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INTERNATIONAL NETWORK OF CUSTOMS UNIVERSITIES

World Customs Journal

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Contents

Editorial

The partnership between the World Customs Organization and the academic world is a very important one, and the annual PICARD (Partnership in Customs Academic Research and Development) conference provides us with an ideal opportunity to get together, to share experiences and ideas, and to identify how we can make the most of this unique partnership.

This year's conference was held in Geneva, with the theme 'Promoting research-based knowledge to support customs decision making', a theme that was examined in the context of research that has been undertaken in a number of specific areas:

- Coordinated border management
- Performance measurement in the customs context
- Economic security and poverty reduction
- Integrity.

Several of the papers that were presented at the conference are published in this edition of the Journal, and we plan to publish more in the March 2012 edition.

While some very useful issues emerged during the course of addressing these issues, one very clear message for me was the need to ensure that our research remains demand-driven rather than supply-driven, otherwise it won't be valued or, worse still, it won't even be read by those who could potentially benefit from it.

In this regard, there is a need to monitor the effectiveness of what we do – to what extent is the theory being translated into practice? To what extent are academic efforts and activities found to be useful by the WCO and its member administrations? To what extent are research findings being applied in a practical sense? This is, in itself, a fertile area for future research.

On behalf of the Editorial Board, I'd once again like to thank all our contributors, and I look forward to seeing further evidence of ways in which the broad range of published research findings is helping to support customs decision making.

David Widdowson
Editor-in-Chief

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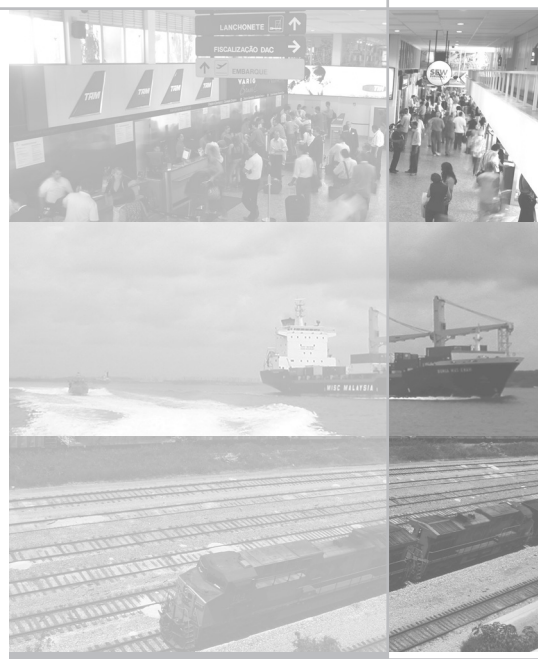


Section 1

Academic Contributions

Cloud single window: legal implications of a new model of cross-border single window

Luciano Pugliatti

Abstract

In his paper, 'Weaknesses in the supply chain' published in this Journal,[1] David Hesketh discussed the problems and threats for customs authorities that arise from lack of visibility in the supply chain of what is really being carried inside cargo containers. According to Hesketh, this is due to the fact that the information supplied to Customs and other authorities in all jurisdictions involved derives from different sources and, for various reasons, it is altered, summarised or manipulated to the extent that it is no longer a true representation of the goods being carried. This has serious implications not only for the collection of proper duties but also for the identification of counterfeit, dangerous or prohibited goods and for supply chain security.

Hesketh posits that the solution lies in a re-think of how the supply chain is being managed by capturing information about the cargo as close as possible to the source, that is, from the consignor, and in ensuring that information does not change when it is made available to border authorities downstream. To make this happen, Hesketh proposed building 'a web-based, seamless electronic "data pipeline" linking the seller/consignor and the buyer/consignee and interested economic operators in-between' with customs authorities.[2]

In this paper, I have suggested a potential system architecture that governments could implement in order to facilitate and take advantage of this data pipeline (the *Pipeline*) and I have explored the legal issues involved. The architecture proposed would require a new international convention but it would address the issue of integrity of the supply chain as well as provide for greater trade facilitation. It is also a model that, by taking a different angle, reduces the complexity of the legal issues involved.

1. Introduction

The supply chain is the end-to-end movement of materials and goods from origin to final destination during which the goods may undergo a number of transformations, are subject to a number of commercial transactions and are transported by different means of conveyancing.

Several economic operators (EOs) are involved in the supply chain. Along the way these different operators acquire title to the goods or materials and responsibility in relation to those goods with regard to regulatory obligations within their jurisdiction.

In a globalised economy, the modern supply chain may span several countries and, therefore, the EOs responsible at any one time for selling, packaging, handling, shipping, storing and, ultimately, importing the goods are subject to the laws and regulations of different jurisdictions.

In order to comply with their regulatory obligations the fundamental requirement for the EOs is to provide truthful and accurate information about the goods for which they are responsible to the relevant authorities in their jurisdiction.

The supply chain has been described as 'traditionally characterised by a forward flow of materials and a backward flow of information'.[3] In a supply chain that involves cross-border movements of goods, Customs and other border agencies are recipients of information except that, ideally, they need the information to flow 'forward' ahead of the physical movement of the goods rather than 'backward' (that is, once the movement has taken place).

Prior knowledge of what kind of goods are to be expected at the border has become an imperative in recent years for two main reasons.

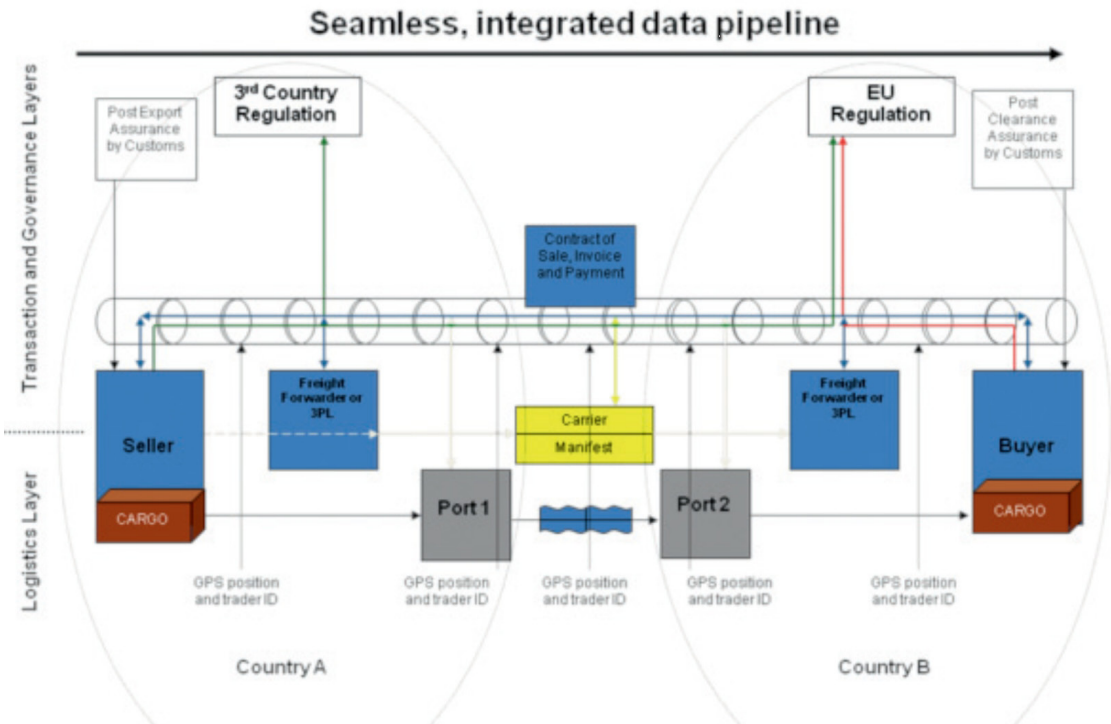
Firstly, there is a growing responsibility put upon border agencies and Customs in particular to promote trade facilitation by speeding up and simplifying clearance procedures at the border.

Secondly, there is a need to screen goods ahead of arrival in order to detect potential security risks. In the wake of the 9/11 events, there has been a growing concern that the supply chain is exposed to terrorist threats or that it could be used to fuel terrorist activities.

Therefore, it is imperative that Customs and other border agencies should receive information about the cargo that they are expecting that is accurate and, ideally, they should have access to this information as soon as it becomes available in the supply chain.

For this to happen, Hesketh advocated the creation of the *Pipeline* described in the following figure (Figure 1) and argued that a new international convention will be required.

Figure 1: Supply chain data Pipeline



Source: David Hesketh 2010.

The key concept of the *Pipeline* is that EOs should find it advantageous to place commercial and logistics information about a consignment in the Pipeline for the purpose of transacting their business and that Customs (and other relevant border agencies), across jurisdictions, should leverage that information in order to discharge the regulatory obligations and carry out risk assessments without requiring that this information should be re-submitted by different parties.

The fundamental assumption is therefore that regulatory authorities should use the actual information which is used in the contract of sale of the goods and in the fulfilment of the transaction rather than a traditional separate declaration.

In this paper, I conceptualise a system architecture that governments could implement so that Customs and other border agencies can 'piggyback' onto the Pipeline and I explore what the legal issues might be around implementing such a thing. I also consider whether the recent trend towards 'cloud computing' would present opportunities to facilitate the implementation of the *Pipeline* principle and, if so, what legal issue that would present.

2. National single window as the gateway for the Pipeline

In the model that I propose, there would be a shared, supranational facility that provides a service to the national authorities of the participating states. I have called this facility ***Cloud Single Window*** (CSW).

The technologies and methodologies for a collaborative e-commerce platform are already proven by well-established examples of logistics networks, such as Tradegate[4] in Australia or TradeXchange[5] in Singapore, that allow the exchange of electronic messages between commercial and logistics operators as well as providing for the interchange, at national level, of certain messages with Customs and other government authorities.

Similarly, the concept of exchanging commercial data using agreed standards, such as Rosettanet,[6] to carry out international transactions between commercial operators – using private networks, VPNs (Virtual Private Networks) or other forms of secure communications – is also well established.

The CSW model is aimed at leveraging these facilities already implemented in the commercial sector, which I have referred to collectively as the *Pipeline*, in order to create a concept of regional or international single window which is aimed at ensuring supply chain integrity and visibility by serving as more than just a routing network for electronic messages between customs authorities.

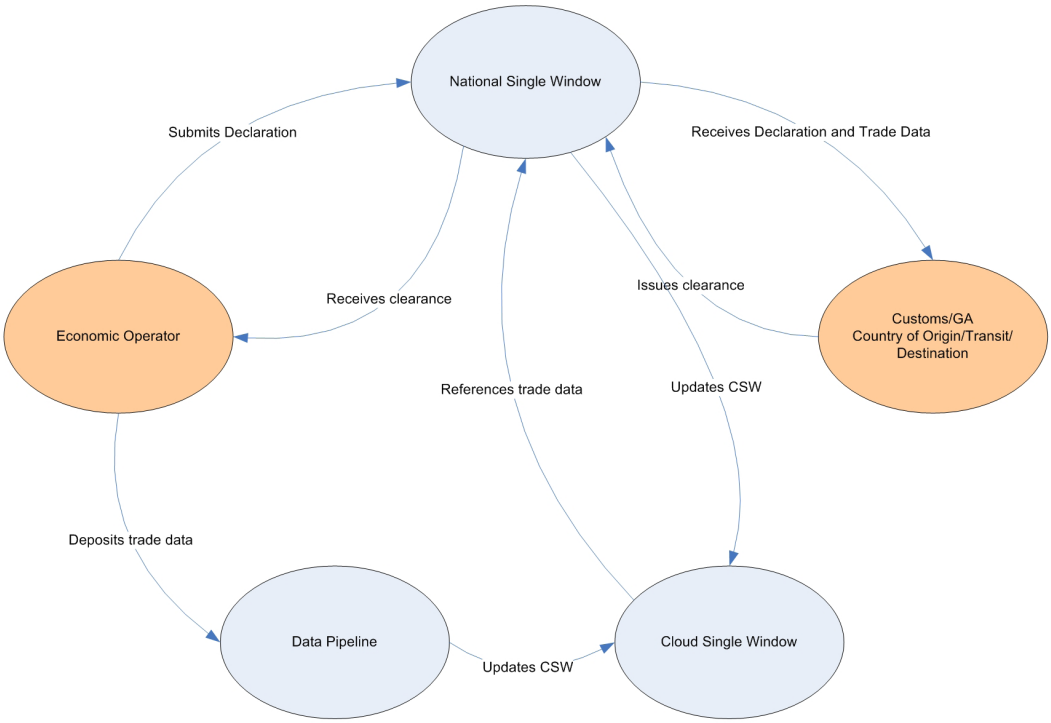
The CSW would be the governments' interface with the commercial *Pipeline* and each participating state would link into it (and, by proxy, the *Pipeline*) through their *national single window* (NSW) acting as the gateway.

At its basic level, the CSW would therefore be a platform for the interconnection of national single windows. This concept, often referred to as 'Regional Single Window' or 'Cross-Border Single Window' or 'International Single Window', is not new and is actually encouraged by the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and the World Customs Organization (WCO). However, there are no examples of one having been implemented and, therefore, there is no accepted international model yet. In any event, the prevailing models of an international single window contemplated so far do not envisage leveraging a commercial data pipeline, and they are simply predicated on an exchange of data between customs authorities. Such an example is the Association of Southeast Asian Nations (ASEAN) Single Window which is probably the only regional single window in the process of implementation, albeit in pilot mode. The model currently being contemplated predicates a Government-to-Government (G2G) exchange of information between NSWs which is independent of the Business-to-Business (B2B) pipeline and, therefore, falls short of delivering real-time visibility on the supply chain.[7]

3. Proposed new model of supranational single window

Essentially, the CSW would be a wide area network (WAN) the stakeholders of which are the government authorities of each country involved in the supply chain (that is, Customs and other border agencies). These stakeholders would interact with the CSW through their NSWs and the CSW would be seamlessly interconnected with the *Pipeline*, which could be any combination of the commercially operated facilities mentioned above, as illustrated in the following high level conceptual model, Figure 2.

Figure 2: Conceptual model of Cloud Single Window (CSW)



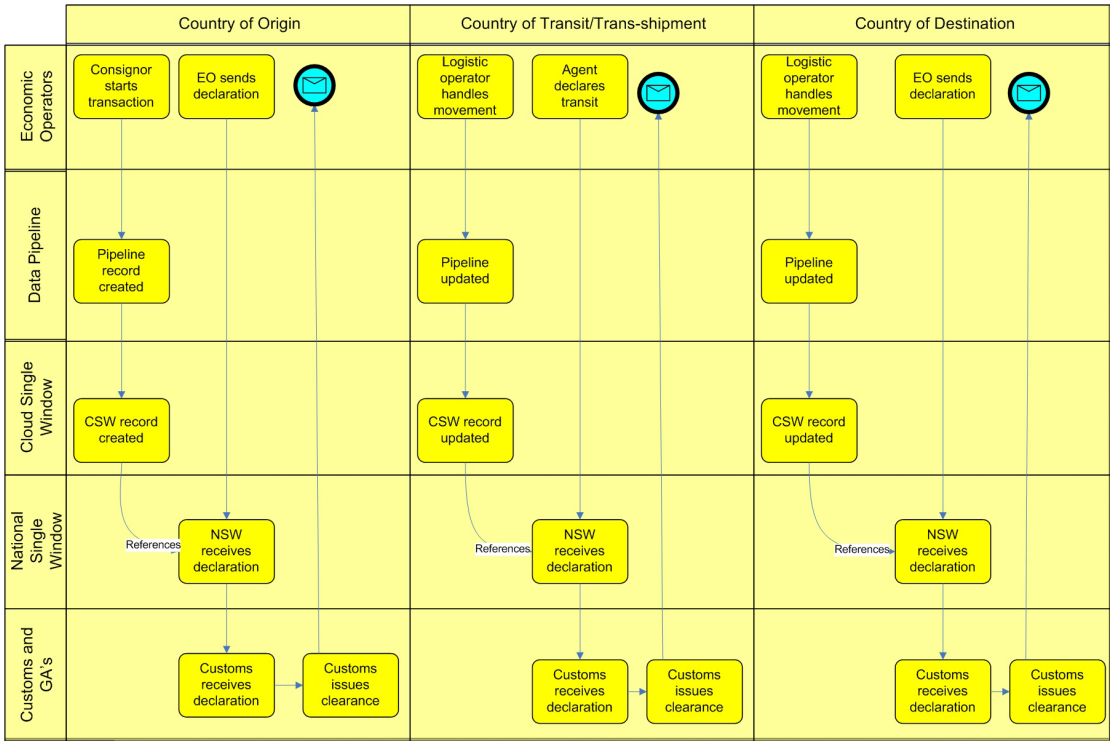
Source: Pugliatti 2010.

The CSW would act as the repository of commercial transaction data from the start through to the end of a transaction involving the shipment of goods across borders.

Conceptually, the *Pipeline* and the CSW could be the same network but this would present an increased level of complexity from legal and operational points of view due to having to accommodate the requirements of both private and public sector within the same environment and across borders.

A high level conceptual representation of the CSW process flow is illustrated in Figure 3 below.

Figure 3: Model of Cloud Single Window (CSW) operation



Source: Pugliatti 2010.

The starting point for the CSW is from the *Pipeline* where the EO deposits details of the goods at the start of a commercial transaction. The CSW would open an electronic 'pipeline record' for that consignment using a Unique Consignment Reference Number (UCRN) as the identifier.

As the consignment progresses along the supply chain, other EOs will take responsibility for it and will be obliged to report a movement relating to it (for example, loading, departure, arrival, discharge) or submit a declaration (for example, export, transit, import) to border agencies within their jurisdiction. In current practice, each party that is responsible for reporting or declaring the consignment sends a message to the authorities containing a description of goods which may originate from their internal systems or may have been re-created through manual processes. This may take the form of a notice of arrival/departure, discharge/load list, tally manifest, cargo/freight manifest, customs declaration as well as any number of commercial supporting documents that national legislation may require.

In the CSW model, each EO may fulfil the above requirements by lodging a message with their NSW which simply identifies the movement or transaction being reported by making reference, by means of a UCRN, to the consignment/s which relate to that transaction recorded in the CSW.

If any changes are necessary to the description of goods, quantities, weight, etc. once the consignment data has been lodged into the CSW, the operator would send a message referring to the original record with any modifications. The change would be stored in the CSW as part of the consignment's history.

For the above to happen, one key legal aspect is that an electronic message carrying legal value (such as a customs declaration) must carry the same legal weight even if it does not contain the full data payload but, instead, it points at another document stored within a third-party domain (the CSW).

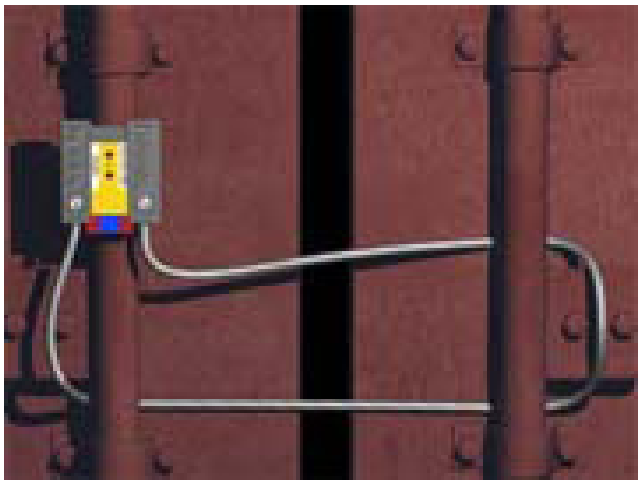
The key factor is that Customs and other agencies always have access to the original data. In the CSW model, Customs and other authorised border agencies will have access to the data for any consignments destined for their jurisdiction as soon as the original commercial transaction record is placed in the *Pipeline* and the CSW. The CSW could issue an alert electronically to the relevant authorities downstream in the supply chain as soon as a 'pipeline record' is created and every time that record is updated with tracking information.

In his paper, Hesketh advocated the use of RFID and GPS technology for granular tracking of goods at unit, pallet, consignment and container level.[8]

Following 9/11 there have been a number of projects experimenting with these technologies aimed at providing real time visibility on the location of goods, especially when stuffed inside containers, as well as attempting to guarantee that the contents of the container have not been tampered with since the original stuffing thus still corresponding to the description carried by the various transport documents.

One such technology is the 'electronic seal'. There have been various prototype electronic seals developed and tested, such as the one shown in the picture below (Figure 4), though most of them fail to live up to their manufacturers' promises of total tamper prevention.

Figure 4: Tamper detecting electronic seal



Source: Universeal UK Limited 2003.

Every time the seal is read at checkpoints along the supply chain (for example, vanning, de-vanning, gate-in, gate-out, loading, discharging, re-positioning, etc.) the operators' systems could relay that information to the *Pipeline*/CSW so that real-time tracking of the cargo position can be made available to all the CSW stakeholders.

There are vast logistic and commercial difficulties in establishing the use of electronic seals across the entire supply chain, at least until the cost of packaging the technology into a device comes down to the level where re-usability is not required. However, as and when these issues are overcome and the cost of technology becomes viable, electronic seals coupled with other technologies like GPS, may prove to play a vital role in ensuring the integrity of the supply chain.

Advantages of the CSW model

What are the advantages of the CSW model as against the traditional one of a regional single window simply acting as a routing service for e-documents (the 'flow through' model)?

Firstly, in the traditional model, once the data has been routed to an intended recipient, it is no longer visible by all other government stakeholders in the supply chain. In the CSW model the complete history of the consignment including, possibly, any movements registered via RFID or GPS devices, would be visible in real-time to all stakeholders in all relevant jurisdictions. This means that, given the necessary safeguards about privacy and confidentiality, it could provide a shared platform for risk assessment by customs authorities in all participating countries, giving them valuable access to advance information as well as traffic pattern analysis.

Secondly, the CSW does not predicate that an exporter's declarations 'flow through' to Customs in the importing country, thus raising a host of legal issues to do with liability for false declarations and others. The CSW model relies on parties in the supply chain electing to accept responsibility for the data lodged at origin at the start of a commercial transaction. If they have no objections to that data being used, they can confidently use it as the basis for their declaration. If, on the other hand, they have objections, they would have the opportunity to submit an alternative data set in which case, potentially, an alarm trigger may be raised with the relevant authorities to investigate the reason for the discrepancy. The principle of 'commercial advantage', gained from a higher level of differentiated treatment by the border authorities, should dictate that most operators will prefer to avoid unnecessary delays by electing to use the CSW data where there is no good reason on their part not to do so.

The CSW model is philosophically in line with the recommendations made by the WCO in its *Resolution on the Role of Customs in the 21st Century*:

> The new requirement is to create, in partnership between the various stakeholders of the public and the private sectors, a global Customs network in support of the international trading system. The vision of this network implies the creation of an international 'e-Customs' network that will ensure seamless, real-time and paperless flows of information and connectivity.[9]

Both the *Pipeline* and the CSW would require a technical and logical infrastructure that sits outside the jurisdiction of each country in the supply chain. Whilst in the case of the *Pipeline* this would be subject to a commercial agreement between the EOs, in the case of the CSW the infrastructure and the service would need to be shared by different national authorities.

4. Legal implications of the Cloud Single Window (CSW)

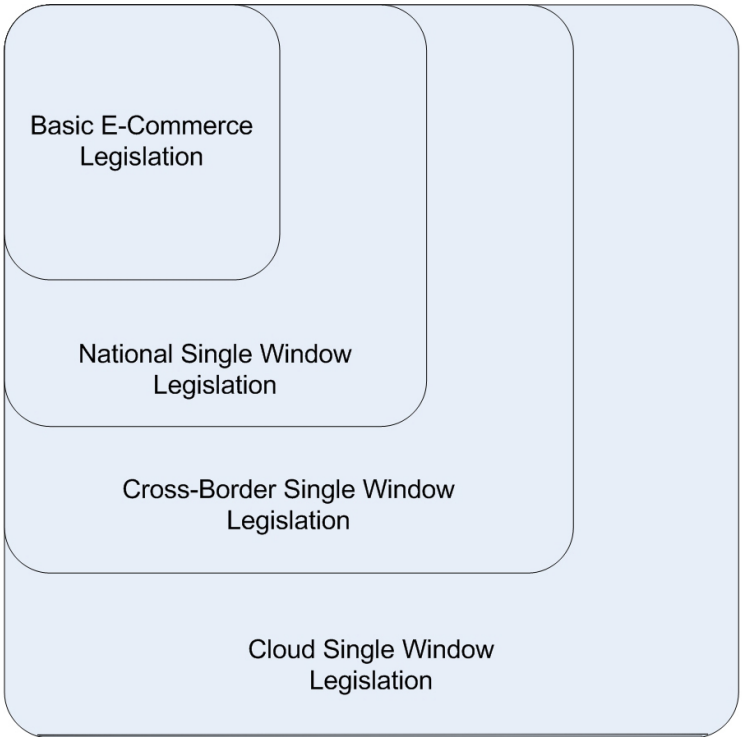
In examining the legal implications of a CSW I have tried to posit measures that require a minimum of mandatory legislation over and above existing frameworks.

CSW relies on certain basic assumptions about the existence of a legal framework that enables information to be received into it, form part of a declaration and be retained over time in the CSW environment. The information would primarily be the contents of a commercial transaction with accurate descriptions of goods, value, quantity, weight, marks, origin, destination and other relevant details.

Therefore, the legal framework for the CSW must be based, incrementally, on the foundations of existing e-commerce legal frameworks that cover the supply chain.

The relationship between these levels of legislation can be described by the diagram below, Figure 5.

Figure 5: Legal framework for CSW



Source: Pugliatti 2010.

National e-commerce legislation

At the fundamental level of any single window legislation is the ability to exchange information that carries legal value between an EO and Customs or any other government agency within its own jurisdiction.

A large number of countries have already enacted basic legislation to allow electronic transactions to take place covering both Business-to-Government (B2G) and Government-to-Business (G2B) transactions.

