrates the point that there are observable variances in the performance and capabilities of businesses and government actors. In the most simplistic terms, business actors move goods across border and government actors seek to verify that trade transactions are compliant with the appropriate regulatory regimes. However, the presented material also shows that trade procedures and arrangements are very complex. Moreover, there is significant evidence of transaction costs, which, from an efficient systems perspective, are undesirable. Their remedy requires the development of skills and capabilities in two areas. The first area of focus relates to the improvement of day-to-day operations between business and government actors. The second area, and just as relevant, are those mechanisms that help shape and change the governing rules and procedures, which in turn provide scope for a less complex and more accommodating cross-border system with lower transaction costs.

Improving relationships at the operational level

Visits to ports and interviews have yielded insight into a number of examples how business and government actors seek to improve operations. A seemingly simple solution is the employment of boundary spanners who are able to take an operational view of the port environment that extends beyond the immediate requirements of their own organisations. For instance a "switched-on" warehouse keeper working for the port stevedore is well positioned to inform customs officers that port health officers are conducting an inspection, thus giving customs officers the opportunity to examine the cargo at the same time as the port health officer. Similarly, a customs officer can give the port stevedore advance notice on the cargo he wishes to intercept, thus allowing the stevedore to immediately set these consignments aside when offloading vessels – significantly reducing the stevedore's handling burden and allowing the customs officer to intercept larger volumes of cargo. The development and use of port community systems allows all port users (including Customs) to share information necessary to clear goods through the port. Where all information is captured electronically, goods can be cleared within minutes.

At some ports traders also reported that close physical proximity and personal relationships with executive officers can help iron out operational problems at very short notice. For instance a port health officer reported that larger importers with goods subject to port health controls will invest time into building up a relationship with the authority. Similarly, some ports have established port user groups which give room to addressing operational and procedural problems amongst users. Another example for improving cooperation amongst actors provides the use of memoranda of understandings. These can be used to support the cooperation of traders and government executives (e.g. to share intelligence or define operational practices). They are also used to help define the cooperation

between different government executive agencies (e.g. between Customs and other government departments). Finally, business actors and government actors can learn from each other by participating in pilot projects prior to the roll out of new systems or the implementation of new legislation. This can iron out or help identify operational problems at an earlier stage.

Improving governing rules and procedures

Many of the transaction costs cited in this paper have their roots in the shape and form of the actual rules, procedure and their administration – good operational relationships between business and government actors are not enough to solve these transaction costs problems. All interviewed business and government actors were able to describe institutional arrangements that they consider to be inefficient and wasteful. The shape and form of the port environment impacts on efficient operations and is defined by wider institutional forces that include national (UK), regional (EU) and international policy levels (e.g. WTO, WCO, UN, IMO). The mechanisms to effect change to rules and procedures are very different to those described earlier. To effect changes to the institutional arrangement includes working with trade associations and government policy executives. It includes the participation in government consultation as well as the less visible lobbying activities that take place in the background of institutional decision making. It also includes the mobilisation (or threat) of political power, to ensure that legislated outcome enables best possible operational practices.

However, the institutions governing trade procedures are shaped by the specific positions of stakeholders (usually all actors that are involved in trade operations) and their underlying interests. Many of their interests can be conflicting. Obvious conflicts might be those between arms-length controls and closer cooperation. A number of interviewed parties gave examples of “old fashioned” officers who have been trained to mistrust every single trader – even those with good compliance records. One other example of conflicts can be found between suppliers of intermediary services (e.g. transport operators or freight forwarders) and their customers who are, as suggested earlier, often likely to be less experienced in working with government agencies and meeting the requirements set by trade procedures.

Conclusion

To improve trade procedures and operations at the border requires attention at both the operational (port) level as well as at the institutional level. In view of recent policy momentum in the areas of supply chain security, customs modernisation, the WTO Doha Development Round and “aid for trade” programmes, closer attention is placed by regulatory institutions on how business and government executives interact. This gives rise to the consideration of requirements for the development of suitable skills and capabilities amongst business and government actors. The legacy of visible transaction costs gives plenty of scope for system-wide improvements. A suitable research agenda, thus, considers mapping out the current regulatory environment, the role and behaviour of its actors, their underlying strategies and interests, as well as the institutional mechanics and skills necessary to influence them and achieve system-wide improvements. The operational and institutional overlap between business and government actors is an area that has barely been considered by current logistics and supply chain management literature. The specific roles played by government actors in enforcing rules and procedures as well as setting the regulatory environment in which supply chains operate, is a particularly large gap. In view of the current policy momentum it is a gap that urgently needs filling. The research presented in this paper offers a first step.

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