Much of this legislation is based on the United Nations Commission on International Trade Law's (UNCITRAL) *Model Law on Electronic Commerce* which provides a framework for the key principles, that is,

- allowing electronic commercial transactions to carry legal status in place of paper documents – this is known as the principle of 'non discrimination'
- retention of data stored electronically in place of physical archives
- integrity of electronic messages
- attribution of messages
- acknowledgement of receipt of messages between parties.

National single window (NSW) legislation

Above the basic e-commerce level, there must be a legal framework for operating an electronic NSW.

A checklist of issues to be considered when implementing a national or international single window is provided by *UN/CEFACT Recommendation No. 35* though some of them are the basic principles of e-commerce listed above.

- Data protection
  The principle of data protection and the right to privacy or confidentiality of the data supplied to the NSW should be enshrined in national legislation.

- Identification, authentication and authorisation
  Identification of the originator or recipient of a message, authentication of his [*sic*] credentials and authorisation to carry out certain transactions are the means to ensure the integrity of the data being submitted and an appropriate level of access to the various facilities of a National Single Window thus also addressing the issue of where liability lies.

  UN/CEFACT Recommendation 35 recognises that 'there are no worldwide legal, procedural and technical standards in this area at the present time'[10] and this is probably also due to the fact that there are many different technological ways of addressing these issues. For example, digital signatures or digital certificates can be used to provide authorised access or authentication of messages. To use such facilities a Public Key Infrastructure (PKI) is required which is, basically, a service managed by a 'trusted third party' (also known as 'certificate authority') that provides authentication of digital message exchanges based on a digital key uniquely associated with a user of which the PKI authority is the trusted custodian.

  There are, however, a number of technical variations and, indeed, there is a school of thought that digital signatures are redundant in an environment where an accredited user is immediately recognised through their login and password credentials and that the 'signature' is implicitly assumed through the interchange agreement in existence between the parties.

- Data quality
  The quality of the data (assuming that modern computers, networks and data transport protocols can be trusted not to distort or lose data in transmission) is only as good as what is supplied by the originator. Therefore this issue comes down, again, to identification and authorisation of the originator of the message and to the legal framework that governs receipt, acceptance and legal status of that transaction.

  In a single window context, the first step of identification is to allow only approved registered users to have access to different facilities on offer according to their role within the supply chain.

- Liability issues
  These are issues that may arise from the misuse of information or from supplying incomplete, incorrect or false information. The liability arising from such issues is closely tied to the provisions governing identification, etc., and data quality as discussed above and the respective responsibilities of the parties involved.

- Authority to access and share data between government agencies
  In the context of a typical NSW, the model would be such that all the data required by all the agencies to give clearance is submitted to a single point, through a single channel and, preferably, as a single message. This means that even if the data is 'sliced and diced' so that each agency receives only the data that it requires, it would still exist, before and/or after that is done, in a domain to which all agencies, potentially, have access. Conversely, in a model where one agency operates the NSW facility on behalf of other agencies, that agency would have access to information which pertains to other agencies.

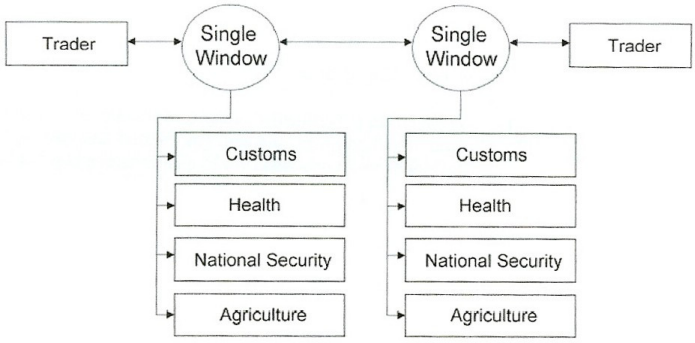
It is therefore necessary to write into law the ability to share information between agencies and for a single submission to be valid as a declaration to all the agencies. The law should confine the sharing of information to certain agencies for the purposes of border control and exclude any entity that may have a commercial interest in the information (for example, an airport authority).

Cross border legislation

The third level is the legal framework for exchanging information between government agencies across borders.

Schermer used the simple diagram below (Figure 6) to describe what an international single window would do.[11]

Figure 6: Model of international single window



Source: Schermer 2007, p. 3.

In this model, the concept of an international single window comes down to an exchange of certain documents once these have been submitted to, validated and generally processed by an NSW.

Therefore, the advice that follows is that 'on an international level, bi-lateral or multi-lateral agreements often need to be established to govern the operations of each single window and that take into account a variety of legal issues that may arise to ensure "legal interoperability" between these single windows'.[12] Similarly, UN/CEFACT *Recommendation 35* recommends that in international agreements there should be 'mutual recognition of electronic documents and data messages that may be exchanged between single window facilities'. The general conclusion is that, in order to provide a legal framework for an international single window, there should be harmonisation of national laws, something that is clearly going to be challenging to achieve in the short to medium term given the disparate level of national law in many countries.

The key principle underlying the models envisaged by UNCITRAL, UN/CEFACT and ASEAN seems to be that an international single window is a facility for routing e-documents – the integrity of which is guaranteed by national legislation – between NSWs that will accept the validity of those documents on the grounds of mutual recognition of each other's national legal frameworks.

However, in the 'flow-through' model where the declaration (and documents) data is exchanged Customs-to-Customs, the issue of recognising a message sent by Country A to Country B as valid and carrying legal weight in the receiving jurisdiction has proved very difficult. ASEAN, for example, thought it presented 'significant difficulties for the efficient and effective enforcement of laws of Country B'.[13]

The CSW model attempts to circumvent these legal difficulties at the same time as addressing the issue of real-time visibility of the supply chain by predicating a different functional architecture that requires a simpler legal framework.

In the conceptual model of CSW, the fundamental principle is that a message containing trade data is delivered to the CSW from the commercial *Pipeline* and, therefore, mutual recognition of customs declarations is not necessary.

However, it will be necessary to create an international convention (the **'CSW Convention'**) whereby all the parties would agree to the rules governing the CSW in respect of data protection, privacy and identification of the information being shared.

The CSW Convention would have to address the following issues.

Ownership

First and foremost is the issue of ownership in the sense of being responsible for the infrastructure, for the service it provides to its users, for protecting the confidentiality of the data and for administering the data within the agreed rules of interchange.

The obvious consideration is that, as it is a service to national authorities that have signed up to it, the managing entity should be a body that represents, equally, the interests of all these stakeholders.

The European Union (EU) provides a model for such cooperation as it already operates a number of systems in an integrated architecture for its members (for example, TARIC [Integrated Tariff of the European Communities], NCTS [New Customs Transit System]) and others – most significantly SEAP (Single Electronic Access Point) – that are under development as part of its eCustoms vision.[14] However, this is made possible by the body of legislation that supports the Customs Union, primarily the *Modernized Customs Code*.[15]

In the absence of such a framework, a CSW open to all countries that wish to take advantage of it and that are not necessarily members of a union could be operated by a body that represents a membership with common goals.

One option would be a 'members owned' cooperative association, along the lines of SWIFT for the banking sector, which would have to accept the 'CSW Convention' as the basis for its constitution. However, this organisation would not have a legal personality that would enable it to dictate that sovereign states should, as may be necessary from time to time, change their national laws and, as in the case of SWIFT which is incorporated under the laws of Belgium, it would have to be subject to the law of wherever it is based which may not be acceptable to some of its members.

The other alternative would be for an established international organisation to take the operation of the CSW under its wing. The United Nations Conference on Trade and Development (UNCTAD) may be a candidate but, for the reasons below, the WCO would seem to be more appropriate.

The WCO has the legal personality to draft and enable a convention which can put obligations on its parties at a national level. The WCO can also acquire property, institute legal proceedings, hold different currencies and transfer funds,[16] all of which would be necessary conditions to enable it to operate a facility such as the CSW as well as charging a fee for the service, if necessary. The WCO could therefore be the custodian of the 'CSW Convention', open for voluntary accession, which would embody the Service Level Agreement (SLA) between the WCO and the parties to the convention as well as the interchange agreement between the CSW and the commercial organisation responsible for managing the *Pipeline*.

The WCO could also provide the premises for the CSW at their headquarters which, under the *Customs Co-operation Convention 1952*,[17] is considered to be an inviolable supranational location thus resolving the issue of parties having to come to terms with the service being operated under the national law of another member as well as being free from liabilities, taxes, prosecutions, etc. arising from any national law.[18]

In fact, there is already a precedent for such an arrangement as the WCO has been running for some years a system called CEN (Customs Enforcement Network) which offers Members the facility to exchange data relating to seizures and trans-national crime. Furthermore, the *Johannesburg Convention* makes provisions for a 'secure central automated information system' managed at the WCO's Headquarters.[19]

Capture of original data from the consignor

The key feature of the *Pipeline* concept is to capture data regarding a consignment from a reliable source (the real shipper) as close as possible to the start of the supply chain. This data would be voluntarily placed into the *Pipeline* by the EO using the data that constitutes the contract of sale.

Mandating in law that the real shipper should be obliged to do so would seem to be a step too far. Ultimately, EOs should be convinced that there is a commercial advantage in complying with this requirement which will be reflected in the treatment of their consignment along the entire supply chain.

However, a measure of integrity may be catered for by national Authorised Economic Operator (AEO) schemes which would confer each EO an appropriate degree of trust. This degree of trust could be reflected in a 'hallmark' affixed to each transaction and carried through to the CSW which could be used by customs authorities down the supply chain to assess the degree of risk that the data carries in terms of accuracy.

The way in which the data is assembled prior to submission could be subjected to the normal audits for verifying AEO compliance which could include inspection of the AEO's computer systems to ascertain whether their data originates straight from electronic contract of sale documents.

Of course, whilst the above may ensure the integrity of the information down the supply chain, it cannot guarantee that the information is accurate in the first place if the shipper is engaged in some form of illegal activity. This is something that can only be addressed by customs authorities through their intelligence and risk management programs.

Use of UCRN, authorisation and identification

The CSW would rely on each consignment being uniquely identified throughout its life cycle. This can be done through the use of a UCRN. The use of a UCRN has been advocated by the WCO by means of a recommendation[20] and there is therefore a substantial obligation on Members to enforce its use through national legislation.

The important issue to note is that, in the CSW, an EO down the supply chain can choose to submit a declaration by making reference to the original data using the UCRN as the key identifier.

There are technical issues concerning the use of a UCRN. However, from a legal perspective, it is immaterial who issues the UCRN but its use and the rules governing its generation would have to be written in national law and the 'CSW Convention' should provide for harmonisation of these rules.

Security can be enforced by issuing a private key to the original operator who lodged the consignment at the start of the supply chain and that key would be uniquely associated with the UCRN for that transaction. It would then be the responsibility of the original operator to communicate the UCRN and its associated private key to their trading partners down the line. In this way, only the EOs legitimately involved in that transaction will have access to the original data and Customs, in any of the jurisdictions down the supply chain, will know that they are authorised to do so by their trading partners.

In this scenario, alongside issuing the UCRN, the service provider of the CSW could also be the ideal vehicle for providing the PKI services to all its members so that a common security standard can be adopted. Indeed, the use of PKI is advocated by the WCO in the *SAFE Framework of Standards*[21] and it is catered for in Data Model 3.[22]

Liability

Perhaps the most important issue is that of liability for the information supplied, that is, whether this can be used as evidence in any particular jurisdiction and what to do to enforce any liabilities given that it may not have been originated by a party in that jurisdiction.

In the CSW model, liability for a declaration would rest with the EO that has submitted a declaration message to their NSW making reference to the data supplied via the *Pipeline*. The basis for accepting an e-document that makes reference to another e-document is already covered by the UNCITRAL Model Law as a fundamental principle of e-commerce. Therefore, liability and use as evidence fall within the national jurisdiction of the receiving authority.

The legal instrument that carries liability and that can be used as evidence is the 'declaration message' submitted to an NSW which contains a reference to the data and, unlike the 'flow-through' model, no electronic document is being passed from one government agency to another across borders thus mutual recognition of electronic customs declarations is not necessary.

Eventually, it may be desirable to make the originator of the data liable for inaccurate or false descriptions. This would require a high degree of harmonisation of national laws and an international agreement to allow prosecutions in another jurisdiction and, undoubtedly, the legal issues involved in this respect are likely to be complex.

Standard to be used for messages

This is probably the easiest issue to address because all that is required is that the CSW Convention's members agree to submit or retrieve data to/from the CSW in an agreed format. It is immaterial what format each NSW enforces on its users nationally and, indeed, an NSW, similarly to services such as Tradegate's MessageXchange,[23] should allow economic operators to submit declarations and other messages using formats that are in wide international usage, for example, EDIFACT, UNeDocs, and XML.

From the perspective of the data set, again, if the WCO were to take an active role in CSW it would become easier to stipulate the use of the WCO Data Model 3.

Confidentiality

The issue of confidentiality of the data retained in the CSW is probably the most controversial. As Luddy states, 'Ensuring confidentiality, integrity, availability and privacy of information and data are fundamental to protecting the information assets of government and private sector participants'.[24]

It is understandable that what ostensibly looks like one big database containing all the trade data related to the participating countries' – albeit conceivably only for the lifetime of the transaction – would raise the concern that it could, firstly, be mis-used by other members to gain some advantage and, secondly, could be the target of hacking.

On the danger of unauthorised access by hackers all that one can say is that, obviously, the danger does exist but, as in other security-conscious applications like banking, the benefits of doing it outweigh the danger. The CSW would have to adopt the most stringent security measures available to the ICT industry to prevent such attacks and in this respect it is no different from any public service that is, to different degrees, exposed to the outside world through the internet. Such measures could include the use of proxies to shield access to the main database/s, 128-bit encryption on all communications via the internet, storage of data in encrypted format requiring a private key to decode it, spread of data over separate locations, and so on.

On the question of whether authorised members trust each other to only use the data for legitimate purposes, protection of each member's interests in this respect would have to be incorporated in the CSW Convention along the lines of the national legislation that governs the sharing of information between government agencies within a country. Therefore, the basis for this mutual trust could be mutual recognition agreements between members.

National law may prevent countries to share information across borders. Indeed, concerns about sharing information may account for the poor take-up by states of the *Johannesburg Convention*. However, these concerns may be alleviated by the fact that, in the CSW concept, what is being shared is not operational customs data but data voluntarily submitted by the private sector. Therefore, it is the private sector that should be comfortable with the provisions on confidentiality and data protection that would be embodied in the CSW Convention and these concerns should be addressed in the SLA between the CSW operator and the *Pipeline* operator/s.

5. Running the Cloud Single Window in a 'cloud' environment

Throughout this document I have referred to the 'cloud' in relation to the proposed model of a supranational single window. In this respect, I have used the term loosely to signify that the CSW does not run in any specific jurisdiction and that it provides a service to users across national boundaries.

In technical terms, however, the prevailing modern meaning of 'cloud' is a service provided by a supplier that delivers to end users the information and functionality they require (whether through web screens or data packet exchanges with their back-office systems) by using an infrastructure which does not reside with the end users and could, indeed, be reliant on data centres or computer facilities in more than one location anywhere in the world.

The reason for exploring the feasibility of operating the CSW as a 'cloud' service is that this is now a topical subject. The recent WCO IT Conference held in Seattle in May 2011 was boldly entitled '*Cloud Computing – A New Era for Customs*' and its thrust was that 'cloud' technology is now mature enough to be able to offer Customs the opportunity to run collaborative systems such as single window in a potentially massively scalable environment with substantial gains in efficiency and savings in cost.

In the CSW model where a supranational organisation like the WCO would take ownership of providing the service, one could conceive the traditional model where a large computer is installed at their headquarters with all the necessary telecommunication devices to enable external access by users over the internet. In this case, the data, the software and the hardware would reside in one specific place. There is nothing wrong with this model except that the service would have to be kept operational 24/7, provisions would have to be made for backup and disaster recovery and, most importantly, a very high degree of scalability would have to be built into this infrastructure as the data repository will very quickly get larger and larger and the volume of transactions bigger and bigger as the service grows. This would require a hugely sophisticated ICT support capability on the part of the provider and the cost of running such an operation would be substantial.

The advantages of the 'cloud' model are that the client/s do not have to maintain and support the infrastructure and the systems; they are guaranteed virtually limitless scalability and do not have to deal with a variety of contracts or SLAs with different technology suppliers.

This is where an arrangement whereby CSW is operated on a 'cloud' platform would, in theory, present several benefits. However, a number of legal issues would need to be resolved in a model where an organisation, such as the WCO, would be the client 'owning' the CSW and providing a service to its members but where this service is provided, via a contract with a 'cloud' provider.

A report by an Expert Group to the European Commission (EC) identified the great potential for

cloud applications and, indeed, its main recommendation was that the EC should stimulate research and development and address the regulatory aspects and issues of standards in order to encourage its development and expansion. However, the report acknowledged that there are still gaps both on the technology side and on 'the legalistic side of cloud systems'. [25]

For the purpose of this paper, I will set aside various technical issues (for example, broadband speeds, and scalability of telecom infrastructure) and assume that sufficient progress, as has always been the case with technology, will be made to address these issues. I will also set aside whether a 'cloud' service is any more secure than a privately-owned service and, suffice to say, for various technical reasons it would probably provide a higher level of security against unauthorised access though no-one can ever give a 100% guarantee.

As 'cloud' is a relatively new concept it follows that there are no established models to address the key issues, and most literature that I have researched simply enumerates the various issues that need to be considered or that are problematic without actually offering a solution. For example, the Expert Group's report to the EC simply states 'new legislative models have to be initiated, and/or new means to handle legislative constraints'.[26]

In any 'cloud' contract there would have to be, of course, all the normal provisions in terms of performance, business continuity, disaster recovery and quality of service which would have to be embodied in an SLA for which many established models exist in the context of outsourced contracts. For example, in a lot of the commentary about the 'cloud', much is made of the perils of losing all the data through a catastrophic disaster. From a technical perspective, this is a potential danger that applies equally to in-house computers as to outsourcing. Therefore, a client would demand guarantees to be written into a 'cloud' contract in the same way as any outsourced contract.

Similarly, the same issues in terms of protection of trade secrets that arise from sensitive data being placed in the hands of a commercial provider apply for the 'cloud' and, also, these would have to be covered by non-disclosure clauses in the contract.

In the CSW context, the main issue is not only that critical and highly confidential data would not be within the client's physical control but also that they do not necessarily know where it is. In a 'cloud' contract, the concept of the location where a service is being performed is indeterminate and, indeed, the service breaks down into different levels, that is, data storage, data processing (the systems), data transport (telecommunications) and end-user presentation. All of the above components of the service could utilise locations and infrastructure spread over different countries. Indeed a piece of data, before it is presented to a user, could have been manipulated in and have traversed several jurisdictions.

This begs the question as to which jurisdiction applies in terms of data protection, confidentiality, intellectual property rights (IPR) infringements as well as, of course, contractual liabilities. If the client demands certain standards about data protection, the 'cloud' provider may not be able to offer guarantees that the data will not be handled, at some point during the processing, storing or backing up, in a country where the data protection laws are not adequate and, therefore, the data would be at risk if, during the processing, it were to 'stick' or leave a trace on computers located in that country.

To a certain extent, however, the above problems already exist when the internet is used as the transport medium for any transaction as the end user has no control over the journey or the handling of the transaction's payload. In the case of the CSW, the main sticking point would appear to be where the data is actually stored. This would have to be in a location or more than one location with which the client is comfortable in terms of local data protection legislation. This means that whatever piece of infrastructure is operating at any given location that may hold or process the client's data, is under the jurisdiction of national law in that country and could be subjected to a search warrant or seizure by national authorities in that country, even if the contract with the 'cloud' provider falls under another jurisdiction.

At first glance, it would therefore seem unlikely that an organisation such as the WCO or the CSW's stakeholders would contemplate operating the CSW as a pure 'cloud' given the likely concerns about privacy and mis-use of information. However, there are alternative solutions, for example:

- A 'private cloud', that is, a 'cloud' infrastructure operated solely for an organisation. Some providers are willing to create a 'point of presence' in a known location in a specific country (hence under a known jurisdiction) if the scope of the contract justifies it.
- A 'community cloud', similar to the above except that it is operated for the benefit of more than one organisation.
- A 'hybrid cloud', that is, a combination of any of the above with the public 'cloud' depending on the level of security that different types of interaction require.

6. Conclusions

In this paper I have outlined a suggested model and architecture for a supranational single window which could be implemented by governments alongside the commercial *Pipeline* in order to improve supply chain visibility. The model leverages the existence (present or future) of NSWs and differs from current envisaged models of a regional or international single window in that it is not based on a bilateral exchange of electronic documents but it predicates the existence of a real-time repository of shared data.

The advantages of this model in relation to traditionally envisaged models are that it would provide real-time visibility over the cargo along the entire supply chain whilst guaranteeing the integrity of the data available to Customs and other border agencies.

This model can be implemented using currently available internet technology and infrastructure and, potentially, it could be implemented using an infrastructure and facilities operated in a 'cloud' environment.

From a legal perspective, whilst there are important issues to be resolved, there are few real impediments, at least for those countries that have already implemented the fundamentals of e-commerce, as most can be achieved by leveraging existing legal frameworks.

At the foundation, should lay a solid framework for e-commerce implementable using the *UNCITRAL Model Law* as a template and, indeed, this has already been done in a number of countries. The basic e-commerce legislation should, however, be extended to allow an NSW to share information between agencies with the necessary protections in terms of confidentiality and privacy. Again, in a number of countries, this has already been done.

However, for the CSW, it is also necessary to have a legal framework to allow sharing of information (*not e-documents*), with the necessary confidentiality and data protection measures, between agencies across borders. Whilst there is no existing example of such a framework, the WCO has laid the foundations in the *Nairobi Convention* and the *Johannesburg Convention* and is actively encouraging the creation of an e-Customs network. In this respect, in the CSW model, things are simplified by the fact that no data is being passed from government to government as the information is derived from data voluntarily supplied by EOs.

It would, however, be necessary to draft a new convention to allow the operation of the CSW and this convention may incorporate a number of the provisions already existent in the *Nairobi* and *Johannesburg Conventions* with regard to confidentiality and data protection.

It would also be necessary to establish an organisation to operate the CSW on behalf of all the governments and this should be an organisation that represents the interests of all the stakeholders. I have suggested that the WCO would be ideally placed for such a role as it has a legal personality that

allows it to draft a convention and, if necessary, require that members should make changes to national law. Another advantage of the WCO taking on such a role would be that the CSW would be operated under a supranational jurisdiction which is not subject to the laws of any one country. This would remove one of the most often heard objections to any collaborative arrangement.

However, the CSW may be too big an undertaking in terms of technology infrastructure and operational commitment for an organisation such as the WCO. I therefore considered what the alternatives could be in terms of operating such a model and what legal issues they raise.

One traditional model is outsourcing where the client would enter into a contract with a service provider. This is a well-established model with many examples of government agencies outsourcing their data collection and processing to commercial operators. This kind of arrangement could take different flavours such as operating an off-site facility or one on the client's premises or a mixture of both.

The other model that is emerging is the 'cloud' where the client outsources the service to an operator that uses an infrastructure that takes advantage of the distributed nature of the internet in order to offer virtually unlimited scalability and computing power as well as economies of scale. The difficulties that would arise in this model for the CSW would be in the fact that, in a pure 'cloud' model, the client has no knowledge of where the data is kept and, therefore, whether it is safe from intrusion or juridical interference.

Unfortunately, the 'cloud' is still a relatively new concept for which there is no established legal framework. To quote the Research Centre on IT and Law (CRID): 'Currently Cloud computing seems closer to fog than cloud and it might constitute a real danger for the users and data subjects whoever they are…'.[27]

Therefore, it would seem unlikely that, given their already high concerns in terms of data protection, stakeholders would consent to such a highly security-conscious operation as CSW being operated in a pure 'cloud' environment, at least in the immediate future. There are, however, alternatives – all essentially variations on outsourcing – such as a 'private cloud', a 'community cloud' or a 'hybrid cloud' where the supplier may provide localised, identifiable locations for all or some of the services to be provided through the 'cloud'.

In conclusion, the CSW is a different model from the ones normally envisaged for an international single window but it is a model that would address the issue of integrity of the supply chain as well as trade facilitation. It is also a model that, by taking a different angle, reduces the complexity of the legal issues involved. Technology has moved to the point where there are no impediments to its implementation. What remains is the willingness to embrace it and to make it work! Much work would remain to be done to reach the necessary agreements but, in this paper, I have attempted to outline a vision and a potential way forward.

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Luciano Pugliatti

Luciano Pugliatti (Luc) is an independent ICT consultant with over 15 years' experience of delivering solutions for customs and revenue administrations. He has designed and implemented innovative ICT systems aimed at revenue enhancement and modernisation of customs and tax administrations in many countries in Africa, Eastern Europe, the Caribbean and South East Asia. He has carried out diagnostic missions for the World Bank and has acted as ICT Adviser to Vietnam Customs and, currently, to the Lao Ministry of Industry and Commerce.

Prior to working in the public sector, Luc owned and operated a software company that specialised in shipping and trade logistics systems with an emphasis on electronic data interchange (EDI) solutions. His clients included some of the major shipping agents and lines in the United Kingdom and Europe.

Towards an international regime of supply chain security: an international relations perspective

Frank Altemöller

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Abstract

This article considers the threats to security in international trade by considering possible scenarios. It discusses concepts for protecting container transit, and the implementation of national, regional and international security concepts as political and legal transfer (a 'multi-level thematic'). Some of the challenges, obstacles and strategies for the implementation in public and private sector organisations of security concepts are addressed, and finally, the article provides a future perspective that is a shift from a national approach to mutual recognition and then, from mutual recognition to an international regime of supply chain security.

1. Threats to security in international trade: possible scenarios

The attack on the New York World Trade Center on 11 September 2001 made the world aware of the potential dimensions of a terrorist attack in the most dramatic way possible. This event quickly led to considerably heightened risk awareness, which also extended to international trade: the fear grew among customs and trade experts that the terrorists could turn their attention to international container transit and ports. Scenarios emerged in which terrorists placed bombs and other material for attacks in containers at inadequately secured ports. Terrorists would operate from insecure ports, using container transit to carry out attacks throughout the world. Such scenarios envisaged a potential threat of yet unknown magnitude: the sum of all fears was that after an episode of container terrorism no country would be safe, and the subsequent panic would bring container transit to a standstill (at least temporarily) and have incalculable consequences not just for individual ports and countries but also for the global economy itself.[1]

Therefore, 9/11 gave rise to numerous national, regional and international initiatives to protect container transit and ports from the risk of terrorist exploitation.[2] Against this background, this article describes the different approaches adopted by container-transit and port security regimes (section 2) in order to explain their diverse consequences which go far beyond risk management (section 3). It then describes the the specific problems that the relevant authorities have experienced in their implementation (section 4). The author argues that the approaches adopted by the various initiatives to improve global container security and port security, form only one aspect. As will be shown, there are other far-reaching political, economic and social functions which have considerable consequences not only for the welfare effects of free global trade but also on economic integration as a whole (section 5).

2. Initiatives to protect container transit: the 'Container Security Initiative', 'Authorised Economic Operators' and the 'SAFE Framework' of the World Customs Organization

In view of these threats, different initiatives were launched worldwide with the United States (US) administration under President George W Bush leading the way. The security programs were first initiated by the large western industrial states for their own national purposes. Due to the fact that world trade is largely dependent on maritime transportation, the initiatives predominantly aim to secure container transit and ports. This focus is understandable when one considers that each year 12 million containers are shipped to the United States of America (USA) alone.[3]

The US Container Security Initiative (CSI) was among the first initiative to be implemented. It provides for the identification of high-risk containers, a non-intrusive inspection (x-ray) of suspicious containers, as well as the introduction of so-called 'smart containers'. These containers are characterised by special security devices attached to the container doors. Customs officers can check whether the container has been opened during transit and its load manipulated.[4] The CSI has been complemented by further initiatives. These include the Customs-Trade Partnership Against Terrorism (C-TPAT), which is based on cooperation between the private sector and the customs authorities; in addition, the Maritime Transportation Security Act (MTSA) provides for the identification of all ships before they enter the coastal waters of the USA.[5]

The US was soon followed by the European Union (EU) which introduced the concept of the Authorised Economic Operator (AEO). Here, the customs authorities identify particularly reliable private stakeholders and, once they have successfully completed an exhaustive application procedure (certification), grant them special trading privileges. These include operative advantages which are essentially preferential and expedited customs procedures (customs simplifications).[6]

Meantime, a number of other security initiatives have been introduced which supplement and overlap.[7] There are differences in their specific purpose, the instruments they use, as well as their means of implementation. Traditional controls all shared; the basic common characteristic was that controls on container transit took place once the container had entered the importing country. These points of control were located at state borders and were presumed sufficient to guarantee national security. By contrast, the new security initiatives shift border controls to the country sending the goods. For example, the US Customs and Border Protection describes the CSI as follows:

> The Container Security Initiative is a revolutionary program to extend our zone of security by pre-screening containers posing a potential security risk before they leave foreign ports for US seaports. Our goal is to process 85 per cent of all containers headed for the United States through CSI ports by 2007.[8]

The new initiatives for the security of supply chains explode conventional wisdom: security can only be achieved if high-risk freight no longer reaches the territory of the destination state but is identified and inspected at the point of export (that is, the principle of 'Pushing the borders outwards').[9] From now on, security controls should take place as far away from the destination country as possible. In an 'anarchic world' without central global security structures, it is left to individual states to launch initiatives to tackle these issues. The fact that a state's security measures must be effectively implemented outside its sovereign territory requires cooperation with its trading partners – mainly with those countries from which the freight in question is sent. Supply chain security regimes can therefore be understood as real controls at 'virtual borders', that is, borders, which for purposes of state surveillance, are projected from the state territory. In order to achieve the practical realisation of the initiatives it is thus especially important that interested countries cooperate with each other. For this reason, numerous agreements

have been concluded which provide for the mutual recognition and joint pursuit of national and regional security regimes (such as the EU's AEO concept).[10]

In order to implement increased protection of international supply chains, experience has shown that it is not enough for the authorities to identify the supply chain; rather, they must identify the individual link of the supply chain as well as the specific risk it is exposed to. In risk analysis, the 'visibility' of supply chains therefore plays an important role. To ascertain risks and tackle them effectively, governments and authorities need concrete information which enables them to identify the load at any point in the supply chain at any given time. They must therefore be able to retrieve this information in real time ('visibility on demand').[11]

The legal basis for this is provided by the European Customs Code (CC) and its Implementing Provisions (CCIP) with the AEO Guidelines governing procedural aspects.[12] AEO status is granted by Member States and recognised by their customs administrations; AEO status therefore applies throughout the territory of the union and within the jurisdiction of customs authorities. All persons who take part in the import and export of goods in the EU can obtain the status of an authorised economic operator. Among them are producers of goods, wholesalers, importers, exporters, ports, brokers and transportation companies.[13]

The AEO initiative is based on a system of incentives with two fundamental mechanisms: first, the grant of AEO status requires a comprehensive security check and certification by the state following a formal application. The central question in the validation procedure is whether the applicant can fulfil the requirements of the AEO system ('compliance'). The ability to electronically transmit the required data ahead of the container's arrival to the EU authorities is fundamental to this process because it enables risk analysis to be carried out in advance. Moreover, applicants must prove their reliability in tax and customs matters. This includes proof of financial solvency, regular compliance with customs regulations, a satisfactory system for the administration of the company and transportation documents which allow appropriate customs controls, as well as the possibility to prevent unauthorised access to the ship's space and loading zones.[14]

AEO status bestows considerable advantages on the holder: in particular, authorised economic operators enjoy fast and efficient customs clearance and are exempt from the obligation to provide surety. The specific trade-related benefits granted in return for implementing European security requirements mean that holders of AEO status clearly enjoy a clear competitive advantage over their non-AEO competitors. It is likely that many aspects of the AEO scheme will be refined as part of the European reform of customs legislation. For example, one proposal is to increase data by requiring the buyer and seller to submit an additional declaration and more detailed description of the goods (currently taken from the existing schedule code of the harmonised system).[15]

The SAFE Framework[16] of the World Customs Organization (WCO) adopts an overarching approach. This instrument was passed by the members of the WCO (representing 178 customs administrations) and provides global standards for supply chain security. In particular, it requires that the private sector and customs authorities cooperative closely with each other and is based on four core elements.[17]

> *First*, it harmonizes the advance electronic cargo information requirements on inbound, outbound and transit shipments. *Second*, each country that joins the SAFE Framework commits to employing a consistent risk management approach to address security threats. *Third*, it requires that at the reasonable request of the receiving nation, based upon a comparable risk targeting methodology, the sending nation's Customs administration will perform an outbound inspection of high-risk containers and cargo, preferably using non-intrusive detection equipment such as large-scale X-ray machines and radiation detectors. *Fourth*, the SAFE Framework defines benefits that Customs will provide to businesses that meet minimal supply chain security standards and best practices.[18]

It is easy to imagine that the multitude of regional and national initiatives for supply chain security will place a considerable burden on the stakeholders involved. In practice, international traders will be expected to fulfil the demands of several initiatives in order to obtain the corresponding privileges. As a consequence, considerable information and transaction costs arise. Therefore, as an international body, the WCO is attempting to ensure the mutual recognition of security concepts. To this end, the SAFE Framework provides a set of recommended standards to harmonise the different initiatives on supply chain security. Provided that a national security initiative meets these standards, it will be recognised by customs authorities throughout the world. In this way, the mutual recognition of security regimes could become a reality in the future:

> The Resolution of the SAFE Framework of Standards that the WCO Council adopted in June 2005 calls upon customs administrations to work with each other to develop mechanisms for mutual recognition of AEO validation/authorisation and customs control results, in order to eliminate or reduce redundant and duplicated efforts. Mutual recognition is a concept whereby an action or a decision taken or an authorisation that has been properly granted by one customs administration is recognised and accepted by another customs administration. The standardised approach to AEO authorisation, as outlined in the AEO Guidelines, provides a solid platform for developing an international system of mutual recognition of AEO status at bilateral, sub-regional, regional, and in the future, global level.[19]

The aim of such recognition is that an economic operator who meets the requirements of one initiative does not have to prove that it meets the requirements of the other initiatives included in the agreement.

3. The implementation of national, regional and international security concepts as political and legal transfer: a 'multi-level thematic'

An important part of supply chain security initiatives is the fact that those initiatives incorporate a number of political and economic functions and therefore raise significant legal questions. These functions go much further than the original aim of improving risk management:

Economy. At the macro-economic level, the initiatives are capable of producing direct effects on improving security and on international trade as a whole. This affects both the state and private sector: experience shows that actors in individual countries are able to adapt themselves to the particular requirements and take advantage of them to very different extents. At the national level, customs authorities in the more developed countries are in a better position to adapt than those authorities in developing countries and less developed countries and can therefore provide the necessary legal framework. As far as the private sector is concerned, it means that global players with financial resources and advanced technical infrastructure will be in a better position to meet the requirements for preferential treatment than small companies which are primarily active on national markets and only occasionally pursue international business.

Competition. Against this background, the security initiatives tend to give an advantage to those institutions and companies that act more competently than others owing to their perceived efficiency. Accordingly, the initiatives present an additional hurdle to newcomers who are only just starting to set up their international business. When faced with a set of alternatives, stakeholders will prefer those ports and transporters which fulfil all the necessary requirements for obtaining specific benefits. For these reasons, the ability of public and private stakeholders to adapt to the various security systems appears to represent a new economic parameter. This ability of the different stakeholders leads to a competitive scenario at various levels: new competition is initiated between public institutions, as well as producers, traders, exporters, importers, and transport companies that participate in the initiatives and those that do

not yet do so. These different competitive conditions can affect industries, sectors as well as countries, and regions as a whole. As such, the initiatives are capable of producing a harmonising effect on those actors who are integrated and whose compliance guarantees the grant of benefits. On the other hand, those who do not fulfil the requirements run the risk of becoming marginalised. Consequently, trade flows tend to increase among the 'integrated'. Simultaneously, however, there are growing incentives for those who do not yet participate in the systems to do so.

Investments. As far as opening up new markets abroad is concerned, investors wish to import goods into the country and export the goods produced or processed there as easily as possible. They will prefer those countries and regions which are well integrated into the international transport structures for supply chain security. The question of whether and how effectively the individual stakeholders have implemented the initiatives will thus play an increasingly important role in competition and investment.

Development cooperation. The danger of (further) marginalisation emerges, because experience shows that it is developing countries which lack the necessary capacity to implement security measures. Therefore, assistance in this area also forms part of development cooperation. Nevertheless, implementation in many developing countries is progressing slowly because it requires them to have modernised and globally interlinked customs systems in place. In many instances it has become clear that the authorities attach greater importance to modernisation than adaptation to global security systems. Customs modernisation is therefore a prerequisite for the implementation of supply chain security initiatives. On the other hand, many modernisation projects are only started because the implementation of security measures now forms part of development cooperation. It therefore appears that customs modernisation and the integration of a customs administration into global supply chain security initiatives are mutually conditional.

Compatibility with the legal texts of the World Trade Organization (WTO). The question as to whether and, if so, to what extent the individual initiatives constitute obstacles to international trade and, as such, conflict with WTO law has still not been decided by the dispute settlement committees of the WTO. Relevant legal criteria include the principle of most favoured nation (Article I:1 GATT), the prohibition of quantitative restrictions (Article XI GATT), the obligation to guarantee free transit (Article V GATT) and rules on fees and formalities connected with importation and exportation (Article VIII GATT). Moreover, the Agreement on Technical Barriers to Trade (TBT Agreement) as well as the Agreement on Pre-Shipment Inspections (PSI Agreement) could be affected. However, a contravention against one or more of these provisions does not necessarily mean that the initiative in question also contravenes WTO law. Rather, the crucial question is whether the contravention is justified on the basis of an exception.[20] In this respect, the security exceptions of Article XXI GATT are particularly pertinent. Article XXI GATT has had little relevance in security practice to date. When interpreting this provision there is, therefore, very little decision-making practice to go on. If such a dispute did arise before the dispute settlement bodies, the WTO could use the opportunity to resolve important issues. The interpretation of Article XXI poses fundamental legal questions involving the relationship of free trade and state sovereignty. However, whether it is possible to interpret the relevant WTO rules in order to strike a balance between both interests also depends to a considerable extent on the current decision-making practice on parallel regulations (such as to Article XX GATT). One open question is whether it is possible to transfer the rules governing the general exception to the national security exception.[21]

Data protection. The initiatives for supply chain security require a high degree of data exchange. In cross-border transit, goods have to be electronically registered with the customs authorities in order to ensure the visibility of a load in the supply chain at any time. For example, the European AEO requires information not only about the goods traded but also about the producer, traders, transporters and other participants. Exactly what data should be communicated in person by the buyer and seller is currently being decided. A detailed description of the goods which exceeds the usual technical four-figure commodity code may also be introduced. In the opinion of experts, 'parcels' and 'packages' also represent a gap in security and so they may also be the subject of electronic registration in the future.[22]

Such measures will ensure that international trade in goods is transparent and economic relations for national institutions are understandable down to the last detail. All in all, security is about comprehensive data material of outstanding strategic value. Thus, the question arises whether and to what extent the disclosure and transmission of data comply with national laws on data protection.

Another question which has to be resolved is whether and, if so, to what extent corresponding national data protection regulations have to be adapted to the initiatives or whether the extent of data exchange is to be limited.

Cooperation and networks. The introduction and intensification of supply chain security initiatives requires new areas of cooperation and the formation of networks between:

(a) public institutions (particularly the customs administrations of the participating countries), and

(b) customs administrations and private actors (for example, port operators and transporters in the form of Public Private Partnerships).

The SAFE Framework of the WCO sees itself as the driving force behind this development and aims to intensify cooperation and build networks. In this sense, it requires:

> ... twin pillars of Customs-to-Customs network arrangements and Customs-to-Business partnerships. The two-pillar strategy has many advantages. The pillars involve a set of standards that are consolidated to guarantee ease of understanding and rapid international implementation. Moreover, this instrument draws directly from existing WCO security and facilitation measures and programmes developed by Member administrations.[23]

Covering the costs. Finally, the implementation of the initiatives for supply chain security raises the question of who is to bear the costs. The WCO or other organisations (such as the EU) do not provide any financial support to their member-states for implementation. As a consequence, the stakeholders (that is, port operators, transporters, exporters, importers, producers and traders) have to bear the costs incurred in implementing the initiatives. Relevant assistance can refer exclusively to knowledge-based support in adapting to security-related customs procedures. This underlines the fact that the implementation of corresponding initiatives is easier for well-equipped stakeholders to overcome. In this respect, the bleak outlook of financial assistance can represent an obstacle to implementation, and potentially increase the risk of marginalisation.

4. Challenges, obstacles and strategies for implementation in public institutions and the private sector

There are two fundamental questions concerning the realisation of initiatives for supply chain security:

- How successful are the individual actors in effectively meeting the necessary requirements?
- To what extent are the individual initiatives (even in the case of a hypothetical optimal realisation) in a position to achieve their aim?

Regarding the first question, the results of a study by the WCO[24] show varying degrees of implementation. The study reports that:

> Since 2001 there have been a number of initiatives taken by Member administrations to enhance the security and facilitation of the supply chain. These developments have received a common benchmarking instrument, developed by the WCO, i.e. the SAFE Framework of Standards. Out of 161 countries that are signatories to SAFE, thirteen AEO programmes have been established in 39 countries (due to the EU-27 uniform programme) and nine countries plan establishment in the nearest future (see Chapter 4 and Appendix 2). Thus, standing up AEOs and achieving mutual

recognition have become an important priority for many WCO Members. That is the reason why many administrations have started working on the legislative level or cooperating with other agencies in order to prepare the background for future AEO programmes.[25]

Another study into the state of AEO implementation carried out by the private sector shows that the number of certified participants is continually rising. In 2009, 16 per cent of those questioned were already certified, a further 17 per cent had submitted a corresponding application to the customs authorities or were in the process of doing so. Thirty-one per cent wanted to submit an application later, and 21 per cent had not yet decided whether they wished to apply for certification. On the other hand, 10 per cent stated that they did not intend to apply for certification at all. This figure of 10 per cent is, however, down on surveys from the year before. In the Customs study, economic operators were also asked about their motivation for gaining certification. The main reasons were better rating in terms of quality from the customers and the advertising potential attached to it.[26] Less weight was given though to cost savings, optimisation of the organisation and savings in personnel. This almost certainly has its cause in the fact that the realisation of the AEO program (particularly during the introductory phase) entails considerable costs, organisational effort and personnel. Looking to the future, the study concludes that the modernised European Customs Code and related implementing rules will strengthen willingness to participate in the program.[27] The biggest challenge is seen in the fact that international actors not only need to implement the requirements of the AEO but other initiatives as well (for example, US C-TPAT). Having to fulfil the requirements of various initiatives incurs significant transaction costs. In this respect, therefore, an international agreement on mutual recognition would bring considerable relief.

Mutual recognition currently represents an important topic of inter-institutional cooperation. The discussion surrounding mutual recognition is characterised, on the one hand, by national perceptions of security as an expression of national sovereignty, as well as the requirement for a simplification of customs procedures on the other.[28] For example, important differences between the European AEO initiative and the US C-TPAT exist in the fact that the EU (unlike the USA), controls not only imports but also exports.[29] So far, though, mutual recognition has come up against considerable political impediments. The requirements of individual security programs are an expression of the priorities of state security policy and are thus unavoidably connected to important questions of sovereignty.

However, the comprehensive question of how well the initiatives can achieve their stated objective (that is, the creation of greater global security) is to be seen differently: even after the introduction of numerous regimes which aim to secure international supply chains, container transit is far from being completely 'visible' and safe.[30] According to the Organisation for Economic Co-operation and Development (OECD), risk assessment is made fundamentally more difficult by the following factors:

- There is considerable doubt about whether the load actually declared has really gone into the container at the point of departure.[31]
- Even when the load in a container has been determined, there is still a risk that the freight will be substituted or manipulated during long supply chains (for example, over land).
- For data security reasons, it is very important to pass on the corresponding data.[32]
- The sensible use of the vast quantity of data not only requires collection but also systematisation and interpretation which can be a source of misunderstandings and thereby lead to mistakes in risk analysis.[33]
- If the numerous initiatives for supply chain security regard the concept of visibility on demand as offering the ideal solution, then the pre-condition for this is that all-encompassing logical systems are available to deliver all relevant data for the risk analysis in real time, all the time. These pieces of information are currently only partially (and thus insufficiently) available. Although large logistics and transport companies are generally able to request and make available the relevant data using pre-existing organisational structures, this is not true of small and medium-sized companies (SMEs) which are faced with difficulties in implementing security systems. They need to devote sizeable

financial resources to the establishment of appropriate information exchange systems.[34] The same goes for developing and (to a certain extent) emerging economies.

- It is often argued that the initiatives do not deal with the 'potentially dangerous' group of actors. It can be assumed that dangers to security do not stem from those actors who are well integrated into security systems. Due to the fact that there is no obligation to participate, it would be better to focus efforts on those actors who do not participate and therefore do not fulfil the prerequisites as a potential source of danger.[35]

5. From a national approach to mutual recognition – from mutual recognition to a global supply chain security regime: a future perspective

The AEO program has initiated a political and legal transfer within the EU: the Member State's customs authorities have to create the necessary conditions enabling the economic participants to participate in the system. Thereby, the AEO (just as the US initiatives, for example) offers generous incentives for the economic participants to integrate themselves into the system and thus receive sweeping operational advantages in international transit. In legal terms, the participation of the institutions of third party states and private actors in the initiatives is voluntary. However, one can argue that, in reality, voluntary participation is largely enforced participation, taking into account the strategy of implementation described.[36] The persuasive effect of incentives in increasing participation levers appears thoroughly intended. Grillot, Cruise and D'Erman put forward this argument:

> In an anarchic world with no central authority, the United States has the ability to either physically force other countries into compliance with violence, or the country can seek co-operative partnerships to reach its goals – partnerships in which it can wield significant influence because it is a great power. The United States has chosen the latter.[37]

The role of the USA discussed here underlines the need for sovereign states to have a security policy in place. However, it also shows that a large (and potentially vulnerable) trading partner can only overcome anarchy among nations and achieve the desired degree of protection by cooperative measures. In that case, from the perspective of the policymakers, the success of supply chain security initiatives largely depends on sufficient numbers of states participating in the initiatives. A dilemma arises if, despite the incentives offered, too few stakeholders show interest in participating or cannot implement the concept.

This is where the SAFE Framework assumes special importance: adopting a globally comprehensive approach, it provides framework guidelines addressed to the customs authorities of Member States. Unlike national initiatives, however, it is based on recommendations rather than binding legal provisions. It can be seen as a framework that provides fundamental overarching structures for supply chain security. In this context, the SAFE Framework performs an additional function: because it has been accepted by the Members of the WCO, it also serves to legitimise national approaches to the extent that they accord with the Framework.

The preceding discussion has highlighted the fact that the initiatives for supply chain security consist of numerous steering functions which go well beyond the aim of securing international trade. The individual actors all have different reasons to participate. Against this background of asymmetrical interests, the main task of the international community arguably lies in formulating the different approaches in such a way that they can be seen more clearly as offering an opportunity for all participants. However, it will only be possible to improve integration into security concepts on a global basis by taking stock of and carefully analysing the numerous requirements as well as assessing the consequences on individual stakeholders. In this respect, the central questions are:

- What specific demands should the security concepts under discussion meet and what problems need to be solved?
- Do the initiatives reflect the actual demands of those participating and if so, to what extent?
- How can it be ensured that the interests of policymakers and participants are harmonised?
- Do concepts complement or compete with each other and how can coherence be achieved between different approaches?
- How effective are the security initiatives in relation to the addressees' sphere of activities?
- Are stakeholders capable of attaining their goals or solving the problems at hand?
- Finally, how can the conditions ensuring the successful transfer from policymaker to participant be defined?

These and other questions touch core elements of political and legal transfer. This makes it necessary to better recognise and further develop the steering instruments of international and European risk management. Supply chain security initiatives would then be conceived as a regime of international security governance. Thereby, they would cease to resemble an anarchic system, in which concepts are opposed to each other. By contrast, an internationally cooperative approach presents the opportunity to develop complementary concepts in a process which is legitimate for all participants and transparent in terms of decision making and voting arrangements. The security of supply chains should be understood as risk management in the sense that it does not focus exclusively on the demands of increased security but rather takes account of the additional functions described to a far greater extent than has been the case to date. Such an integrated approach would provide a means of harmonising the security policies of sovereign states and promote economic integration. As an international customs organisation, the WCO would be the appropriate organisation to take up this challenge.

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Endnotes

1 For these scenarios, see Grillot, Cruise & D'Erman 2010, pp. 24-8. A current example is the case of explosives which were hidden in printers and the air freight of a transport plane from Yemen, see Neue Zürcher Zeitung 9 September 2010; Küchle 2008; as well as Heseler 2000, pp. 9-27.

2 Section 2 provides an overview of individual initiatives and their legal basis.

3 US Department of Transportation 2009, p. 1.

4 For the details, see, for example, CSI Fact Sheet 2005; Legal bases for the CSI are *The Homeland Security Act 2002*, *U.S. Patriot Act 2002*, *The Marine Transportation Security Act 2002*, *The Trade Act 2002*, *The Security and Accountability for Every Port Act 2006*, as well as the *Implementing Recommendations of the 9/11 Commission Act 2007*; and Widdowson 2007.

5 Further US initiatives are: The Secure Freight Initiative, The Megaport Initiative, Operation Safe Commerce, The Proliferation Security Initiative as well as The Smart Box Initiative; for additional information see: U.S. Customs and Border Protection (2007), and Supply Chain Best Practices Catalogue (2006); Laden (2007, pp. 75-80), and Irish (2009, pp. 80-4).

6 European Commission 2006a, 2006b, 2007; Wolffgang & Ovie 2008.

7 The following are particularly noteworthy at international level: Resolution of the United Nations No. 1373 from 28.9.2001 and those following, such as No. 1456 from 20.1.2003 and No. 1624 from 14.9.2005 as well as the initiatives of the World Shipping Council. In addition, the G8 has passed an initiative for the strengthening of security in the area of international mode of transport: The Cooperative G8 Action on Transport Security, 26 June 2002.

8 U.S. Customs and Border Protection 2006a, p. 2.

9 Grillot, Cruise & D'Erman 2010, p. 68. On the question of institutional and operational realisation see, for example, Grainger 2007, pp. 17-29.

10 For a deeper perspective on mutual recognition, see Aigner 2010, pp. 47-54.

11 Widdowson & Holloway 2009, pp. 26 ff.

12 European Union Regulation (EC) No. 648/2005 of the European Parliament and of the Council of April 2005; European Commission 2006a, TAXUD 1450.

13 From the industry's perspective, see Fletcher 2007, pp. 61-6.

14 For the details, see, for instance, European Commission 2005, as well as European Commission, Directorate-General for Internal Policies 2011, pp. 16-19.

15 For further details, see section 3 under 'data protection'.

16 World Customs Organization 2007, *WCO SAFE Framework of Standards to Secure and Facilitate Global Trade*, WCO, Brussels.

17 World Customs Organization 2007.

18 World Customs Organization 2007, p. 3.

19 Mikurya 2007, pp. 51, 57; as well as the more in-depth WCO Policy Commission 2006.

20 For a discussion of the fundamental systematisation with the example of environmental measures, see Altemöller 2000, pp. 213, 231 ff .

21 For an interpretation of Article XX GATT, see Altemöller 2000, pp. 213, 231 ff.; on the legality of the CSI according to the legal texts of the WTO, see Dallimore 2008.

22 For a thorough discussion of the data transmitted along with a critical analysis and recommendations for action, see Lux 2011a, 2011b.

23 World Customs Organization 2007, p. 3 as well as in more detail, Ireland 2009.

24 Polner 2010.

25 Polner 2010, p. 7; for details of realisation in the regions, see pp. 9-16.

26 Zollstudie 2009-2010, p. 47.

27 Zollstudie 2009-2010, p. 48.

28 Aigner 2010, pp. 47-54 as well as Scholl (Germany Trade and Investment) 2009.

29 The 'ISO-Standards' developed by the 'International Organisation for Standardization' should achieve a relief for the economic participants, see, for example, ISO 2007.

30 Widdowson & Holloway 2009, pp. 17, 26.

31 Organisation for Economic Co-operation and Development 2005, p. 29.

32 Dahlmann et al. 2005.

33 Organisation for Economic Co-operation and Development 2009.

34 See Dahmann et al. 2005; see also Wieland 2009, and the United States Government Accountability Office 2008.

35 See Bures (2011) for criticism on the European politics of combating terrorism.

36 A binding effect in the sense of 'soft steering' is only achieved via the SAFE Framework of the World Customs Organisation. The SAFE Framework is not a legally binding multilateral agreement because it is based on an agreement between the customs authorities of the WCO Member States. Grillot, Cruise & D'Erman explain it as follows: 'The lack of central authority is an anarchical system that requires states to provide for their own security and survival ... Though international organisations attempt to provide some order, they are only able to moderate the effects of anarchy. They do not have the force of law, or true enforcement capabilities (Keohane 1984). In the current international system the sovereignty of the individual state – in particular that of the most powerful states – always prevails (Reinicke 1997)' (Grillot, Cruise & D'Erman 2010, p. 66); fundamental: Keohane 1984, 2002.

37 Grillot, Cruise & D'Erman 2010, p. 68.

Frank Altemöller

Dr jur. Frank Altemöller is Professor for European Law and European Public Management at the University of Harz in Germany (University of Applied Studies and Research). He is concurrently affiliated with the University of Münster, where he gives academic advice for the Master of Customs Administration, Policy and Law course. He completed his university education with an interdisciplinary doctorate at the University of Saint Gallen in Switzerland and has given numerous guest lectures, including in the Middle East, Africa and Eastern Europe.

Preventing corruption: lessons learned from anti-corruption training for Belgian customs and excise officers

Arne Dormaels and Gudrun Vande Walle

Abstract

Prevention of corruption in public institutions has become more important as a key component of a successful strategy to combat corruption. In the literature, however, there is little evidence about the effectiveness of anti-corruption training for public servants and information about how to develop appropriate training is lacking. This paper examines the lessons learned from the anti-corruption training introduced by the Belgian customs administration. The aim of this training was to sensitise the customs officers about corruption they may encounter in their work environment and the corruption vulnerabilities of their complex job. The training provided participants with a theoretical introduction to the legal framework and the social meaning of corruption, a short dilemma training, and communication training in order to enable the officers to act correctly when faced with corruptive vulnerable situations on the job. In the period 2008-10, the majority of customs officers participated in this one-day training. Based on this intensive training experience and the additional questionnaire distributed to 2,630 Belgian customs and excise officers, we present the perception customs officers have about corruption and the best way to fight it in their own organisation; the main results of the training; and some recommendations for future anti-corruption training.

Introduction

In 2008-09, we conducted an anti-corruption training program for the Belgian Administration of Customs and Excise.[1] This training course was part of an awareness campaign to make customs and excise officers more alert to corruption situations in their workplace. This was done in partnership with the University of Liège, which provided the training for the French-speaking community. The initiative came from the Belgium Customs and Excise service itself and was funded by the School voor Financiën en Fiscaliteit (School of Finance and Taxation). Once the anti-corruption training course was over, we sent out an electronic questionnaire to all 2,630 Dutch-speaking members of the Customs and Excise service. In the questionnaire, we asked for the respondents' opinions about the anti-corruption training, officers' perceptions of corruption, their opinion about the possible causes of corruption within the service, and their vision of a targeted anti-corruption policy. The survey was in two phases. In the first phase, we sent the questionnaire to 1,105 Dutch-speaking A and B level staff. Of those, 599 staff filled in the questionnaire, giving us a response rate of 54%. In November 2010, we sent the questionnaire to 1,525 C and D level staff members. This time we got a lower response rate of 33% – 500 respondents filled in the questionnaire.

Based on this electronic survey of the service, we would like to formulate a number of hypotheses about the significance of an anti-corruption training course as part of an anti-corruption policy. An answer to this question could help us organise a more targeted anti-corruption policy in the future.

Characteristics of people who did not attend the training course

Although attendance at the anti-corruption training course was compulsory, 6.4% of respondents (70) did not attend it.[2] Of those, 24 were men (34.3%) and 23 were women (32.9%). Twenty-three respondents did not fill in their personal details. The reasons for non-participation varied from being on leave, to approaching retirement age, and so on. We have ascertained that length of service was a determining factor for non-participation in the course. Staff who had been working at the Customs and Excise service for a very short time (less than a year) and staff who had worked there for a very long time had statistically lower participation rates in the training course (Pearson Chi-square <0.000). This could be explained by the fact that recent appointees are required to undertake a compulsory training course for new entrants. Participants who have been with the Service for many years more commonly work part-time, or may be reaching pension age so they no longer take part in training courses.

It is more interesting to investigate (see Table 1) whether there is a relationship between the members of staff who did not participate in the course and previous experience of corruption situations. We found non-participation in the training course to be linked to previous experience of corruption situations, and that the relationship is significant (Chi-square: 0.043).

Table 1: Corruption experience table

	Percentage that have come into contact with corruption and took the course (%-N)	Percentage that have come into contact with corruption and did not take the course (%-N)
Never	91.9 (159)	8.1 (14)
A few times a year	93.3 (280)	6.7 (20)
Several times a year	93.4 (171)	6.6 (12)
Monthly	69.2 (9)	30.8 (4)
Weekly	91.7 (11)	8.3 (1)
Daily	100 (7)	0.0 (0)
Total	100.0 (663)	100.0 (51)

Chi-square: *<0.05.

Anti-corruption training and knowledge of the corruption phenomenon

92.4% (839) respondents thought they already had a clear picture of what corruption was before the training course started. However, we observed that 47% (372) of the respondents reported that they gained more insight into what corruption means.

Statistically, we did not determine any differences with regard to gender, number of years' service and whether the training was perceived as helpful. In other words, men's and women's evaluation of the training course was the same. Younger employees did not judge the training course to be more useful than older employees. Furthermore, there was no difference in evaluation of the training course between staff who had already encountered corruption during their career and those who had and those who had not.

The respondents were given the opportunity to comment further on the subject of *gained more insight*

or *not*. Around 100 respondents provided an explanation of why they answered positively. An equal number of respondents explained why they had not gained more insight. Although the answers varied, we were able to distinguish the following three categories of answers from a qualitative perspective. Respondents stated that the concept of corruption became clearer during the training session and that they previously had too narrow an understanding of corruption, had no awareness of the different forms that corruption can take in practice, and that corruption in an organisation is the result of a process of standards becoming blurred, which begins with the acceptance of small gifts. A second category of answers illustrated that the meaning of corruption in criminal terms was explained, particularly the difference between the concepts of active and passive corruption. The third category of answers referred to the discussion of practical examples, and of bringing them out into the open. The practical approach and the opportunity to discuss practical experience offered the staff more insight into the phenomenon of corruption. The examples given by colleagues resulted in an increased collective awareness of the fact that the organisation is not free from the threat of corruption.

Respondents who did not gain additional insights reported that, because of their education and years of work experience, they had a good knowledge of what corruption means. Several commented that the course was too short in terms of time, too vague, and not practical enough. In summary, it is evident that this group of respondents did not evaluate the course negatively but were already sufficiently familiar with the concept.

During the course, many different aspects of how to prevent corruption within an organisation arose, such as ethical ways of dealing with gifts, the ethical obligation to report corruption, weak spots within the organisation (leadership, structure, culture, monitoring), the role of neutralisation techniques when dealing with organised crime, communication methods, and the depiction of situations susceptible to corruption through the use of role play.

Table 2 below shows how useful the participants found the different components of the course.

Table 2: Usefulness of the anti-corruption training course

Component of the course	Not useful at all (%-N)	Limited usefulness (%-N)	Occasionally useful (%-N)	Useful on a daily basis (%-N)	Not applicable (%-N)
Corruption legislation	12.6 (88)	43.5 (303)	23.7 (165)	6.9 (48)	13.2 (92)
Ethics re: gifts	11.9 (83)	32.8 (229)	29.4 (205)	7.3 (51)	18.6 (130)
Ethics re: the obligation to report corruption	10.7 (74)	38.0 (262)	28.6 (197)	5.2 (36)	17.4 (120)
Weak spots (leadership, structure, culture, monitoring)	11.7 (80)	31.2 (214)	28.4 (195)	15.0 (103)	13.7 (94)
Neutralisation techniques	14.9 (102)	33.6 (230)	26.0 (178)	7.7 (53)	17.7 (121)
Explanation about proper communication	9.5 (65)	27.6 (189)	31.8 (218)	22.6 (155)	8.6 (59)
Role play: depiction of situations	31.2 (216)	28.6 (198)	21.7 (150)	5.9 (41)	12.6 (87)

The legislation on corruption, the ethics of the obligation to report corruption and the section on neutralisation techniques were regarded as less important by the respondents. The limited interest in the obligation to report corruption is most striking, because this is a problem within the organisation and because the respondents thought that a clear whistleblowers' procedure was one of the most important measures in fighting corruption.

The respondents found the discussion about the weak spots in the organisation to be more useful. The subjects covered included structure, culture, leadership, internal control, and informal control of colleagues. Around a third of the respondents reported that they sometimes think about the 'Ethics re: gifts' element when doing their jobs. The discussion about proper communication skills, conveying

difficult messages and dealing with aggression were found to be useful by the majority of respondents. More than 20% indicated that they apply these skills daily. On the other hand, the majority of respondents dismissed the idea of using role play in communication skills training.

Experience of corruption after the course

We asked the respondents whether, following their attendance on the training course, they had encountered what in their opinion were corrupt situations. Of the 707 respondents who answered this question, 14.9% (105) reported that after the training session they had come in contact with one or more situations that could be regarded as corrupt. Those who declined to answer this question represented 35.8% or 394 of the respondents. C and D level staff (support level) did not report more corruption than A and B level staff. The respondents were given the opportunity to expand further on their answers with a brief description of the situation. Eight respondents reported that money was offered to influence a decision. An invitation to visit a restaurant was reported by nine respondents. The offer of business gifts was described as problematic by 17 respondents. Ten respondents said that superiors (direct line managers) gave a broad interpretation of their discretionary powers to favour certain companies, and one person referred to the overly liberal political leadership which allowed 'fraudulent' companies to 'get off scot-free'.

Our survey also shows that the respondents deal with corruption in different ways.

Of the 105 respondents who had come into contact with corruption, 32 reported that they had done nothing about it, even though it was strongly emphasised during the training course that *reporting* is the most important part of an efficient anti-corruption policy. Twenty-six out of the 105 staff warned the person that their behaviour and their corrupt proposition were unacceptable. Thirteen reported the incident to their line manager. What is striking is that 12 respondents reported that they told a more senior manager about it, rather than their line manager. This ties in with the comments by 10 respondents that their line managers are too closely involved or do not want to take action against members of their own team. Finally, we can report that we have established no differences between staff at levels A, B, C and D.

Trust in professional groups

Table 3 shows that politicians were overwhelmingly regarded as the most vulnerable group. More than half of the respondents believed that politicians are at great risk. Magistrates came second, followed by private companies. The police came in fourth place, closely followed by the Customs and Excise service. It is striking that the respondents judged their own organisation to be just as vulnerable as the police. If we compare these results with the Transparency International Corruption Perception Index, we can see that, in its research, the police lead by a large margin. Of course, theirs is worldwide data. In this case, the results are limited to Belgium. Traders and small independent businesses came last. Doctors and the medical professions, and teaching staff were viewed as limited risk groups.

Table 3: Trust in professional groups

Who runs the risk of being corrupt	Very high risk (%-N)	High risk (%-N)	Limited risk (%-N)	No risk (%-N)
Politicians (87-13)	54.8 (401)	32.9 (241)	10.8 (79)	1.5 (11)
Magistrates (65-35)	26.9 (197)	38.8 (284)	31.7 (232)	2.6 (19)
Traders and small independent businesses (50-50)	15.2 (111)	34.7 (254)	45.9 (336)	4.2 (31)
Customs and Excise (50-50)	13.1 (96)	37.3 (273)	46.7 (342)	2.9 (21)
Private companies (61-39)	17.9 (131)	44.5 (326)	35.8 (262)	1.8 (13)
Police (55-45)	14.8 (108)	41.8 (306)	40.7 (298)	2.7 (20)
Teaching staff (8-82)	1.6 (12)	6.0 (44)	66.5 (487)	25.8 (189)
Doctors & medical professions (19-81)	3.0 (22)	15.6 (114)	65.2 (477)	16.3 (119)

Trust in colleagues

72.2% (212) of respondents saw themselves as always behaving appropriately; and 24.4% (175) saw themselves as mostly behaving appropriately when it comes to corruption. That means that 3.1% (24) of the respondents are doubtful as to whether what they are doing is appropriate. If we look at perceptions of contract versus permanent officers, 86.6% (610) think that contract officers do not behave more appropriately than permanent members of staff. Half the respondents (357) considered that the more highly educated staff are sometimes more trustworthy than the less educated ones. And 36% (258) thought that more highly educated staff are no more trustworthy than the less educated. Just under 30% (212) of the respondents always trust their close colleagues. Half (364) of the respondents said they trust their close colleagues most of the time. It is striking that 19.5% (140) trust their colleagues occasionally or never, and that 47.8% (342) of the respondents believe that younger colleagues are frequently more trustworthy than older colleagues. Of 533 respondents, that is, 74.4%, trust their line manager always or most of the time.

We can therefore conclude that the respondents have a relatively high level of trust in themselves, in their immediate colleagues and in their line managers, although a quarter of the respondents trust their line manager occasionally or never (183). Women, young people, more highly educated people and contract staff are not regarded as much more trustworthy than men, older people, less educated people and permanent staff.

Table 4 below gives an overview of the respondents' trust in themselves and their colleagues.

Table 4: Trust in oneself and/or colleagues

When it comes to corruption...	Always (%-N)	Most of the time (%-N)	Occasionally (%-N)	Never (%-N)
I trust my close colleagues	29.6 (212)	50.8 (364)	13.4 (96)	6.1 (44)
I regard myself as behaving appropriately	72.2 (517)	24.4 (175)	1.7 (12)	1.7 (12)
I trust my line manager	34.5 (247)	39.9 (286)	17.2 (123)	8.4 (60)
Women are more trustworthy than men	5.9 (42)	21.2 (152)	43.6 (312)	29.3 (210)
Younger colleagues are more trustworthy than older colleagues	3.9 (28)	23.5 (168)	47.8 (342)	24.9 (178)
More highly educated colleagues are more trustworthy than less educated colleagues	1.8 (13)	12.3 (88)	49.9 (357)	36.0 (258)
Contract officers are more trustworthy than permanent officers	2.0 (14)	11.5 (82)	47.6 (341)	39.0 (279)

Gender appears to have no bearing on more or less trust in oneself, colleagues and superiors (see Table 5). The exception to this is the view that women are more trustworthy than men. If we take the question about men and women and link it to the gender of the respondents, we can establish that men are slightly less convinced than women that *women are mostly more trustworthy than men*. The responses showed that 36.86% of men (101) are certain that women are never more trustworthy than men, while around a quarter of women (29) believe that they are never more trustworthy. Women therefore have a slightly more positive image of themselves.

Table 5: When it comes to corruption, women are more trustworthy than men

	When it comes to corruption, women are more trustworthy than men: (%-N)				
	Always	Most of the time	Occasionally	Never	Total
Man	3.4 (13)	16.8 (65)	43.8 (170)	36.1 (140)	100.00 (274)
Woman	8.1 (20)	29.8 (74)	41.1 (102)	21.0 (52)	100.00 (124)

Chi-square: the differences between men's and women's perceptions are statistically significant at level: $p<0.001$.

Rank does not have any influence on trust in colleagues and superiors either. However, it is striking that C and D level staff more frequently stated that they have doubts about themselves (see Table 6).

Table 6: When it comes to corruption, I regard myself as behaving appropriately

	When it comes to corruption, I regard myself as behaving appropriately: (%-N)			
	Always	**Most of the time**	**Occasionally**	**Never**
Level A	76.4 (107)	21.4 (30)	0.7 (1)	1.4 (2)
Level B	74.2 (210)	23.0 (65)	0.4 (1)	2.5 (7)
Level C	66.2 (96)	31.7 (46)	1.4 (2)	0.7 (1)
Level D	71.4 (60)	22.6 (19)	6.0 (5)	0.0 (0)

Chi-square: the differences in perception based on rank are statistically significant at level: $p<0.05$.

What people consider to be appropriate

The respondents were given six statements which they were required to evaluate as being corrupt or not corrupt. Our aim with this question was to get a feel for how they define corruption. The respondents were also given the opportunity to expand on their answers. Table 7 below shows that of the respondents, 407, or 37%, concurred with the criminal law definition. The consideration aspect clearly plays an important role, judging from the additional contributions given by the respondents. The consideration does not always have to take material form. 'It can also be about encouraging or securing promotions, for example', one respondent said. Several respondents referred to the blurring of standards: 'you start with something small but that can quickly escalate until you get a system you get tangled up in'.

For the majority of respondents, the value of what you get does not matter. Only 23.2% (255) stated that the value of the gift plays a role in whether a situation is corrupt or not. 'The value is irrelevant. It is the intention and the consideration acquired that makes a transaction corrupt', one of the respondents stated. Another respondent said, 'it's OK to accept a bottle, if you get something like that, if nothing is expected in return. But accepting a ticket for the Diamond Games is going too far'. 'Whatever is given, I think that the person giving the gift always has an advantage in mind,' a third person said. One respondent stated that the value of what you get as a customs official depends on your rank.

Concealing from your colleagues the fact that you have received something is regarded as corruption by 17.2% (189) of the respondents. It is not fair, it damages trust, it is underhand, and so on, a number of respondents stated. One person said that not telling colleagues very likely shows that, in some way, you sense that accepting the gift was not above board.

In answer to the question about whether it is corrupt to do something legal for a company which you are paid for subsequently, a number of people said that sometimes you have to be able to do something extra without any consideration. 'Equal treatment is important', some said, 'otherwise you are already distorting competition at the very least'. It is notable that "only" 17.8% of respondents found this to be corrupt. Presumably the fact that the gift is only offered after a service or a service in return has been given has something to do with it.

The acceptance of New Year's gifts during that period of the year remains a point of discussion. Six hundred and fifty-six, or 59.6% of respondents endorsed the view that a New Year's gift does not count as corruption. In the open questions, a number of respondents went into more detail about this. Four respondents confirmed that, as far as they are concerned, this is not corruption. 'In principle, this is not corruption', said another, 'but it is definitely risky'. A number of people indicated that they feel the risk is abating; receiving New Year's gifts has sharply declined in recent years.

Table 7: In my opinion, corruption is…

Statement	Percentage that judge the statement to be corrupt (%-N)	Percentage that judge the statement not to be corrupt (%-N)
In my opinion, corruption is: a person in a public service role requesting or receiving an offer, a promise or an advantage of any nature whatsoever in exchange for preferential treatment. It makes no difference to me whether that preferential treatment consists in processing a file more quickly, lowering excise duty or verifying goods that in principle cannot be approved. Bribery is bribery.	37.0 (407)	63.0 (694)
The value of what you receive matters: getting a bottle from a company is different from being invited to a business lunch or receiving a ticket for the Diamond Games.	23.2 (255)	76.8 (846)
If you receive something and do not tell your colleagues about it, that is corruption.	17.2 (189)	82.8 (912)
None of these three statements reflects my understanding of corruption. For me, corruption is: …	39.4 (434)	60.6 (667)
If you do something for just one company and it is not illegal, such as processing a file more quickly, that is not corruption, even though you receive something for doing it.	17.8 (196)	82.2 (905)
If you receive something from a company in the New Year period, that is not corruption.	40.4 (445)	59.6 (656)

Table 8: How often do you come in contact with corruption?

How often do you come into contact with corruption?	Percentage that have come into contact with corruption and took the course (%-N)
Never	25.1 (173)
A few times a year	43.6 (300)
Several times a year	26.6 (183)
Monthly	1.9 (13)
Weekly	1.7 (12)
Daily	1.0 (7)
Total	100.0 (688)

Table 8 above shows that a quarter (183) of the respondents reported that they come into contact with behaviour that can be regarded as corruption several times a year. Three hundred (43.6%) of the respondents come into contact with corruption once a year. Only 25.1% (173) have never come into contact with corruption.

Causes of corruption

Of the respondents, 34.4% believed that 'a few bad apples in the service' bear substantial responsibility. About a quarter of respondents stated that businesses exert strong pressure and that a lack of leadership is a cause of corruption. Only a limited number of respondents touched upon the following issues: the officials earn too little, we are not up to speed with the rules of conduct and we work on our own too much.

Table 9 below shows the most significant causes of corruption.

Table 9: Causes of corruption

	Percentage that do not see it as a cause of corruption (%-N)	Percentage that see it as a cause of corruption (%-N)
A few bad apples	65.7 (723)	34.4 (378)
Businesses exerting strong pressure on Customs	75.6 (832)	24.4 (269)
Working alone too much without consultation with colleagues	91.6 (1008)	8.4 (93)
Unclear structure	80.5 (886)	19.5 (215)
Rules of conduct not known	92.4 (1017)	19.5 (215)
A lack of leadership within the organisation	74.7 (822)	25.3 (279)
No external monitoring of customs activities	85.8 (945)	14.2 (156)
There is no penalty afterwards	85.9 (946)	14.1 (155)
There is no structure for reporting corruption	86.3 (950)	13.7 (151)
Officials earn too little	91.6 (1009)	8.4 (92)

If we look at the reactions given to the open answer option 'other', some of the respondents described a different cause, while other respondents seized the opportunity to write further remarks to go with their chosen answer. We have divided the 54 reactions into a number of categories. These give some idea of what is going on within the Customs and Excise service.

Blurring of standards. The blurring of standards was mentioned eight times as a possible cause of corruption. It is difficult to determine what exactly this blurring of standards means and whether in a number of cases it coincides with collusion or with the urge to make financial gain. Here is an illustration of the reactions: these are increasingly common practices, both among companies and among the customs service, and they are passed on from generation to generation. If, during your training as a fledgling customs officer, you encounter a culture of lining your own pocket, there is a strong chance that later in your career you will adopt these practices and, what's more, will consider them to be normal. This is a 'blurring of standards that has gone on for years'. 'The culture within the organisation is the chief cause.'

Leadership. There were 15 comments about the limited leadership from the top of the organisation. The problem, these respondents said, lies at the highest echelons of the organisation. The most senior figures do not set a very good example.

Collusion. There were also frequent observations that officials and companies are working in too close cooperation. Respondents called this collusion or a dishonest relationship (in this case, between official and company) to the detriment of a third party. We can illustrate this problem with a number of reactions: 'for some people in our service, the economic actors have become "friends"'. 'The upper echelons no longer know about their own service and are chasing after the companies instead of standing behind their staff.' 'There is too close contact between customs officials and economic actors.' 'Both those at the top and the small fry in strategic positions could easily be targets for dodgy deal makers.' One respondent said that many fines have been reduced or waived. He/she suggested taking the prosecution policy outside of the Customs and Excise service but not to the justice system. This relationship between Customs and business is becoming increasingly commonplace. One of the respondents referred to the influence of associations to which both businesses and members of the customs service belong. What type of associations these are is not made clear.

Political pressure. One respondent referred to the politicisation of the service. Political pressure is exerted on certain sensitive files, such as those of the diamond sector or multinationals. People also clearly feel that the port of Rotterdam is a competitor.

Monitoring and penalties. A number of respondents reported that the current monitoring and penalty system does not work. The following reactions illustrate this: 'There are no evaluation rules.' 'As a boss, your hands are tied. When the examining magistrates intervene, they block disciplinary files.' 'Corruption is not penalised', said one of the respondents. 'Only the little people at the bottom are punished.' 'Dispute records can be directed or manipulated by external bodies.'

Whistleblowers' procedure. Two respondents reacted negatively to whistleblowing: 'It always turns out badly for the whistleblower'. Another respondent clearly supported a different view: 'Now make a commitment finally to internal or independent external monitoring and ensure that a framework is established as quickly as possible within which the whistleblower can have his/her say!'.

Financial gain. The culture of lining one's own pocket came up a number of times.

Unclear legislation: the legislation is complex. Responses included references to: structure; only defined tasks; too many contingency procedures; too little training about the importance of certain tasks.

We thought it would be worthwhile to examine to what extent staff who encounter corruption have a different view of the causes of corruption from those who rarely or never come into contact with corruption.

Table 10: Differing views about corruption

Have you already encountered corruption?	Possible causes of corruption (%-N)	Not causes of corruption (%-N)
	A few bad apples	
Never	47.4 (82)	52.6 (91)
A few times a year	58.7 (176)	41.3 (124)
Several times a year	55.7 (102)	44.3 (81)
At least monthly	61.5 (8)	38.5 (5)
Weekly	41.7 (5)	58.3 (7)
Daily	71.4 (5)	28.6 (2)
	Businesses exerting strong pressure on Customs**	
Never	27.7 (48)	72.3 (125)
A few times a year	39.7 (119)	60.3 (181)
Several times a year	45.9 (84)	54.1 (99)
At least monthly	56.5 (13)	53.8 (7)
Weekly	66.7 (8)	33.3 (4)
Daily	42.9 (3)	57.1 (4)
	Working alone too much without consultation with colleagues	
Never	8.7 (15)	91.3 (158)
A few times a year	13.7 (41)	86.3 (259)
Several times a year	16.9 (31)	83.1 (152)
At least monthly	7.7 (1)	92.3 (12)
Weekly	16.7 (2)	83.3 (10)
Daily	42.9 (3)	57.1 (4)
	Unclear structure**	
Never	23.1 (40)	76.9 (133)
A few times a year	29.3 (88)	70.7 (212)
Several times a year	41.0 (75)	59.0 (108)
At least monthly	38.5 (5)	61.5 (8)
Weekly	25.0 (3)	75.0 (9)
Daily	57.1 (4)	42.9 (3)

Have you already encountered corruption?	Possible causes of corruption (%-N)	Not causes of corruption (%-N)
	Rules of conduct not known	
Never	10.4 (18)	89.6 (155)
A few times a year	10.3 (31)	89.7 (269)
Several times a year	16.9 (31)	83.1 (152)
At least monthly	7.7 (1)	92.3 (12)
Weekly	8.3 (1)	91.7 (11)
Daily	28.6 (2)	71.4 (5)
	A lack of leadership within the organisation*	
Never	27.7 (48)	72.3 (125)
A few times a year	36.7 (110)	63.3 (190)
Several times a year	54.1 (99)	45.9 (84)
At least monthly	69.2 (9)	30.8 (4)
Weekly	58.3 (7)	41.7 (5)
Daily	71.4 (5)	28.6 (2)
	No external monitoring of Customs activities*	
Never	17.9 (31)	82.1 (142)
A few times a year	22.0 (66)	78.0 (234)
Several times a year	24.6 (45)	75.4 (138)
At least monthly	38.5 (5)	61.5 (8)
Weekly	41.7 (5)	58.3 (7)
Daily	57.1 (4)	42.9 (3)
	There is no penalty afterwards**	
Never	17.3 (30)	82.7 (143)
A few times a year	15.7 (47)	84.3 (253)
Several times a year	35.0 (64)	65.0 (119)
At least monthly	46.2 (6)	53.8 (7)
Weekly	33.3 (4)	66.7 (8)
Daily	57.1 (4)	42.9 (3)
	There is no structure for reporting corruption*	
Never	16.8 (29)	83.2 (144)
A few times a year	18.7 (56)	81.3 (244)
Several times a year	30.1 (55)	69.9 (128)
At least monthly	38.5 (5)	61.5 (8)
Weekly	16.7 (2)	83.3 (10)
Daily	42.9 (3)p	57.1 (4)
	Officials earn too little	
Never	13.9 (24)	86.1 (149)
A few times a year	12.0 (36)	88.0 (264)
Several times a year	14.8 (27)	85.2 (156)
At least monthly	0.0 (0)	100.00 (13)
Weekly	25.0 (3)	75.0 (9)
Daily	14.3 (1)	85.7 (6)

Chi-square: (*) the differences in importance of measures to dissuade corruption are statistically significant at level: $p<0.05$*=$p<0.01$**=$p<0.001$***.

Table 10 above shows the response categories for the 10 causes of corruption we asked about, split into experience or no experience of corruption. The experience of corruption shows how often a member of staff encounters corruption. The absolute numbers on which our findings are based are given in brackets. The causes 'businesses exerting pressure', 'a lack of leadership', 'no external monitoring', and 'there is no penalty afterwards' are statistically significant ($p<0.05$ or higher).

Staff reported various causes of corruption within the Customs and Excise service. Our analysis shows that 'experience of corrupt situations' is the variable linked most closely with designating causes of corruption. Gender and number of years' service are weaker indicators of which cause a respondent gives for corruption within the Service.

Staff who encounter corruption while doing their jobs described its causes in different words and have a more outspoken opinion about them than colleagues who reported that they do not encounter corruption. The more frequently a member of staff had encountered corruption, the more he or she stated that the exertion of pressure by businesses is a cause of corruption. In addition, the fact that a penalty fails to materialise when corruption occurs was seen as a significant cause. Lastly, the lack of leadership within the organisation and the absence of external monitoring were both seen as causes of corruption within Customs. This relationship is extremely meaningful: the group of staff who encounter corruption cite significantly more the lack of leadership and no external monitoring as causes of corruption.

Importance of anti-corruption measures

Table 11: Anti-corruption measures

In your opinion, which measures could have a dissuasive effect on corruption?	**Importance of measure on a scale from very important to not important (1 = very important; 10 = not important)**									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Whistleblowers' charter	22.8	10.9	12.1	12.6	9.8	8.6	7.4	4.1	4.7	6.9
Anti-corruption training during recruitment	21.8	12.8	7.3	8.5	18.8	9.2	7.6	4.5	4.3	5.4
Simpler disciplinary procedure	11.1	19.5	11.6	10.4	9.7	12.6	13.0	8.8	2.1	1.4
Stricter disciplinary penalties	4.0	12.4	19.9	8.5	6.9	10.1	10.1	14.7	11.1	2.6
Rewarding good behaviour	12.8	11.9	7.1	8.6	7.6	7.9	14.5	9.8	13.8	5.5
Intervention by the police and public prosecutor	5.9	5.0	7.9	15.9	8.6	6.2	10.2	10.9	14.7	14.7
Better knowledge of rules of conduct	9.2	11.8	12.8	9.2	8.2	8.2	7.8	9.5	17.5	5.7
Anti-corruption initiatives during officers' careers	1.0	7.4	10.0	10.9	13.3	24.9	13.1	8.3	7.8	3.3
Encouraging social monitoring	2.6	3.6	6.4	10.9	11.3	9.4	11.6	23.4	13.5	7.1
Higher pay	9.0	4.2	4.7	4.4	5.3	3.2	4.7	5.8	10.9	47.8

Table 11 above shows that the vast majority of respondents think it is extremely important to have a whistleblowers' charter and to offer anti-corruption training during recruitment. Of the respondents, 33.7% see the introduction of a whistleblowers' charter and a structure for reporting corruption as the most important or second most important measure. Anti-corruption training during recruitment is one of the two most important measures for 34.6% of respondents. It is notable that simplifying disciplinary procedures came in as the third most important measure, and was considered more important than the application of stricter disciplinary penalties. 30.6% of respondents agreed with the statement that a simpler disciplinary procedure could help to prevent corruption, while only 16.4% judged stricter penalties to be the most important or next most important measure. Rewarding appropriate behaviour, anti-corruption initiatives during officers' careers, and intervention by the police and public prosecutor are clearly seen as less effective ways of preventing corruption. A striking observation is that an exceptionally small number of respondents think that encouraging social monitoring on the shop floor is a good solution. Only 6.2% think this is a very important measure. Nor is higher pay considered to be a measure that will impede corruption.

Statistically, we cannot differentiate between staff who have come into contact with corruption in the past and staff who have not yet encountered it. However, we can observe significant differences based on the respondents' level in the organisation. A and B level staff attach notably more importance to simplifying disciplinary procedures than C and D level staff (Chi-square: $p<0.001$). Anti-corruption training during recruitment is judged to be more important by B, C and D level staff than A level managers (Chi-square: $p<0.05$). The picture is the same for rewarding appropriate behaviour as a method of preventing corruption. Staff at levels C and D find this more important than staff at levels A and B (Chi-square: $p<0.05$). Familiarising staff with the rules of conduct is judged to be more important by A and B level staff than by C and D level staff (Chi-square: $p<0.05$).

One hundred and fourteen respondents answered the question about whether they had further suggestions for preventing corruption. We also grouped these answers into a number of themes. Most of the suggestions referred to leadership qualities in the higher level managers. Various respondents thought that managers should take action more quickly against staff who do not behave appropriately. Secondly, they thought that it is important that managers set an example, and that their position as role models is coming under increasing pressure. Hence a number of respondents suggested avoiding political influence and making a clear distinction between economic interests and the monitoring powers of the Customs Service. In concrete terms, clear rules should be established, along with a clear vision of the role that the Service needs to play as regulator of the economy. A good illustration of this was given by a respondent who warned about '*favouring some firms under the guise of customer friendliness*'.

The introduction of periodic evaluation of officials, setting up an internal audit or internal monitoring by an independent body was suggested. In addition, it was suggested that there should be stricter and more monitoring of companies which are often not acting as they should.

With regard to the HR policy, a number of comments were made about the system of organising overtime, which can give rise to abuse.

Conclusions

On the basis of the survey, we can draw certain conclusions about the importance of an anti-corruption training course.

The aim of the anti-corruption training course was to raise awareness. The anti-corruption policy of the Customs Service illustrates its choice to place the individual responsibility of the employee in pole position. Skills addressed during the anti-corruption training course were: accentuating the feeling of responsibility; tackling the pitfalls of neutralisation techniques; and motivating staff to report corruption. This kind of anti-corruption training places a strong emphasis on the individual responsibility of the employee, and not on the group effect. This is further strengthened by grouping participants at random rather than training a set group of colleagues. Like other researchers, we consider these tools, which are targeted at the individual perpetrator, to be necessary but not sufficient. If we compare the policy initiatives with the causes of corruption cited by researchers, the first thing we notice is that an anti-corruption training course has no effect on a number of causes of corruption, such as pressure from the private sector, unclear regulations or lack of leadership. However, in this case, the anti-corruption training course had a significant effect.

During the various phases of the research it became clear that a targeted anti-corruption policy can only be produced if people know enough about the specifics of how an organisation functions. We now know that the culture of the organisation, leadership, and informal social monitoring are clear points for improvement within the organisation. However, we still do not have enough information about, for example, the extent to which the culture of the past still lingers, the cause of the lack of leadership, and the universality of the lack of informal social monitoring, to be able to produce a more effective anti-corruption policy.

Lastly, we would like to point out the problem of collusion between the Customs and Excise service and the business world. Throughout the different research phases, what became most clear was that employees of the Customs and Excise service are in a difficult position. On the one hand they have the task of 'protecting the financial interests of the Community by collecting and controlling import duties, excise and VAT. On the other hand the service must increase the competitive position of European companies'.[3] The employees feel that this second objective is given priority. The creation of an economically favourable climate is a key part of the Customs and Excise service policy and is reinforced by pressure from management and the private sector. We therefore wonder to what extent the relationship of collusion between the Service and the private sector presents the greatest risk.

Endnotes

1 Also working on this training project were: Lieselot Bisschop, An De Coninck, Arne Dormaels, Jo Hellinckx, Fien Gilleir, Christina Pauwels, Lotte Smets, Stefanie Van der Burght, Gudrun Vande Walle and Gerwinde Vynckier.

2 In addition, 13 people emailed to tell us that they had not attended the course and therefore had not filled in the questionnaire. These people have not been included in the survey. The reasons these 13 people gave for not attending were: long-term illness, employment abroad, not having been invited, and not having had the opportunity yet to take the training course.

3 See: Missie administratie der Douane en Accijnzen (Mission of the Customs and Excise Service), http://fiscus.fgov.be/interfdanl/nl/publications/missie.htm.

Arne Dormaels

Drs Arne Dormaels has a masters degree in criminological sciences (2000). Since 2008, he has been an academic assistant at the University College Ghent (Faculty of Business and Public Administration). He is also a visiting lecturer at the Ruhr-University Bochum (Law Faculty), Germany, in the International Masters program in Criminology, Governance and Police Science. He is currently working on his PhD research on 'Values, norms and perceptions of corruption in Flanders'. He belongs to the research unit 'Governing and Policing Security' (GaPS) and the associated research unit 'Governance of Security' (GofS) – Ghent University Association. From 2005 to 2008, Arne was a member of staff at the Association of Flemish Cities and Municipalities, Police and Security Branch. Before that, he worked at the Belgian Federal Public Service Home Affairs and at Ghent University, Faculty of Law, Department of Penal Law and Criminology.

Gudrun Vande Walle

Dr Gudrun Vande Walle is an assistant professor at the University College Ghent, Faculty of Business and Public Administration, where she is a member of the research unit 'Governing and Policing Security' (GaPS) and the associated research unit 'Governance of Security' (GofS) – Ghent University Association. She is also a visiting lecturer at the Ruhr-University Bochum (Law Faculty), Germany, in the International Masters program in Criminology, Governance and Police Science. She has a masters degree in Law (KULeuven), in Criminology (UGent) and a doctoral degree in Criminology (UGent). Her PhD project (2004) concerned 'Conflict resolution between private companies and consumer victims of corporate practices in the pharmaceutical industry'. Nowadays, Gudrun is carrying out research in the field of corruption and anti-corruption policy in public and private organisations. Her research and teaching experience cover Governance and Ethics, Governance of Security, Sociology of Law, anti-corruption policy, conflict resolution, and Financial-Economic Crime.

Coordinated border management: from theory to practice

Mariya Polner[1]

Abstract

In a globalised world where interconnectedness and integration are key dynamics influencing economic growth and social development, policymakers increasingly realise the need for accelerated transborder regulatory reform to remove unnecessary barriers and burdens on trade. The World Customs Organization (WCO) in its Customs in the 21st century document has captured these critical concepts for reform within the theme of Coordinated Border Management (CBM). For Customs, CBM is about describing how improved regulatory efficiency and effectiveness can be realised through greater coordination between border agencies during policy development and operational activities, both domestically and internationally.

This paper considers the meaning of the CBM concept for the customs community in particular and border agencies in general. It provides an overview of the evolution of the concept, which serves as a theoretical underpinning for further policy development. As the CBM concept is broad and offers numerous interpretations, operational arrangements, such as joint mobile teams, hot pursuit, joint risk management, and targeting centres are not addressed, nor does the paper analyse information exchange systems, in particular the Single Window that forms an intrinsic part of CBM. Instead, the paper focuses on institutional and some practical border arrangements developed in several countries as part of a CBM implementation strategy, and concludes by suggesting areas for further research.

1. Introduction

The border environment is complex and comprises a variety of actors with conflicting interests. As O'Dowd states, borders are 'places of economic and political opportunity for nations and states as well as for a host of other interest groups and agencies, legal and illegal' (O'Dowd 2002, p. 24). Throughout human history borders have played a major role in the state by being a silent tribute to its sovereignty. However, in the last 30 years, we have witnessed two major opposing processes. Because of the dissolution of the Soviet Union and Yugoslavia and, as a result, the emergence of new countries on the world map, new borders have been created or 'externalised'. At the same time, the most successful integration project in human history, the European Union (EU) leading to the 'internalisation' of the borders, resulted in the creation of the Single Market, Schengen area and common external border. These processes of transformation have had a significant impact on the border environment of the countries concerned. For some countries, borders lost their primary function as barriers, and acquired a new 'bridging' function (O'Dowd 2002). For other countries, embarking on the road to independence, the borders retained their role as primary sovereignty indicators.

Apart from the political transformation, the border environment is exposed to other kinds of external influence, such as major security shocks. For example, in response to 9/11, the meaning of borders changed for all countries exporting to the United States of America (USA). The US policy response to the attacks was the implementation of the Container Security Initiative (CSI) and the Customs-Trade Partnership against Terrorism (C-TPAT), both of which consider the starting point for borders in the country of export. In other words, as the borders were 'pushed out' (Bowman 2006, pp. 2-3) and thus didn't coincide with the geographical borders, they obtained a new meaning from trade and security perspectives.

In addition to security shocks, natural disasters are occurring more frequently and on a much larger scale, and there are economic crises – all of which are affecting the supply chains and labour markets. At the same time, the processes of globalisation and trade liberalisation have led to changes in consumer expectations, where consumers can now choose among similar products produced by different companies. As a result, the growing competition among companies that need to produce and deliver their products faster and reduce production and transportation costs, has led to changes in the supply chains and growing pressure on border agencies to carry out their roles more effectively and efficiently, while the volumes of goods moving around the world continue to grow.[1]

The benefits of globalisation, such as faster cross-border movement and technological progress, also contribute to the operations of terrorists and other criminal groups. As opposed to terrorist activities, clandestine activities are not aimed at undermining or destroying the state authority. Having a profit-driven nature, illegal activities might contribute to the weakening of a state, threaten consumer health and safety, reduce income to the state budget normally obtained through duties and taxes, and have an indirect impact on security in the region due to the way those activities are conducted or goods are being traded (Mitsilegas, Monar & Rees 2003, p. 51).

The major regulators of this complex environment are border agencies that have specific mandates and roles, such as revenue assurance, migration, phytosanitary, radiological, transport, ecological and food safety controls. Many of these agencies are also subject to various pressures, such as financial and staffing limitations, problems of intra-agency and inter-agency cooperation and information exchange, non-transparent legislation, increasing procedural requirements, revenue pressure, and rising demands from the private sector (Doyle 2011, p. 12).

How to deal with these challenges? As the governments adjust old policies and design new ones to better tackle these challenges, within the customs community there is recognition that increasing cross-border flows, limited resources, growing expectations for improved facilitation and control by governments, the trade community and travellers necessitate enhanced coordination between the agencies. Moreover, the role of Customs as the gatekeeper of the state and the embodiment of its sovereignty at the borders becomes more prominent.

This paper considers the meaning of the Coordinated Border Management (CBM) concept for the customs community in particular and border agencies in general. It provides an overview of the evolution of the concept, which serves as a theoretical underpinning for further policy development. As the CBM concept is broad and offers numerous interpretations, this paper does not address the operational arrangements, such as joint mobile teams, hot pursuit, joint risk management or targeting centres, nor does it analyse the information exchange systems, in particular the Single Window that forms an intrinsic part of CBM. Instead, the paper focuses on the institutional (intra-service and inter-service) and some operational (international) arrangements on the border developed in different countries as a part of CBM implementation strategy, and concludes by suggesting areas for further research.

2. Evolution of the CBM concept

From the mid-1990s, there has been a growing demand to coordinate the work of different agencies at the border in order to facilitate trade. Various institutions started developing a concept that is currently known as Coordinated Border Management (CBM). By definition, CBM is of interest to non-customs border agencies, policymakers, and international organisations. While the World Customs Organization (WCO) uses the term 'Coordinated Border Management', other organisations have devised their own terminology, including but not limited to *Integrated Border Management* (EU), *Collaborative Border Management* (the World Bank's more recent choice of terminology), and *Comprehensive Border Management* (OSCE [Organisation for Security and Cooperation in Europe]). Although these terms have subtle differences in definition, the intent is largely the same: there is the need for border agencies to coordinate their actions in order to improve effectiveness and efficiency of border procedures. In practice, this term has become a cornerstone for a set of donor-driven structural border reforms in numerous countries.

CBM concept from the WCO perspective

The concepts of CBM have their antecedents in key WCO instruments, especially the *International Convention on the Simplification and Harmonization of Customs Procedures (as amended)* (the revised Kyoto Convention), and the *SAFE Framework of Standards to Secure and Facilitate Global Trade* (the SAFE Framework). The revised Kyoto Convention entered into force in 1974 and was revised in 1999. One of the major principles of this Convention was to simplify as well as standardise customs procedures. In particular, Chapters 3, 6 and 7 touch upon CBM mechanisms, such as the concepts of 'juxtaposed office' and 'joint controls', and the enhancement of international cooperation with other customs administrations. The standards relating to Single Window (Standards 7.3 and 7.4), which supports CBM through the exchange of information between the related ministries and agencies, are also stipulated in the Convention (see Appendix 1). Techniques such as risk management (Standard 6.3) would benefit from the implementation of CBM as it would assist in areas such as sharing information, intelligence, and examination results. These actions will considerably enhance intelligence-driven risk management and promote coordination among the agencies.[2] Thus a CBM approach, when used in conjunction with the standards and guidelines contained in the revised Kyoto Convention, provides a strong foundation upon which streamlining the border processes associated with both facilitation and control take place.

The SAFE Framework, introduced in 2007, has become a major international instrument, setting standards for Customs-to-Customs network arrangements and Customs-to-Business partnerships. Acknowledging the importance of balancing security and facilitation, in particular in the post 9/11 environment, this document contains a set of practical measures on Single Window and border management (see Appendix 1). Currently, 164 countries have signed a letter of intent committing to implement the SAFE Framework (WCO 2011).

In addition to Pillar 1 (Customs-to-Customs cooperation) and Pillar 2 (Customs-to-Business cooperation), there have been discussions to add a Pillar 3 to the SAFE Framework, which would cover Customs-to-other border agencies cooperation. This idea is reflected in Standard 1, implementing specification 1.3.9 of the SAFE Framework, developed as a placeholder for the future standards or best practices. It addresses the need for the governmental agencies involved in international trade to cooperate (see Appendix 1).

The CBM concept has continued developing in other WCO documents. In particular, in the 2008 *Customs in the 21st Century* strategy document, CBM is described as:

> Better coordinated border management entails coordination and cooperation among all the relevant authorities and agencies involved in border security and regulatory requirements that apply to passengers, goods and conveyances that are moved across borders. Governments also need to

explore more effective solutions to border management. The establishment of better coordinated border management for the cross-border movement of goods requires:

(i) The recognition of Customs or the agency responsible for the Customs function as the lead front-line administration at national borders for controlling the movement of goods. According to the UN Trade Facilitation Network, Customs administrations are usually best suited to develop integrated procedures for processing goods at points of entry; and
(ii) The introduction of the electronic Single Window concept that allows a trader to provide all necessary information and documentation once to the designated agency that, in turn, distributes the information to all relevant agencies (WCO 2008, p. 7).

Taking into consideration that the term 'Integrated Border Management', mentioned in the SAFE Framework, has a strong institutional connotation, the term 'Coordinated Border Management' has been introduced in view of its encompassing nature. A 2009 *Background Paper – WCO Inter-Agency Forum on Coordinated Border Management*, introduces the evolved thinking of the WCO about CBM and outlines its major principles:

> Coordinated Border Management (CBM) represents an approach to manage borders involving public service agencies working across portfolio boundaries in a coordinated manner to achieve a shared goal thus providing a cohesive government response to the challenges of border management. CBM can be referred to as meaning a logical way to manage border operations to ensure efficient and effective processes and procedures used by all regulatory agencies who are involved in border security and regulatory requirements that apply to travellers, goods and conveyances crossing international borders. The objective of a coordinated border management system is to facilitate trade and the clearance of travellers at the same time ensuring secure borders (WCO 2009, p. 5).

Therefore, the CBM is viewed more as a guiding principle for the border agencies rather than a practical one-size-fits-all model.

CBM concept developed by other stakeholders

As previously mentioned, numerous institutions embarked on developing their own concept of coordination of border activities. In December 2001, the Laeken European Council introduced a new topic, called 'integrated border management' (IBM). The topic became very popular, as it began being referred to in various Council and Commission documents, in particular, in the Hague Programme on strengthening freedom, security and justice in the EU (Council of the European Union 2004), endorsing the 'establishment of the European Agency for the Management of Operational Cooperation at the External Borders' (Council of the European Union 2004, p. 15), known as FRONTEX. A clear definition of IBM can be found in the European Commission (EC) Guidelines for Integrated Border Management for the Western Balkans:

> … national and international coordination and cooperation among all the relevant authorities and agencies involved in border security and trade facilitation to establish effective, efficient and coordinated border management in order to reach the objective of open, but well controlled and secure borders (EC 2004, p. 18).

The Commission further developed the concept by making a distinction between three levels of cooperation: intra-service cooperation (inside one agency), inter-agency cooperation (coordination among the agencies in one country) and international cooperation (including cooperation with neighbouring and other countries) (EC 2004, pp. 19-23).[3]

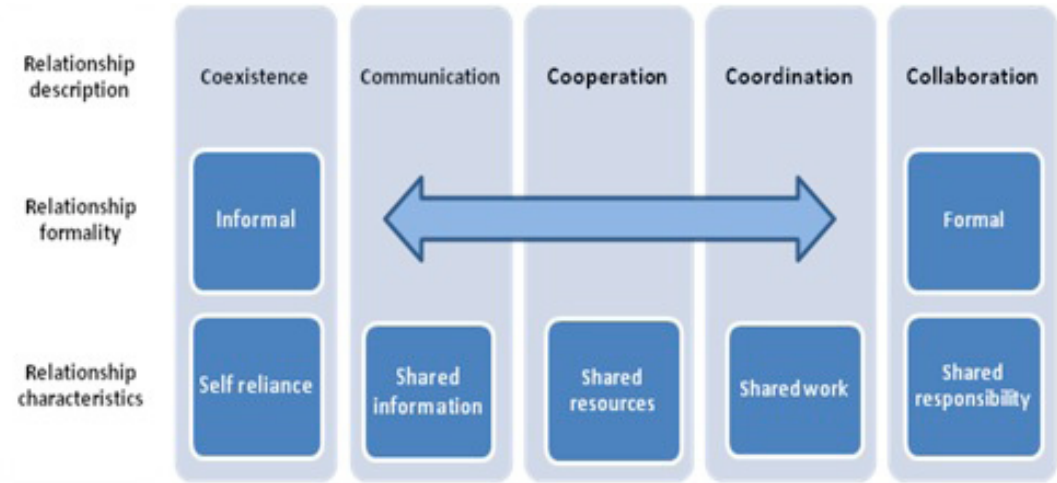
In its 2010 *Border Management Modernization* book, the World Bank uses the term 'Collaborative Border Management'. One of the authors uses this term to avoid the 'threatening connotations of the organisational integration' (Doyle 2011, p. 14) arising from the term 'IBM'. One of the reasons why

organisational integration is treated cautiously is because it requires a 'significant organisational change' and may create problems 'as various entities struggle to retain their identities and protect their mandates and resources' (Doyle 2011, p. 12).

Another stakeholder active in developing the CBM concept is the OSCE. In December 2005, the OSCE Ministerial Council adopted the OSCE Border Security and Management Concept which has become a stepping stone for the CBM. In particular, the OSCE prefers using the term 'Comprehensive Border Management' which entails a whole-of-government approach to the border issue. The key idea in this concept is concentrated on the need for cooperation among the agencies in a highly complex and interconnected environment.

Apart from analysing the factors influencing the border environment, the OSCE follows the notion of three possible levels of cooperation: coordination, collaboration and integration. In a similar vein, in the *Discussion Document for Managers and Front-Line Staff on Better Joining Horizontal and Vertical*, the authors distinguish between co-existence, communication, cooperation, coordination and collaboration, where collaboration entails a 'more intensive process, sometimes involving a formal partnership' while cooperation involves 'more formalised meetings and exchanges of information so that the organisations involved can achieve their respective goals more effectively'. In general, Figure 1 provides guidelines on different ways of working together: from informal, including almost no sharing of information and resources, to formal, where staff members work in one team (Institute of Policy Studies 2008, p. 14).

Figure 1: Continuum of inter-governmental integration



Source: Institute of Policy Studies 2008, p. 14.

According to this continuum of inter-governmental integration, there are different degrees of relationships between the governmental agencies. If this matrix was applied to the border management concept, the definitions provided by different organisations would follow it. In general, despite some differences on tactics and implementation of CBM, its conceptual meaning is accepted by all major stakeholders.

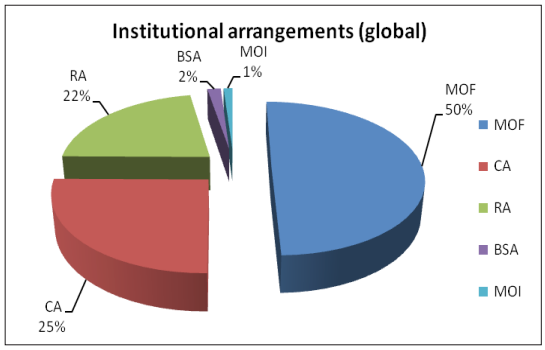
3. Fit for Purpose? Institutional arrangements of customs administrations

There are multiple border functions or responsibilities including but not limited to customs, immigration, agriculture, quality control, quarantine, and police. These functions vary from country to country in terms

of emphasis or even existence, depending on such variables as national priorities, geography, resources, management style, and so on. In some cases, there can be as many as 16 agencies, as in the Democratic Republic of Congo (Zoellick 2011). The result is that goods and passengers must pass through multiple controls and comply with numerous regulations. This can lead to inefficiency, bottlenecks at the border, and frustration of traders and passengers. Moreover, it can detract border agencies from achieving their objectives, including Customs (for example, revenue collection, trade facilitation, anti-smuggling, trade facilitation, and collecting trade statistics) and other border agencies (for example, preventing crime, illegal immigration, influx of pests, and promoting safety and standards). At the same time, complying with the controls criteria imposed by all agencies slows border procedures and increases delays at those borders. Therefore, some proponents of CBM see its main objective as reducing the number of agencies at the border.

One CBM method relates to the use of the institutional arrangements to coordinate the activities of various border agencies or even to merge them under one roof, thus reducing the number of agencies at the border. Therefore, this section provides an analysis of different types of institutional arrangements observed in WCO Member countries (see Table 1), with a particular focus on some cases of either delegating non-customs functions to the customs authority or merging border agencies institutionally.

Table 1: Institutional arrangements



Institutional arrangements	Quantity	Percentage
MOF	88	50%
CA	45	25%
RA	39	22%
BSA	3	2%
MOI	2	1%
TOTAL	177	

Key: Ministries of Finance (MOF); Customs administrations (CA); Revenue authorities (RA); Border Security Agencies (BSA); Ministries of Interior (MOI)

In placing the institutional arrangements by type, it was found that approximately 50% of 177 WCO Members are within the Ministries of Finance (MOF) in the form of an Administration, (General) Directorate or Department. Approximately 25% are independent customs administrations which do not form part of any Ministry. For the purpose of this paper, 'Independent customs administrations' means that the agencies are not organisationally within the Ministry, but that they may report to a higher authority in the government which does not exclude the Ministry (see Box 1).

Box 1. Examples of independent customs administrations: Russia and China

The Federal Customs Service of the Russian Federation is an independent federal authority of the executive branch, governed by the Government of the Russian Federation (2006).

China Customs is an independent authority reporting directly to the State Council, which is the highest executive organ of State power. It does not form part of the State Council and is at a lower level of organisation under the State Council. Its head is a Ministerial-level officer, appointed by the Premier (website of the Central People's Government of the People's Republic of China).

While not a merger of border agencies, a number of customs and tax administrations are integrated into revenue authorities[4] and constitute 22% of WCO Members. These three types of agencies, those within MOF, independent customs and revenue authorities, sometimes have a partial or no delegation of border functions from other agencies and thus, for example, the control over people crossing the border is still performed by border guards, police or an immigration authority.

Several agencies chose the approach of the institutional integration of border functions under a single roof, thus creating a Border Security Agency (BSA) with a particular focus on security (especially anti-terrorism) and border protection. These agencies, such as the US Customs and Border Protection (US CBP), the Canada Border Services Agency (CBSA), and the Australian Customs and Border Protection Service (CBPS), represent 2% of membership (see Box 2).

Box 2. Single border agency – USA and Australia

In the US, before 2001, border functions were divided among various federal departments, however the 9/11 events called for consolidation of most of them under one roof. As a result, the 2002 Homeland Security Act envisaged the creation of the Department of Homeland Security (DHS) which would take over the majority of the border functions. As a result of this merger, the functions have been divided in the following way: the Bureau of Customs and Border Protection (CBP) acts as a 'front line responder' dealing with immigration, customs and agricultural compliance and thus having an enforcement function within DHS, the Bureau of Immigration and Customs Enforcement (ICE) performs an investigative function, the Transportation Security Administration (TSA) deals with security of the transportation system and the US Coast Guard ensures security in the US territorial waters. While CBP, ICE and TSA form part of the Directorate of Border Security, the US Coast Guard is a standalone division within the DHS structure (Haddal 2009, p. 1).

In December 2008, the Australian Prime Minister's National Security Statement brought changes for Customs and border agencies. Customs changed its name to Australian Customs and Border Protection Service (CBPS) and was given the leading role in border protection. Functions involving customs, immigration and quarantine such as primary line checks at international airports and seaports, and coordinating the response to the resurgent coastwatch threats, such as maritime people smuggling and illegal fishing, are largely managed by customs officers on a daily basis. However, if more expertise is required, the competent authorities take the lead role (for example, in case of doubt regarding the authenticity of a passport, the Department of Immigration would take over). CBPS manages the security of Australia's borders. It works closely with other government and international agencies, in particular the Australian Federal Police, the Australian Quarantine and Inspection Service, the Department of Immigration and Citizenship and the Department of Defence, to detect and deter unlawful movement of goods and people across the border (Australian Customs and Border Protection Service 2011).

In general, border security agencies remain a small minority of customs administrations. In particular, there is one country that shifted from the integrated model to a more complex arrangement (see Box 3).

Bahrain and Oman customs authorities that are under the Ministry of Interior (MOI) represent 1% of WCO Members.

Looking at the regional representation, the number of customs administrations that are within the MOF structure are predominantly in West and Central Africa (83% of WCA members), East and Southern Africa (68% of ESA members), Middle East and North Africa (MENA) (59% of membership), and Asia-Pacific (55% of AP members). In the Americas and Europe, their share reaches 42% and 41% respectively. It is the only cluster which is present in all six WCO regions.

The majority of the independent customs administrations are located in Europe (43%), followed by 29% in MENA, the Americas and Asia-Pacific (26% and 25% respectively). Revenue authorities are rather widespread in East and Southern Africa (32%), the Americas (26%) and Asia-Pacific (19%). The border security agencies are in the Americas (6%) and Asia-Pacific (3%).

Box 3. The United Kingdom case

Her Majesty's (HM) Revenue & Customs (United Kingdom) (UKRC) was formed in 2005 by a merger of Inland Revenue and HM Customs and Excise Departments, while the investigative and intelligence work of HM Customs and Excise in relation to serious drug trafficking and recovering related criminal assets was passed on to the Serious Organised Crime Agency (SOCA). In 2007, the Government announced the creation of the United Kingdom Border Agency (UKBA), bringing together staff responsible for customs border activity, immigration control and overseas visa work. UKBA was established in shadow form in April 2008 with the express purpose of securing the UK borders and controlling migration for the benefit of the country. UKBA gained full Executive Agency status on 1 April 2009, taking on the majority of customs work at the border. The work UKBA does in this regard contributes to HMRC Strategic Objectives. In a number of areas, HMRC retains policy responsibility for border activity, and in this respect, the UKBA is acting as delivery agent for HMRC. A joint HMRC-UKBA Partnership Committee oversees performance and wider relationships between the two organisations.

The region where only two types are present, MOF and revenue authorities, is East and Southern Africa. In the other regions three or more types are observed, though still one type out of the three holds the leadership.

While most customs administrations remain organisationally separate from other border agencies, there are interesting examples where countries establish a virtual integration of border agencies.

Box 4. New Zealand border strategy

In New Zealand, the Border Sector Governance Group was established in order to oversee the implementation of CBM. The Group comprises the chief executives from the New Zealand Customs Service, Department of Labour, Department of Internal Affairs, Ministry of Transport, Ministry of Agriculture and Forestry and Food Safety Authority. The Border Sector Strategy for 2008-2013 serving as a 'framework for collaboration of border sector agencies' (New Zealand Government 2008), identifies the following common areas for all border agencies: trade single window, streamlined passenger facilitation with improved risk management, robust identity assurance for all of government regarding entry and exit of persons at the border, and better targeting capability using information across all border agencies. Having identified common objectives and deliverables, New Zealand undertook a whole of government approach to border management where agencies remain separate, however work together to achieve common goals.[5]

In general, any reorganisational process needs political will and clear leadership, as well as change in the institutional culture. The organisational change is very difficult to implement as institutional memory is one of the major impediments to this process.

4. CBM: the international dimension

Distinctive features of the one-stop border post (OSBP) and its legal framework

Apart from the institutional reorganisation or integration at a national level, a number of administrations implement cross-border arrangements with neighbouring countries in order to smooth and facilitate border procedures. The idea of the joint control arrangements and OSBPs is not new. For example, the first OSBPs in Western Europe appeared approximately 60 years ago (Zarnowiecki 2011, p. 65). The reasoning behind establishing different kinds of OSBPs revolves around increasing the effectiveness of the border crossings by reducing the number of stops and participating agencies. OSBPs have to be based on the principles of cooperation and trust. As a result, information exchange and joint actions become indispensable features of OSBPs, thus implementing the principles of CBM. As the control agencies cooperate more vigorously, the opportunity arises to develop a more effective risk management system that will eventually have a positive impact on revenue collection as well.

Nevertheless, there is no particular definition of the OSBP. Kieck developed the following distinctive features for OSBPs:

- offices of both states are relocated in close proximity, necessitating only 'one stop' for border crossings
- a control zone (or zones) is demarcated within which officers from both states conduct controls in terms of their respective laws
- the control zone comprises offices, inspection areas and related facilities and is usually located within the national territory of only one state
- immigration, import and export formalities are handled as a seamless transaction between the two countries
- inspection and searches of cargoes or vehicles are generally conducted in the presence of officers from both states [countries] (Kieck 2010, pp. 6-7).

This list is not exhaustive, and one of the imperative features of OSBPs, which is not mentioned above, is the principle of extraterritoriality, or the extension of the application of the national laws outside the country's own territory with the consent of the country where these laws are to be applied. In the OSBP context, this principle has two dimensions:

1. empower control agencies to conduct controls in correspondence with their national legislation outside their national territory
2. allow control officers of the adjoining State to conduct border controls under their national law within the territory of the host State (Kenya Private Sector Alliance 2010).

Therefore, an appropriate legal framework to guarantee this principle and enable the functioning of the OSBP is necessary (Harmon 2008; see Box 5).

On the contrary, in 2009 Corridor Development Consultants (CDC) in cooperation with the East African Community (EAC) Secretariat conducted an analysis of the legal instruments of the EAC Partner States in relation to OSBP. It was found that the national legislation in all five EAC Partner States does not provide a sufficient ground for the application of the principle (Kenya Private Sector Alliance, 2010).

Box 5. The legal basis for the delegation of functions: the case of Sweden and Norway

In 1959, Sweden and Norway concluded an agreement on border cooperation, ratified by both Kingdoms. This Agreement is a cornerstone for the coordinated border management between two countries. Norway signed a similar agreement on border cooperation with Finland. In 1995, when Sweden and Finland became EU Members, these two agreements were replaced by an 'Agreement on Customs Cooperation Between the Kingdom of Norway and the European Communities' (OJ L 105/17, 23.04.1997), However, the substance of the bilateral agreements was preserved. In particular, Art. 3 states that:

> Norwegian customs authorities shall be authorised to perform, for and on behalf of the Finnish or Swedish customs authorities, all customs checks and formalities for goods under the Community customs rules applicable to import, export, transit and the placing under any customs procedure of goods between the Community and Norway.

Based on this agreement, every country issued a set of domestic legislation in order to implement such an agreement. For example, the Regulation issued in 2002 and the Instruction of the Swedish Customs on how to implement the Regulation complete its legal basis, describing the duties of the Swedish customs officer when acting on behalf of the Norwegian Customs on the Swedish territory or on the Norwegian territory in areas such as clearance, enforcement, seizures, legal powers for arresting people, etc. (Förordning (2002:1054) om gränstullsamarbete med Norge). Thus, Sweden created a solid legal framework for the Agreement to operate.

OSBP arrangements

There are a number of OSBP physical arrangements that are common in practice. In this section, the arrangements between Switzerland, France and Germany are discussed as case studies. The most common arrangement is related to so-called 'juxtaposed facilities'. This model is used where the border posts are in good condition or where there is a natural border, such as a mountain, a river, and so on. The main idea is that the exit country facilities are bypassed in order to carry out all necessary exit and entrance procedures in the entry country.

Another model can be described as a 'common one country facility'. It implies the physical location of the shared office on the territory of one of the countries thus allowing officers from both countries to carry out border controls together. This model is practical only in cases where trust and cooperation between the countries are strong.

Assuming that there is political support and willingness to cooperate from both governments, as well as readiness to contribute to each other's operations, an OSBP model can be chosen based on geographical and other criteria. To achieve this model, however, requires a significant investment entailing much work on the national level and with the adjoining country. Moreover, it needs a longstanding commitment to the project, as the change will impact on all layers of governance, starting at the national level and ending with day-to-day work at the border.[6]

Box 6. Juxtaposed office in the country of import: Swiss-French border

Being a landlocked country, Switzerland has established juxtaposed offices or the like at its land borders for over four decades. Switzerland concluded bilateral intergovernmental conventions and bilateral agreements with the administrations of the neighbouring countries to comply with the principle of extraterritoriality in order for the officers of a country to work to their full capacity at the juxtaposed office on the territory of the other state.

For instance, the bilateral convention of 1960 between Switzerland and France (Convention 1960, RS 0.631.252.934.95) provides a legal basis to establish a juxtaposed office. Article 1 of the Convention states that the FCA officers shall be authorised to perform their duties on the French territory, and the French customs officers shall be authorised to perform their duties on the Swiss territory, reciprocally. In accordance with Article 1 of the Convention, the juxtaposed office in the Geneva area was established by an exchange of diplomatic notes in 1996 (Echange de lettres 1996, RS 0.631.252.934.952.3). Commercial and transit goods, but not passenger traffic, are processed at the juxtaposed office in the country of entry, where the Swiss Customs office and the French Customs office are located side by side.

For example, drivers of commercial trucks from France submit export declarations and related documents to the French Customs office of the juxtaposed office on the territory of Switzerland. After finishing the export customs procedures, they walk to the Swiss Customs office in the same building for import customs procedures. Where any inspection, such as X-ray inspection, is needed, only one inspection is undertaken, normally by the importing Customs.

Box 7. One country office: German-Swiss border

The Basel land border is located on one of the busiest north-south automobile routes from Germany to Switzerland and Italy. Thus, the major traffic consists of commercial trucks. Because of the geographical conditions and other considerations, Germany and Switzerland have agreed that all forms of border control would take place on the German territory. In accordance with the bilateral Convention of 1961 (RS 0.631.252.913.690) and the Agreement between Germany and Switzerland (RS0.631.252.913.692.3), the one country office facility was established in 1980.

Both customs administrations share all the facilities. For example, drivers of commercial trucks coming from the German side visit the juxtaposed facility to complete export procedures with the German Customs office, and then import procedures with the Swiss Customs office. Having fulfilled all necessary requirements, such as payment of duties and receipt of documentation, they move on to the exit lane to receive a final stamp allowing them to leave the territory. In the case of goods in transit to Switzerland, the exit transit procedures at the German Customs office and entry transit procedures at the Swiss Customs office are made at the facility for goods in transit.

Passenger vehicle traffic moves through the common facility where it can be checked by the German police or Swiss Border Guard Corps (BGC) in cases of suspicion. It should be noted that with Schengen entering into force, BGC does not perform systematic checks on persons, but they are able to stop a vehicle based on the suspicion of smuggling or contraband in accordance with the Swiss Customs Act.

Enforcement cooperation: Customs and Police Cooperation Centres (CCPD)

Another example of coordination of operational activities and exchange of information is the establishment of so-called Customs and Policy Cooperation Centres (CCPD). One of the major principles of the Schengen Agreement, originally signed on 14 June 1985, is the free movement of persons enforced by the abolition of internal controls between the signatory countries. In its turn, the Convention Implementing the Schengen Agreement (OJ L 239, pp. 19-62), defines the conditions for the implementation of this principle. In particular, the Convention stipulates the suppression of the fixed controls on the common borders of the Schengen countries and moves the focus of controls to the external borders (that is, between Schengen and non-Schengen countries).

In order not to jeopardise security within the Schengen zone after the gradual removal of the border controls, it was decided to reinforce the police and judicial cooperation for Schengen Members. In particular, Art. 39 of the Convention imposes the obligation of prevention and search of punishable deeds on Member states. Art. 39§4 of the Convention allows conclusion of bilateral administrative agreements between the border regions, while Art. 39§5 allows for the possibility of concluding bilateral agreements between the countries sharing a common border.

Therefore, this legal provision provides the opportunity for Schengen Members to develop bilateral agreements to improve cross-border cooperation. This provision served as a ground for the development of the CCPD model by the Committee on Coordination of the European Policy in the Area of Internal Security in 1996. The CCPD covers four important areas: public security, the fight against illicit trafficking, the fight against illicit immigration, and trans-border violations. The CCPD mission is:

- to gather and exchange information
- to cooperate in order to treat foreigners in irregular situations
- to execute readmission of the asylum seekers with a non-suit status, as well as asylum seekers whose procedure is in course, and who are located on the territory of one of the Member states.

Another role of CCPDs is to coordinate joint measures for the surveillance of the border area. Based on this model, since 1997 a number of bilateral agreements to set up CCPDs have been signed. CCPDs are located on the German-French border (Offenburg[7] and Kehl), French-Belgian border (Tournai), French-Italian border (Vintimile),[8] Swiss-Italian border (Chiasso), and the Bulgarian-Serbian border (Kalotina).[9]

Box 8. CCPD on the French-Swiss border

The CCPD-Geneva operates in accordance with the Paris Agreement that entered into force on 1 July 2009. In general, the CCPD functions as a 'back office' for the border crossing point. However, in the case of the Swiss side of the CCPD-Geneva, it also has a responsibility to treat enquiries of all 26 Swiss cantons, thus its area of responsibility is not limited to the border only. It is a reactive service, whose activities are mostly limited to the information collection, update, analysis and dissemination. However, given the coordinative role of the CCPD for 'hot pursuit', the CCPD employs mixed patrol teams, operating on both sides of the border. For instance, in 2009 the CCPD-Geneva organised over 300 border patrols. It can also organise trans-border escort (the same team escorts the goods/passengers through two countries).

The staff of the CCPD-Geneva includes officers from French Customs, Swiss Customs and Border Guards, French Police and Swiss Cantonal Police, French Gendarmerie and Swiss Federal Police. There are more police officers than customs officers working at CCPD. The Swiss and French sides provide funding for the CCPD on an equal basis. Thus, an important feature of the CCPD is that both sides are represented by Coordinators. Because of such 'double-headed' structure, the decisions have to be taken on the consensual basis. However, it should be noted that the Coordinators are mostly involved in administrative matters, such as budget, resource allocation, joint use of equipment, and so on, and do not influence the operational side of business.

The CCPD operates 24/7 all year round thus enabling the participating agencies to process information in real time. In 2009, the CCPD-Geneva treated 18,151 enquiries and executed 198 readmissions. Out of all enquiries, 32% are related to judiciary police, 32% to road infrastructure, 23% to public order and only 2% to customs issues (information provided by CCPD-Geneva). In terms of readmission, it is noteworthy to mention that the number of asylum procedures dropped after Schengen was implemented because of the Dublin II Regulation that entered into force in Switzerland on 12 December 2008.

In terms of information exchange, the procedure is that one side asks another for information within a defined time frame. In particular cases, the information exchange should go through the capitals (for example, on money laundering) and cannot be processed directly at CCPDs. It is important to note that French Customs does not have direct access to the database of Swiss Customs and vice versa. The information is rendered upon demand in a special format.

5. Conclusions

Coordinated border management, if properly implemented, can provide substantial benefits to both border agencies and the private sector. By streamlining and harmonising procedures, border agencies can substantially optimise the use of their resources and manage the border effectively and efficiently, despite increasing flows of goods and people. This paper has detailed the institutional arrangements with an emphasis on the new organisational solutions, and some operational arrangements, in particular OSBP and CCPD. While emphasising the necessity to cooperate, the paper does not endorse a particular solution as every solution needs to be tailored to the specific needs of the country. Having discussed the theoretical underpinnings of the CBM concept and given some practical examples of its implementation, the paper leaves open for further research the discussion on other means, such as single window, common risk management and targeting centres, and other successful examples of CBM implementation.

Appendix 1

Coordinated Border Management: related Revised Kyoto Convention standards and SAFE Framework of Standards specifications

Revised Kyoto Convention (1999)

Standard	Legal Text
Standard 3.3.	Where Customs offices are located at a common border crossing, the Customs administrations concerned shall correlate the business hours and the competence of those offices.
Transitional Standard 3.4.	At common border crossings, the Customs administrations concerned shall, whenever possible, operate joint controls.
Transitional Standard 3.5.	Where the Customs intend to establish a new Customs office or to convert an existing one at a common border crossing, they shall, wherever possible, co-operate with the neighbouring Customs to establish a juxtaposed Customs office to facilitate joint controls.
Transitional Standard 3.35	If the goods must be inspected by other competent authorities and the Customs also schedules an examination, the Customs shall ensure that the inspections are co-ordinated and, if possible, carried out at the same time.
Standard 6.3.	In the application of Customs control, the Customs shall use risk management.
Standard 6.7.	The Customs shall seek to co-operate with other Customs administrations and seek to conclude mutual administrative assistance agreements to enhance Customs control.
Standard 7.3.	The introduction of information technology shall be carried out in consultation with all relevant parties directly affected, to the greatest extent possible.
Standard 7.4.	New or revised national legislation shall provide for: electronic commerce methods as an alternative to paper-based documentary requirements; electronic as well as paper-based authentication methods; the right of the Customs to retain information for their own use and, as appropriate, to exchange such information with other Customs administrations and all other legally approved parties by means of electronic commerce techniques.

SAFE Framework of Standards (2005)

	Specification	Content
Pillar 1, Standard 1, Integrated Supply Chain Management	1.1. Scope	The implementation of the integrated Customs control procedures requires appropriate legal authority that will allow Customs administrations to request the advance electronic submission to Customs of data from the exporter (see 1.3.1) and by the carrier (see 1.3.2) for security risk-assessment purposes. In addition, the integrated Customs control procedures involve cross-border co-operation between Customs administrations on risk assessment and Customs controls, to enhance the overall security and the release process, that require a legal basis. Both of these requirements are supported by WCO-developed instruments: Guidelines for the Development of National Laws for the Collection and Transmission of Customs Information; the Model Bilateral Agreement; and the International Convention on Mutual Administrative Assistance in Customs Matters (Johannesburg Convention). As part of this co-operation, Customs administrations should agree on mutual recognition of control/inspection results and authorised economic operator programs.
	1.3.8. Single Window	Governments should develop co-operative arrangements between Customs and other Government agencies involved in international trade in order to facilitate the seamless transfer of international trade data (Single Window concept) and to exchange risk intelligence at both national and international levels.
	1.3.9. Integrated Border Management	Similarly, governments should develop co-operative arrangements among their government agencies that are involved in international trade. Governments should also work with the border agencies of neighbouring foreign governments in order to maximise the harmonisation of border control functions. The implementation of such co-operative arrangements could address border issues such as national and international cooperation and co-ordination and the adoption of international standards. Integrated border management should lead to the facilitation of trade through a secure supply chain.

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Endnotes

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2 More on the WCO approach to risk management can be found in WCO 2011, *WCO Customs risk management compendium*, vol. 1, Brussels.

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5 See New Zealand Government 2008, *Border Sector Strategy 2008-2013, A Framework for Collaboration for Border Sector Agencies*.

6 For the pros and cons of one-stop border posts (OSBP) and other joint arrangements, see Zarnowiecki 2011, pp. 37-78.

7 For more information on the functioning of Offenburg CCPD and other forms of intra-service cooperation in Europe, see Council of Europe 2003.

8 For an analysis of functioning of the Customs and Policy Cooperation Centre (CCPD) in the European Union (EU) and on its borders, see Center for the Study of Democracy 2011 pp. 231-9.

9 This CCPD was opened in 2010.

Mariya Polner

Mariya Polner is a Research Analyst at the WCO Research and Strategies Unit, where she has worked since 2009. Her main areas of interest include anti-corruption and governance, coordinated border management, trade facilitation and security. Prior to taking this position, she worked at the European Commission and the European Union Border Assistance Mission to Moldova and the Ukraine (EUBAM). She holds two Masters degrees: in International Relations (Central European University in Budapest) and in EU Politics and Administration (College of Europe in Bruges). She is fluent in English, French, Russian, and Ukrainian, and speaks some Spanish and Turkish.

Developing the case for trade facilitation in practice

Andrew Grainger

Abstract

While the rationale for trade facilitation, at least to the practitioner, is self-evident, building the case for trade facilitation is seldom straightforward. Policymakers often rely on the persuasive recommendations of international organisations and are likely to include reference to macroeconomic models. Though helpful, these lack operational detail. Many practical questions about trade facilitation solutions, context, scope and priorities, as well as the onus on implementation and funding remain open. This paper explores the challenges of developing a robust case for trade facilitation in practice, in particular the aspects relating to trade compliance cost. In doing so, the paper builds on the current understanding of trade facilitation and its literature, balanced against substantial practitioner experience in developed and developing countries. The paper concludes with a proposal for developing a trade compliance cost model.

A fast growing area of policy

Over the last few decades countries across the world have pursued strategies of progressively reducing customs tariffs, encouraging foreign investment and taking advantage of the opportunities found within greater regional and international integration. However, this process has been undermined by many disruptive and costly administrative practices that have directly impacted on the efficiency of modern international transport and logistics operations (Grainger & McLinden forthcoming). Trade facilitation seeks to reduce those costs.

The rationale for making improvements to the operation of the international trade system is self-evident. Even countries with a more protectionist stance on trade are likely to recognise that the reform in administrative practices and related infrastructure can help free economic resources which, in turn, can be put to more productive use.

Policy momentum towards trade facilitation, as described in the following paragraphs, includes the desire to modernise cross-border operations, enhance national competitiveness, accommodate trade facilitation related obligations negotiated at the World Trade Organization (WTO), and tighten security. For many developing countries and donors, trade facilitation is also a central component within 'aid-for-trade' and trade capacity building programs.

Modernising cross-border operations. Rapidly growing volumes in trade and subsequent movements of goods across the border represent a considerable operational challenge for government agencies (for example, the customs, quarantine, and immigration services or vehicle inspectors). With only finite resources at their disposal, government agencies need to develop smart enforcement strategies that ensure that regulatory objectives can still be safeguarded without disrupting trade. Trade facilitation ideas, such as risk management and the preferential treatment of trusted operators with a good compliance history, can significantly free resources. These can then be redeployed to target the clandestine cross-border

activities. Likewise, the use of modern technology – in particular for the processing of declarations as well as the sharing and communication of trade-related information – can bring about radical benefits.

National competitiveness. Compliance activity has direct and indirect cost implications for business. Direct costs include those associated with preparing and submitting trade and customs declarations to the relevant authorities. They also include those costs associated with presentation of the actual goods, vehicles and crew. Indirect costs relate to those costs subsequent to the direct costs, such as failure to meet customer expectations (for example, where goods are delayed) or missed business opportunities (for example, because operators in other countries do not face the same burden). Fearful of global competition, projects motivated by trade facilitation are often seen as vehicles for improving a country's respective competitive standing. The example set by countries like Singapore, which operates a so called 'single window'[1] system (TradeNET) that provides a radically streamlined electronic infrastructure for information sharing between the public and private sector, can be particularly compelling.

World Trade Organization (WTO). Perhaps unsurprisingly, with falling customs tariffs, the WTO is increasingly looking at the non-tariff area, including trade facilitation (Grainger 2011). While the reduction of non-tariff barriers has always been an objective (GATT 1947), discussions about trade facilitation started formally as part of the so-called 'Singapore Agenda'. While three of the original Singapore issues have been dropped (competition policy, investment, and transparency in government procurement), trade facilitation remains strong. Formal negotiations commenced in November 2004 initially focusing on the Freedom of Transit (GATT Articles V), Fees and Formalities (GATT Article VIII), and the Publication and Administration of Trade Regulations (GATT Article X). While negotiations have not yet been concluded, they are likely to hold WTO Member States accountable to adopting a wide catalogue of trade facilitation measures and recommendations (Grainger 2011; WTO 2011). It is noteworthy that many countries and regions may also seek to negotiate trade facilitation measures outside the WTO, for example, within the context of regional or bilateral trade agreements.

Supply chain security. In the last decade, especially since 9/11, border agencies have faced increasing political pressure to tighten security within trade operations. The fear, within some policy circles, is that modern supply chains are particularly vulnerable and open systems that can be misused by terrorists and criminals (Flynn 2002). Many of the emerging control regimes, such as the World Customs Organization's (WCO) SAFE Framework of Standards (WCO 2007), recognise that the collaboration with business stakeholders is an essential requirement for more robust border control. However, businesses need to be suitably enticed and trade facilitation measures, where they help deliver a net reduction in trade compliance costs, can provide those incentives. Similarly, trade facilitation measures associated with the modernisation of the cross-border environment are also able to help tighten security by freeing resources that can be redeployed on security issues.

Aid-for-trade and trade capacity building. Trade facilitation has also become a central facet within the global 'aid-for-trade' initiative, where trade is viewed as a catalyst for economic growth and development (Grainger & McLinden forthcoming). Here, the implementation of trade facilitation measures seeks to ensure that developing countries are able to effectively participate in the global economy. While detailed figures on such donor initiatives are difficult to compile, narrowly defined trade facilitation programs have enjoyed an increase in donor funding from USD100 million dollars in 2001 to USD393 million dollars in 2006 (WTO/OECD 2010). Closely related trade infrastructure and modernisation programs, with significant trade facilitation components, are likely to be in the order of billions of dollars (OECD 2006).

But, what is trade facilitation?

A good question – and one which can easily be an initial stumbling block when developing the case for trade facilitation! While a range of technical definitions has been drafted by various international

organisations (see OECD 2001), it is fair to assert that trade facilitation tends to look at '... how procedures and controls governing the movement of goods across national borders can be improved to reduce associated cost burdens and maximise efficiency while safeguarding legitimate regulatory objectives' (Grainger 2011). In this context, the topic of trade facilitation has four interdependent themes: (1) the simplification and harmonisation of applicable rules and procedures; (2) the modernisation of trade systems, and the sharing and lodging of information between business and government stakeholders in particular; (3) the administration and management of trade and customs procedures; and (4) the institutional mechanisms to safeguard effective implementation of trade facilitation principles and the ongoing commitment to reform (see Figure 1 with relevant examples).

As the examples in Figure 1 show, the topic of trade facilitation can lend itself to a wide range of projects and initiatives. They may be relatively simple and cheap, such as ensuring that the office hours of staff within the border agencies coincide with those of commercial operators, or more costly and complex, such as redesigning the machinery of government to reduce duplicate activities and enable the use of modern electronic systems such as a 'single window' approach (UN/CEFACT 2004). The approach to trade facilitation can also vary. Trade facilitation may be driven "top-down" or "bottom-up" (Grainger 2011). While the former draws heavily on the desire to implement international trade facilitation recommendations and instruments, such as those promoted by UN/CEFACT or the WCO amongst others (Figure 2), the latter is born out of the desire to remedy experienced operational frustrations (Figure 3).

The various stakeholders within the international trade and cross-border environment, depending on their specific interests, may have different views about how trade facilitation measures should look in practice. Stakeholders within the private sector include:

- traders, such as buyers, sellers, their agents and distributors
- transport operators, such as shipping lines, airlines, railway companies, logistics and trucking companies
- providers of trade services, such as banking, finance and insurance
- operators of transport infrastructure, such as port terminals, airports, stevedores and handling agents, warehouses and electronic information systems
- specialist service providers, such as freight forwarders, shipping agents and logistics service providers (Grainger forthcoming 2012).

Public sector organisations, depending on the specific arrangements in any given country can be equally diverse, typically including Customs; the quarantine inspection services; immigration; the National Statistics Office; and the Ministry for Transport, amongst others. Their mandates are likely to be specific to:

- revenue collection (for example, customs duties)
- safety and security (for example, anti-smuggling, the handling of dangerous goods, or the safety of transport vessels)
- environment and health concerns (for example, quarantine controls)
- consumer protection (for example, labelling, product testing); and
- trade policy (for example, administration of tariff quotas) (Grainger 2011).

Apart from views about the form and shape of trade facilitation measures, each group of stakeholders is also likely to have different views on reform priorities. Some stakeholders are likely to be hostile. One person's saving can be another person's redundancy! As a rule of thumb, policymakers may wish to be guided by considering what measures are able to maximise public welfare – effectively reducing regulatory compliance costs across the breadth of international logistics operations, yielding net savings for the shippers and receivers of goods – whilst safeguarding regulatory objectives.

Figure 1: The four interdependent topics that define trade facilitation

1.	**The simplification and harmonization of applicable rules and procedures**
	i. Harmonization of Procedures For example: the adoption of international conventions and instruments; and the harmonization of controls applied by the various different government agencies
	ii. Avoidance of Duplication For example: regional or bilateral agreements to recognize export controls in lieu of import control; shared inspection facilities, for instance for customs officers, veterinarians, plant health inspectors and health inspectors; and the formal recognition of private sector controls (e.g. in the area of security or quality) in lieu of officially checks.
	iii. Accommodate business practices For example: to accept commercial documents (such as the invoice) in lieu of official documents; and to allow goods to be cleared inland, away from the bottlenecks at ports and border-posts.
2.	**The modernization of trade compliance systems**
	i. Solutions For example: use of electronic information systems, the Single Window concepts, electronic customs systems, port community systems, websites, and information portals
	ii. Standardization For example: electronic standards for the exchange of information between computers; paper document standards; barcode standards; document referencing conventions; and standards for the description of locations
	iii. Sharing of experiences For example: training and awareness building; development of toolkits and implementation guides; collaborative and open source systems developments
3.	**Administration and Standards**
	i. Service standards For example: public service level commitments; publish and make available applicable rules and procedures; produce plain language guides; develop online websites; keep the customs tariff up-to-date; provide for efficient appeal mechanisms
	ii. Management principles For example: enforcement of controls in proportion to the risk against which they seek to protect; selective (risk based) controls that reward compliant behavior (e.g. preferential treatment at the border)
4.	**Intuitional mechanisms and tools**
	For example: establishing a national trade facilitation body; produce and publish whitepapers setting out reform ambitions and inviting stakeholder comments

Source: Adapted from Grainger 2010; to be published in Grainger & McLinden forthcoming

Figure 2: International trade facilitation recommendations and instruments

International Trade Facilitation Recommendations and Instruments
World Trade Organisation (WTO)
Trade Facilitation Specific Articles: **GATT Article V** (freedom of transit), **GATT Article VIII** (fees and formalities) and **GATT Article X** (publication and administration of trade regulations) Customs Valuation: **GATT Article VII** (technical interpretation covered by the WCO) **WTO Agreement on Rules of Origin** (technical interpretation of 'non-preferential rules of origin' covered by the WCO)
World Customs Organisation (WCO)
Kyoto Convention for Harmonising Customs Procedures; WCO Harmonised Commodity Code Descriptions and Coding System (**HS System**); Framework of Standards to Secure and Facilitate Global Trade (**SAFE**);
United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT)
Rec. N°1: United Nations Layout Key for Trade Documents; **Rec. N°. 2**: Locations of Codes in Trade Documents; **Rec. N°. 3**: Code for the Representation of Names of Countries; **Rec. N°. 4**: National Trade Facilitation Bodies; **Rec. N°. 5**: Abbreviations of INCOTERMS; **Rec. N°. 6**: Aligned Invoice Layout Key for International Trade; **Rec. N°. 7**: Numerical Representation of Dates, Time and Periods of Time; **Rec. N°. 8**: Unique Identification Code Methodology – UNIC; **Rec. N°. 9**: Alphabetic Code for the Representation of Currencies; **Rec. N°. 10**: Codes for the identification of Ships; **Rec. N°. 11**: Documentary Aspects of the Transport of Dangerous Goods; **Rec. N°. 12**: Measures to Facilitate Maritime Transport Documents Procedures; **Rec. N°. 13**: Facilitation of Identified Legal Problems in Import Clearance Procedures; **Rec. N°. 14**: Authentication of Trade Documents by Means Other than Signature; **Rec. N°. 15**: Simpler Shipping Marks; **Rec. N°. 16**: LOCODE - Code for Trade and Transport Locations; **Rec. N°. 17**: PAYTERMS - Abbreviations for Terms of Payment; **Rec. N°. 18**: Facilitation Measures Related to International Trade Procedures; **Rec. N°. 19**: Code for Modes of Transport; **Rec. N°. 20**: Codes for Units of Measure Used in International Trade; **Rec. N°. 21**: Codes for Passengers, Types of Cargo, Packages and Packaging Materials; **Rec. N°. 22**: Layout Key for Standard Consignment Instructions; **Rec. N°. 23**: Freight Cost Code – FCC; **Rec. N°. 24**: Trade and Transport Status Codes; **Rec. N°. 25**: Use of the UN Electronic Data Interchange for Administration, Commerce and Transport Standard (UN/EDIFACT); **Rec. N°. 26**: The Commercial Use of Interchange Agreements for Electronic Data Interchange**; Rec. N°. 27**: Preshipment Inspection; **Rec. N°. 28**: Codes for Types of Means of Transport; **Rec. N°. 31**: Electronic Commerce Agreement; **Rec. N°. 32**: E-Commerce Self-Regulatory Instruments (Codes of Conduct); **Rec. N°. 33**: Single Window Recommendation
United Nations Conference on Trade and Development (UNCTAD) ASYCUDA: an open source off-the-shelf computerised customs management system used in more than 70 countries (http://www.asycuda.org)
ICAO and IATA (Air)
IATA **e-freight initiative**; ICAO Convention on International Civil Aviation (**Annex 9**: Trade Facilitation); "**know shipper/known consignor**" concept
International Maritime Organisation (IMO)
Convention on Facilitation of International Maritime Traffic (**FAL**); Safety of Life at Sea Convention (**SOLAS**); International Ship and Port Facility Security Code (**ISPS-Code**)
Other International Organisations
UNECE: Working Party 7 looking after **agriculture quality standards**; UNECE and IRU: **TIR** (Road Transit) Convention; **ISO**: countless product and quality standards; ICC: **Incoterms** (standardised trading terms used in international trade); ICC: Uniform Customs and Practices for Letters of Credit (**UCP**); ICS: **Standard [shipping] Manifest** Report and Recommendation; ICS: Standard **Format of Bills of Lading**

Source: Adapted from UN/CEFACT and UNCTAD 2002; published in Grainger 2011

Figure 3: Examples of operational frustrations suffered by businesses

1. Excessive paperwork and authorization requirements
2. Long queues at the government offices responsible for stamping paperwork
3. Different ministries demand declarations that are similar or overlapping in content
4. Checks at the border are unnecessarily long
5. Border crossing may only be operational between 9:00 and 17:00 – or even worse, have different operating hours to their counterparts across the border
6. Border staff may decide to 'close shop' during lunch break, causing backlogs and further delay
7. Customs officers may be unnecessarily heavy handed in order to encourage payment for 'special' treatment
8. Government executives may display a lack of commercial awareness, failing to appreciate how their actions impact on the economy at large
9. Operators may not be aware of the governing rules and procedures and have no place where they can go to obtain such information; often compliance requirements are established by costly trial and error
10. Key publications such as the customs tariff are not publically available
11. Frontline staff may have not been briefed about new procedures, subsequently implementation may vary significantly throughout the country
12. Capacity at official labs to check health risk may be severely limited, leading to backlogs and very long delays (sometimes in excess of one or two months)
13. Government veterinary authorities may be deemed not suitably capable by their counterparts in key export markets, effectively rendering exports to these countries illegal
14. Paper documents go missing, especially when travelling with the goods (for example in the driver's cab)
15. Rejected declarations because reference numbers in supporting documents contain errors (e.g. the number "8" can easily be confused with the letter "B")
16. Correction mechanisms to amend declarations or erroneous information may not exist – or are very cumbersome unless facilitation monies have been paid.
17. Appeal mechanisms to challenge decisions made by executive officers are nonexistent or very time consuming
18. Delay because declarations are processed manually rather than electronically
19. Procedures to enable inland clearance are unavailable
20. The operational practices of one government agency contradict those of another

Source: Grainger & McLinden forthcoming

Research contributions so far

Unfortunately, current trade facilitation research is somewhat limited. So far, it has largely been the domain of economists, whose work has focused on quantifying benefits within a more macroeconomic context. Noteworthy findings include the work of Peter Walkenhorst and Tadashi Yasui at the OECD, who in their model estimate that each one per cent trade transaction cost reduction translates into a worldwide economic benefit worth USD40billion (OECD, 2003). A similarly persuasive case for trade facilitation is made by Wilson, Mann and Otsuki (2003), a team of economists at the World Bank. They calculate, using a gravity model that is based on four proxy variables, that if Asia-Pacific Economic Cooperation (APEC) members who perform below average were able to improve their performance to half the APEC average, intra-APEC trade could increase by a staggering USD254 billion and raise average gross domestic product (GDP) for the APEC region by 4.3 per cent. Later, using a similar methodology, they broadened the focus from APEC to a representative mix of 75 countries and calculated that the total gain in trade flow in manufacturing was worth USD377 billion (Wilson, Mann & Otsuki 2004).

In contrast, more operationally grounded research remains relatively undeveloped. While anecdotal evidence is extensive (see Figure 3), there is little published work to draw on that provides details on the specifics of experienced trade compliance costs. These might be direct and can be associated with the activities involved in collecting, producing, transmitting and processing required information and documents as well as presenting cargo to the relevant authorities, including testing where necessary. Further indirect costs may arise in the context of delay at the border; uncertainty in the environment; and most of all, the loss of business and opportunities.

In the absence of detailed operational cost studies, it can be difficult for policymakers to quantify the impediments to trade and justify expenditure on implementing suitable trade facilitation solutions. Admittedly, this challenge has been recognised within some international organisations and they have, helpfully, developed generic evaluation tools. Noteworthy tools include the United Nations Economic and Social Commission for Asia and the Pacific's (UNESCAP) 'Trade Facilitation Framework: A Guiding Tool' (UNESCAP 2004); the GATT Articles V, VIII and X self-assessment guide produced by David Widdowson with the support of the World Bank (WTO 2007); and the latest version of the trade and transport facilitation assessment toolkit published by the World Bank (2010). The WCO's time release methodology (though Customs-centric) can have similar utility for developing the case for trade facilitation type solutions. Unfortunately, findings made through use of these tools are seldom placed into the public domain. Notable exceptions are the Diagnostic Trade Integration Studies (DTIS) accessible via the World Bank website[2] and the Integrated Framework facility.[3]

However, at the risk of over-generalisations, these assessment tools – though extremely helpful in describing the current trade environment and providing excellent context about possible trade facilitation options – can be lacking in operational detail. This is a failing that those who are tasked with implementing suitable trade facilitation measures often have to address on their own.

Problem statement

While the case for trade facilitation – that is, to reduce cost burdens associated with trade and customs procedures without compromising regulatory control objectives – is self-compelling, policymakers motivated by seeking to improve their country's trade and customs procedures are likely to ask:

- How can the experienced operational frustrations be effectively remedied?
- What specific trade facilitation measures should be implemented and why?
- What is their order of priority?
- Can resulting benefits bring down overall logistics and transport costs (that is, will they benefit the economy at large)?
- What are the implementation costs and benefits?
- Who is able and willing to pay?
- Who will be responsible for implementation?
- Who will win, and who is likely to lose?
- What are the implementation obstacles (project risks)?
- What strategies or pressures can be exercised to help overcome implementation obstacles?
- How should progress in trade facilitation be measured?
- What does success look like?

Practical approaches to making the case for trade facilitation

At present, policymakers rely very heavily on the initial findings of the tools and diagnosis studies outlined above. Implementation of their recommendations is often contracted out to specialist consultants. The

approach to trade facilitation is very much 'project-based', that is, it is seen as something that can be delivered, if suitable investments in specific types of technology, advice and training are made.

Alternatively (and sometimes complementarily), countries may seek to develop dedicated institutional mechanisms to ensure that experienced operational problems within the trade environment are suitably captured and escalated, together with recommendations about their solutions, to the relevant policy levels for their action. National trade facilitation bodies (see UN/CEFACT 2001), designed to help translate experienced operational problems (such as those listed in Figure 3) into mainstream policy and productive solutions, can be of real help (Grainger 2010). They may also be able to rally suitable political support to help overcome any implementation obstacles (see Grainger 2008). However, the work of such trade facilitation 'champions' may not always be sufficient. Hardnosed accountants, tasked with ensuring that tax money (or donor money) is spent wisely, are very likely to demand robust cost-benefit type figures.[4]

Measuring trade compliance costs

The proposal of measuring trade compliance is anything but straightforward. International trade operations typically entail a range of interacting commercial companies. While no two commercial arrangements are likely to be the same, a typical operation will include a transport journey to the port (or airport). This may be by road, train or inland waterway, or any combination of the three. The consignment will then have to be handed over to the port's stevedore. Prior to this, the consignment is likely to have been stored at a third party warehouse or handled by a consolidator (especially if the consignment is less than a container load) and a packaging company. At the port, cargo is loaded onto the ship or aircraft before onward transportation – likely via a major hub port where cargo is transhipped from one vessel to another – before arriving at the port of destination. There, cargo will be received by the port's stevedoring company before being handed over to whoever holds the authority to collect. In the case of a letter-of-credit, this step may involve a trip to the bank in order to secure relevant import documents. Once collected and delivered, the receiver of the goods may also have to arrange for the disposal of packaging material and for empty containers to be returned to the shipping line or the container leasing company.

Hand-in-hand with physical operations are the regulatory compliance operations (the paperwork). Depending of the type of goods, the vehicle within which they are moved, the route the vehicle takes and the people that operate the vehicles, exposure to trade and customs procedures can be extensive. For example, Figure 4 describes some of those procedures that may apply to exports from a landlocked country. The equally complex Figure 5 describes all applicable trade procedures in the country of export (the top part of the fishbone diagram) and country of import (the bottom part of the fishbone diagram) for products of animal origin (such as beef and poultry) between Mercosur and the European Union.

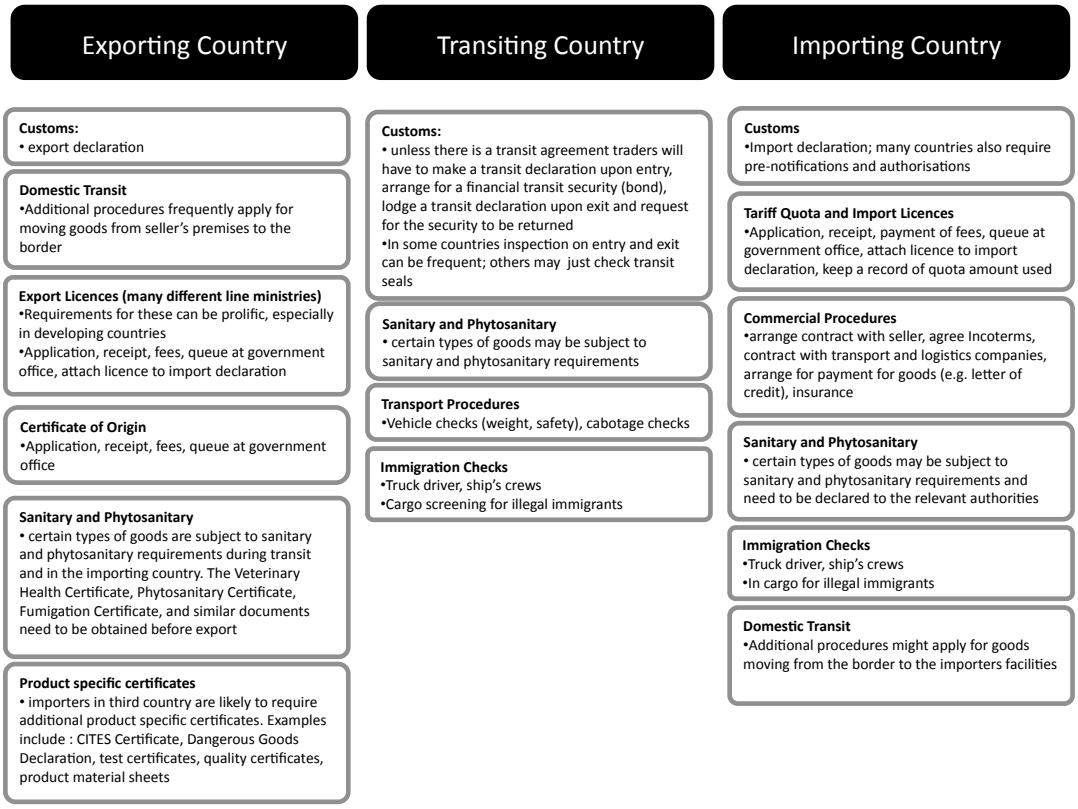
It is noteworthy that responsibility for arranging physical operations and regulatory compliance for any of the above rarely lies with one party alone. In most cases, responsibilities will be split at some stage within the operation, depending on the Incoterms agreed (ICC 2010), and subcontracted to relevant specialists. For any one individual to have full visibility of all physical and compliance operations is unusual. Any invoiced fees for regulatory services, such as a customs declaration submitted by an agent on behalf of the importer, are likely to be based on what customers are willing to pay rather than the actual compliance burden.

Even where some understanding of compliance costs is present, the fact that most trade and customs procedures have multiple steps can represent real methodological challenges. For example, many trade declarations – such as to Customs or the veterinary services – are preceded by so-called pre-notifications or advance notifications. In most countries, authorities also require declarants to be registered, sometimes mandating specialist training and the possession of professional licences (for example, as a licensed

Customs Broker). Many countries will also require declarants to procure dedicated IT systems and software. Effectively, this means that in addition to transactional costs, there are also large overhead costs (that is, fixed costs which are independent from the volume of declarations to the relevant authorities) which are difficult to apportion. Faced with such accounting challenges, many companies are unlikely to be aware of the true compliance costs.

Indirect costs, such as loss of competitiveness and missed business opportunities, are probably even more difficult to ascertain and will also vary from one company to the next. The desire by specific interest groups to influence policy by inflating or deflating reported costs may further represent a research methodological challenge.

Figure 4: Illustrative example: trade and customs procedures for exports from a landlocked country

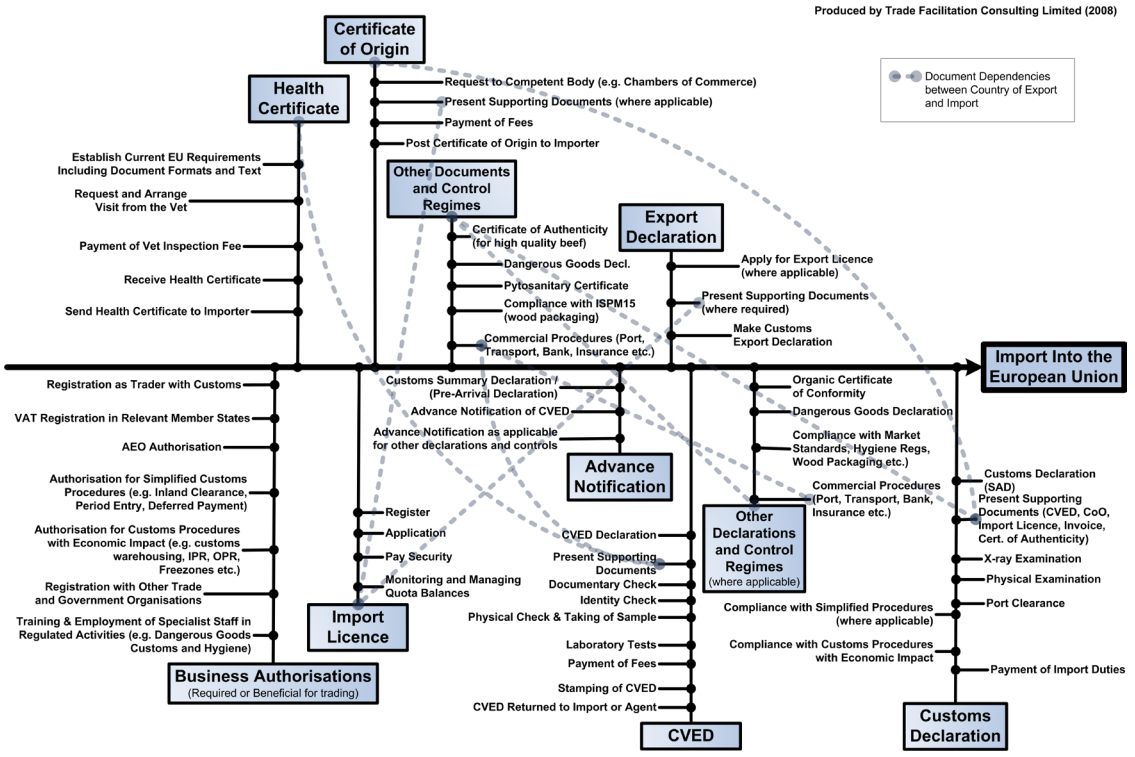


Source: Grainger forthcoming 2012

Proposal

Faced with the complexity of international trade operations and the unwieldiness of governing trade and customs procedures, the formal assessment of compliance costs presents a tough challenge. In their absence, policymakers have to rely on more qualitative approaches. Visibility studies, such as those sketched in Figures 4 and 5, can be helpful. Similar qualitative approaches, such as work with focus groups and national trade facilitation bodies can go a long way to ensuring that trade facilitation takes a fruitful path. For some enlightened policymakers, their recommendations are likely to be sufficiently compelling to initiate action. However, demand for quantifiable cost-benefit data, and failure to oblige, can in many instances be a real implementation obstacle (Grainger 2008).

Figure 5: Trade procedures for products of animal origin between Mercosur and the European Union



Source: Grainger 2009

Considering the multitude of options for arranging international transport and the uniqueness of each and every company involved, it will be difficult to compare like with like and establish representative figures that are of use to policymakers. One solution, however, could be the development of a representative trade compliance cost model. Such a model would acknowledge the diversity within the trade population, but aim to be suitably representative for the collection of relevant trade and customs compliance figures (or where detailed figures are not easily obtained, to ask for indicative cost perceptions that can then be reviewed and verified/rejected by suitably experienced focus groups).

Such a model could be developed on the back of initial visibility studies that map compliance requirements – such as in Figure 5 –and then seek to attach relevant fixed and variable cost figures as identified in corresponding field work, including company visits, visits to government agencies, observations, interviews with relevant partners up and down the supply chain, and the review of relevant rules and regulations. It is likely that such research also needs to include activity-based costing methodologies. Since operations are likely to vary considerably from one company to the next, it will be essential to ensure that the developed model is suitably comprehensive and not limited to the boundaries of any one organisation. Focus groups or national trade facilitation bodies may be relied upon to help validate findings.

It would be ambitious to develop such a reference model without any pilot studies, for example, by focusing on specific industry sectors first (food, automotive, aerospace, arts and crafts, etc.). Once suitable pilot studies have been tested, the project could be expanded in scope, aiming for a non-sector specific national model – possibly even a regional or international reference model. This, in turn, could

be used to help establish suitable trade compliance benchmarks – with direct utility for industry as well as for policymakers – such as in the context of funding trade facilitation initiatives or within the context of bilateral, regional and multilateral trade agreements. Certainly this author is keen to help develop such a research agenda, and welcomes the ideas and thoughts of potential collaborators.

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Endnotes

1 UN/CEFACT 2004.

2 http://go.worldbank.org/ULW8UUZUT0

3 www.integratedframework.org/

4 Likewise, researchers with an interest in the respective performance of operators and government agencies, or quality of the overall trade environment, may wish to draw on quantifiable data, too.

Andrew Grainger

Dr Andrew Grainger is an experienced trade facilitation practitioner and academic. He is currently based at Nottingham University Business School and is regularly consulted by governments, companies and international organisations. In previous roles, Andrew worked as Deputy Director at SITPRO, the former UK trade facilitation agency, and Secretary for EUROPRO, the umbrella body for European trade facilitation organisations. His PhD thesis on Supply Chain Management and Trade Facilitation was awarded the Palgrave Macmillan Prize in Maritime Economics and Logistics 2005-2008 for best PhD thesis.

Extended logistical factors for success in international trade

Franz Vallée and Michael Dircksen

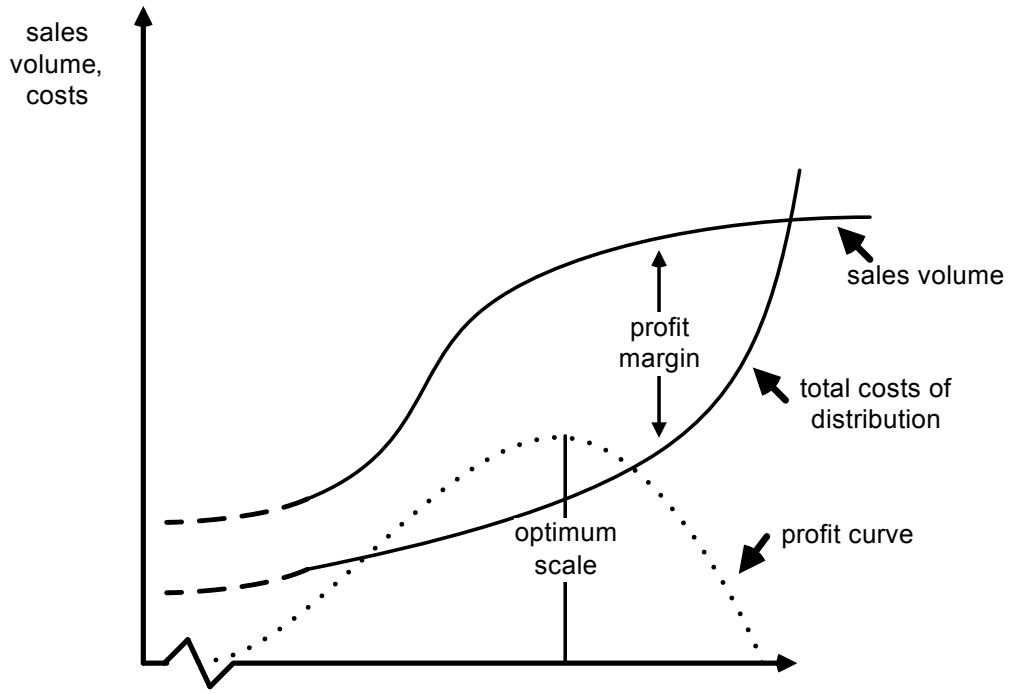
Abstract

Current empirical studies on countries' logistics performance do not fully reflect the main logistical principles of flow, system and total-costs theory. The authors provide a model which fills this gap. The approach is essentially based on the standard Supply Chain Operations Reference model (SCOR) viewed from the perspective of an integrated supply chain. This new, holistic model makes it possible to evaluate the process-related steps of administrative tasks and all modes of transportation and warehousing in terms of time and costs. The model starts with the estimated customer order and takes account of country-specific conditions, such as infrastructure and the legal framework. This process-based approach allows the flows of material and information to be analysed and planned in order to optimise all elements having regard to a company's specific strategy. Accordingly, the model defines various evaluation and calculation methods, thereby revealing a number of interdependencies. It also allows the calculation to be based on data sources from international organisations or the historical operational data of companies (if available). The model also allows countries to be evaluated in terms of their business processes.

1. Introduction

Success in national and international competition depends on the competitive advantages that companies enjoy when pursuing their business activities (Zentes, Swoboda & Morschett 2004, p. 217). Only a systematic study of all company activities and their interdependencies can reveal the reasons for these competitive advantages and their potential. One of the most important activities in the value chain is distribution logistics, which is closely related to customers and therefore able to directly generate competitive advantages (Porter 2010, pp. 70-85). In general, distribution logistics is expected to 'provide the right goods at the right time and place, in the right amount and quality, and at the right price', thereby ensuring the availability of goods and information (Jünemann & Daum 1989, p. 18; Wenzel 2011, pp. 442-3). As part of the overall entrepreneurial goal, distribution logistics also gives top priority to the maximisation of profit and can be defined by the triple aims of cost, time and quality. The company can boost its profits by planning activities in a way that improves the cost-benefit ratio for the customer (Ihde 2001, p. 297). In most cases, however, the planning of the logistical structure is based on the assumption that the customer is not particularly interested in it provided that logistics performance is guaranteed. This means that the company's profit-making activity remains unaffected. It follows that there is only one way to optimise profits, namely by minimising costs (Wöhe & Döring 2005, pp. 564-5).

Figure 1: Cost-profit relation depending on degree of services



Source: Wenzel 2011, p. 445, with modifications

Although writers examine international trade and production in great detail, they pay less attention to the underlying logistical aspects (Schary & Skjøtt-Larsen 2001, p. 378). Admittedly, when it comes to international logistics, there is no difference between companies' basic problems and goals. Nevertheless, certain framework conditions lead to greater complexity and higher risks in relation to country-specific logistical processes. (Arnold 1989, p. 1340; Flaherty 1996, p. 281; Stock & Lambert 2001, p. 376; Schieck 2008, p. 70; Pfohl 2010, p. 337). Generally-speaking, companies cannot influence many of the underlying conditions and therefore have to respond appropriately (Kummer, Schramm & Sudy 2010, p. 84). International distribution logistics is characterised by a high degree of complexity since companies usually accept national boundaries and organise their planning on a county-specific basis (Mayer, Thiry & Cay-Bernhard 2009, p. 33; Bretzke 2010, p. 164). In the following, we provide a procedural model for this planning process and apply it to two countries by way of illustration.

2. Studies, rankings and benchmarking reports as information bases

Data relating to external logistical framework conditions is indispensable for evaluating foreign markets. That said, collecting this information in advance is expensive and companies lack a procedural model to systematically evaluate countries using freely accessible secondary data (Holtbrügge & Ehlert 2009, p. 4; Berndt, Fantapié Altobelli & Sander 2010, pp. 63-4; Kutschker & Schmid 2011, pp. 216-26). The country-specific framework conditions for shaping logistical processes are compared by The World Bank's Logistics Performance Index (LPI), Doing Business Report and Enterprise Surveys, and the World Economic Forum's Global Competitive Index (GCI). Their data is usually based on hard and soft factors and is predominantly collected from questionnaire-based surveys.

The LPI compares national and international logistical performance in terms of cost, lead times, administrative effort, resources and quality (Arvis et al. 2010). The Doing Business Report, on the other hand, evaluates the environment of entrepreneurial activities in terms of legal guidelines and other general conditions. The two indicators of the report relevant to logistics show how legal regulations affect the construction of a simple warehouse and import of a 20-foot container (World Bank 2011a). The Enterprise Surveys consider 12 thematic areas but choose to present them as a separate evaluation of 30 indicators rather than as a summarising index (World Bank 2011b). The GCI's calculation is far more complex because of the broad spectrum of macroeconomic factors upon which it is based. Overall, the index lists 11 indicators relevant to logistical planning (Schwab 2010, p. 11).

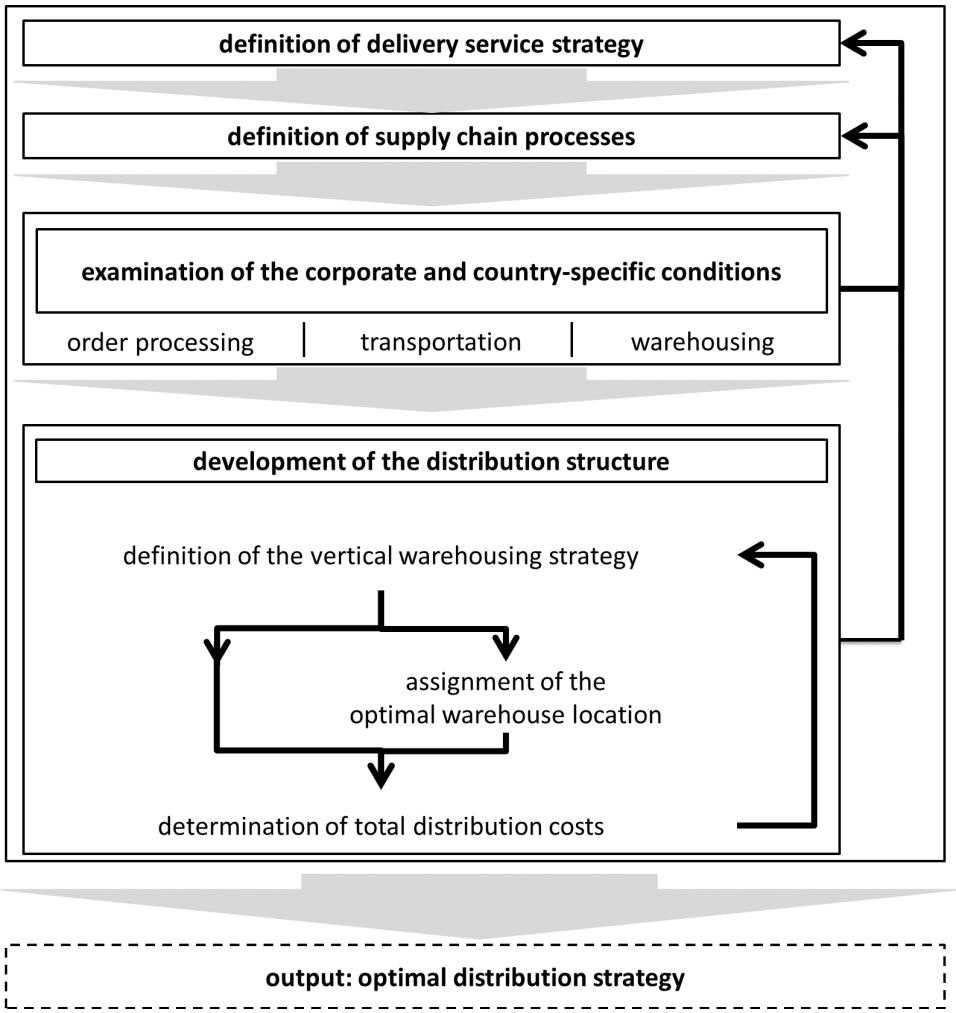
In addition to these general indexes, three more specific ones are used to evaluate countries' transportation networks: the Liner Shipping Connectivity Index (LSCI) deals with international scheduled ocean shipping, the Air Connectivity Index (ACI) with international scheduled flights and the Rural Access Index (RAI) with road infrastructure in rural areas (Hoffmann 2007; World Bank 2007; Arvis & Shepherd 2011).

The key function of the studies briefly presented above is to assess country-specific conditions as well as their competitive status, with assessments being carried out without reference to industries, companies or goods (Matthes 2005, pp. 78-9). Comparing country rankings using logistical criteria paints a more complex picture and suggests that the divergent results of country assessments are explained by the different data sources and calculation procedures used (Berndt, Fantapié Altobelli & Sander 2010, p. 119). The selected criteria and publications aim to assess and compare factors relevant to the country in order to identify the potential for optimisation. However, this selective and isolated approach stands in sharp contrast to efforts in the field of logistics which aim to capture the process-orientated, holistic interplay of activities. Optimisations limited to individual activities may not be ideally effective because of interdependencies and interfaces (Ihde 2001, p. 246). Over and above our criticism of assessment methods, we also have serious doubts about the way data is collected. One often finds that assessments not only use hard, objective data but also soft, subjective data such as opinions and personal estimates. In international logistics research, this 'supremacy of enquiry' has already been noted by Kotzab, who challenges the validity of qualitative logistics research on the basis of its failure to define survey samples as well as the complex problems arising in the collection and explanation of data (Kotzab 2007, p. 81; Bretzke 2010, pp. 64-8). Therefore, one should always sift through and analyse secondary data on the basis of a well-defined research project or application scenario (Holtbrügge & Ehlert 2009, p. 125).

3. Setting up the optimal distribution strategy

Distribution logistics is the link between a company and its customers (Sierke 1997, p. 1272). As a performance indicator, the service level is crucially important in assessing a distribution system. It shows the value or proportion of orders delivered within an agreed or planned timeframe (Wildemann 2010, p. 237). The service level provides a performance indicator for analysing completed transactions as well as a benchmark for developing new distribution systems. For this purpose, planning assumes that delivery times which do not comply with the relevant customer requirements will lead to extra costs in the form of opportunity costs caused by shortages in deliveries. In order to offer and maintain optimal delivery times in light of the usual market-related fluctuations in demand, a distribution system requires either a very high level of flexibility or a certain stock level (Liesegang & Wohlgemuth 1997, p. 963).

Figure 2: Procedural model for creating the optimal distribution strategy



Source: Vallée & Dircksen 2011

The methodology adopted by the authors reflects a linear structure starting with the delivery strategy. The first step is to define the process chain using each company's specific concepts or models of process chains as a basis. The Supply Chain Operations Reference model (SCOR model) is independent of project, product, company or industry and today represents the *de facto* standard for the description and analysis of supply chains. The current version of this normative model includes more than 200 described process elements, 550 defined criteria and 500 leading business practices which are hierarchically organised on four levels. The cross-sector supply chain offers an ideal type of process and consists of the following elements: procurement (Source), manufacturing (Make), delivery (Deliver), return deliveries (Return) and planning (Plan). The second level of the model identifies the following delivery types on the basis of a product's concept and structure:

- Deliver Stocked Product – sD1 (Made-to-stock production): This process is based on projected customer orders or internal orders to re-stock. When receiving an order from an external customer, the product should be available from stock so that it can be delivered immediately.

- Deliver Make-to-Stock Product – sD2 (Contract manufacturing): With this process, the products are either customer or contract-specific. In other words, products are specified by customers or contracts.
- Deliver Engineer-to-Order Product – sD3 (Custom made): This process concerns individual made-to-order products that can only be developed and manufactured once the orders have been received. The goods are delivered immediately after production without being stored.
- Deliver Retail Product – sD4 (Trade products): Retail trade goods are delivered via a subsidiary and collected by the customer.

The performance indicators defined in this model measure performance immediately and display the state of the entire value chain. These strategic parameters can help companies to perform internal and external benchmarking as well as define their goals. They are made up of the external attributes *costs, responsiveness, agility* and the internal attributes *costs* and *asset management efficiency*; the planning approach used in this model assesses the attributes costs and responsiveness for each country. Due to the top-down approach, each attribute can be observed right through to the level of a single process step (level 3) (Bolstorff, Poluha & Rosenbaum 2007, pp. 81-5; Poluha 2010, pp. 85-7; Supply Chain Council 2010).

Since this model does not take the countries' geographical conditions and prevailing circumstances into consideration, one can surmise that Version 10 of the SCOR model is not able to provide the answer to our research question. Therefore, our findings represent an extension of the SCOR model insofar as they examine how country-specific circumstances affect the given performance indicators and processes. This increases the model's relevance for international logistics.

Having defined the process chains, the fourth step is to examine the internal and external circumstances. Internal conditions are, for example, existing logistics structures and cost restrictions which can be optimised in the planning phase. As far as external transport or country-specific conditions are concerned, companies can only act accordingly and have to adapt to the situation in question (Kummer, Schramm & Sudy 2010, p. 84). By examining the effects of internal and external conditions, one can assess whether the delivery strategy and processes can be implemented as planned. If the requirements cannot be met, the processes will have to be revised or the delivery strategy adapted. If the prevailing conditions present no obstacles to the planned procedure, one can go ahead and establish the future distribution structure.

Before the vertical distribution structure can be established, the number of warehouses along the delivery route must be planned. Every additional storage step will make it possible to store available stocks closer to the customer. This benefits customer supply by increasing the speed of deliveries and availability of stocks. More warehouses initially reduce transport costs since it is possible to achieve more comprehensive bundling effects when supplying warehouses. Decisions will be influenced by the factories, storage levels, storage space, transshipment points and customers as well as the transport arrangements between them (Stich 2004, p. 249; eds Klaus & Krieger 2009, p. 127; Schulte 2009, p. 462; Business Optimization Lab, Hewlett-Packard 2010, p. 165).

In addition, the internal and external conditions are important criteria in the design of the distribution structure. By adding all costs, companies can calculate the expense of the service level and therefore set optimal total costs during the planning process (Stich 2004, p. 327; Reichmann & Richter 2006, pp. 428-30; Wenzel 2011, pp. 443-4). If the efficiency of the planned distribution system corresponds to the requirements of the delivery service in question and the costs, the planned scenario can be deemed effective. The distribution strategy can be further optimised by incremental changes to individual components and variations in the degree of delivery services. The following develops and defines the most important criteria for decision-making.

4. Definition of criteria for decisions

4.1 Definition of the process chain

As already mentioned, the second level of the SCOR model identifies different types of delivery services. At the planning stage of the distribution structure, the question arises whether a product is suitable for interim storage. Depending on the decoupling point in the value chain and after checking orders, additional configuration and production steps may be necessary which do not allow for the storage of finished goods. At this stage, it is possible to distinguish between the configuration of processes and planning of storage stages which, during the course of our research, leads to a synthesis of processes sD1, sD2 and sD4. For the engineer-to-order product process (sD3), the focus is therefore on delivery times and delivery efficiency while goods which are pre-produced for the market or specific customers (sD1, sD2, sD4) have to be geographically available and ready for delivery (Ihde 2001, pp. 300-7). The distribution process sD4 is an extension of the process sD1 for branch-specific elements which will not be further considered within the scope of our examination.

If one looks more closely at the contract-based delivery process within the framework of our examination, it becomes clear that it is necessary to arrange delivery from the production site when planning the order. The administrative processes, transport and transshipment processes can only take place once an order has been placed. When planning such distribution structures, it makes sense to use the precedence diagram method which shows all steps of the procedure in a process-orientated sequence and the delivery in an appropriate timeframe. This allows the effects on delivery times and costs for alternative operations (for example, transport via airfreight instead of sea freight) to be evaluated. Once customer orders have been placed, the necessary procedural steps relate to internal order processing such as order entry, planning and checking of the customer's order (sD3.1-sD3.3), transport planning (sD3.5, sD3.6, sD3.7, sED.6), formal export processing (sD3.5, sD3.6, sD3.7, sED.6), transport (sD3.12) as well as delivery (sD3.12). These are all determined by external conditions.

Interim storage is possible when distributing pre-produced goods (sD1, sD2). The process then divides into two phases: that is, the planned provision of space and delivery to the customer. For supply to storage, the internal planning processes of the company (sP2.4 and sP4.4) have been defined in such a way that the relevant production process ends once the finished products (sD1.8, sD2.8) have been delivered to the intended warehouse. For international distribution logistics, this means that the formal export process (sED.8) and transport processes can be carried out before the order processing procedure (sD1.1-sD1.3, sD2.1-sD2.3) and subsequent delivery (sD1.4-sD1.7, sD2.4-sD2.7, sD1.9-sD1.15, sD2.9-sD2.15) (Supply Chain Council 2010).

4.2 Examination of internal and external framework conditions

The key tasks of international logistics are processing, warehousing and transport (Specht & Fritz 2005, p. 115). The impact of the framework conditions on these areas should therefore be ascertained during planning to ensure the distribution logistics are strategically aligned.

4.2.1 Processing

Processing concerns internal company operations but it also interacts with other actors. As borders are crossed, companies interact with the authorities of both the exporting and destination country. In order to compare countries, this model assumes that duty has already been paid on the goods and the product is free for transport. However, the import regulations and processes in the target country also play a decisive role and affect expenditures in terms of staffing costs, investment in IT systems as well as lead times. Although international organisations have long striven to standardise processes and data worldwide, they have been frustrated by the diverse interests involved (Lewis 2009, pp. 6-7). Further measures provide for greater transparency, advance checks without physical inspection, or the elimination of

duplicate procedures or requests for information, and so on (Organisation for Economic Co-operation and Development 2003, pp. 4-5).

There are many different types of processes relating to the flow of information in distribution logistics and the application of information technology. There is the communication with business partners, status tracking of consignments, and information transfer between various locations. Ideally, data transfer requires uniform and centralised information technology for all locations. In this context, centralised maintenance and long distances are particularly challenging which suggests that localisation is more suitable (Krcmar 2003, p. 318). As far as the design of hardware is concerned, the spectrum ranges from purely central mainframes to widely-spread systems (for example, cloud computing). Apart from the internal company resources described, transfer processes also rely on telecommunication and electricity infrastructures. Their capacities are usually in line with local economic development and so companies can only regionally implement their technologies to a limited degree (Davidenkoff & Werner 2008, p. 87). Sometimes, public infrastructure has to be supported by companies' own terrestrial communication systems and electricity supplies (Buxmann & König 2000, pp. 32-3). Thereby, considerations relating to the benefits of information technology and the related infrastructure do not depend on the country but rather on the company and processes and can be justified by transaction costs (Swoboda 2005, pp. 46-8). Performance indicators can help assess the internal efforts and costs by a comparison with international levels (for example, the number of documents required for an import process or relevant country information) but they should at least be defined in terms of transport mode. The availability and speed of the telecommunications infrastructure can be measured by an automatic monitoring process such as that used in the CloudSleuth project, for example (Arvis et al. 2010, pp. 38-40; Compuware 2010; Eriksdotter 2011; World Bank 2011a, pp. 49-54).

4.2.2 Transport

Depending on the processes and distribution structures, it may be necessary to assess the transportation required in advance as part of the planning processes (Wildemann 2010, p. 214). Various transport carriers are used to transport goods (Claussen 1979, p. 15). The design and performance of transport-related tasks aim at efficiency and effectiveness and require, first of all, a selective approach based on the correlation of performance, costs and interaction. Since it is not possible to compare specific variables directly, detailed knowledge of the conditions, prices and terms is indispensable for planning and evaluating the transport options available (Klatt 1997, p. 1209; Pfohl 2010, p. 338).

As far as the significance of transport is concerned, ocean shipping is the most important carrier and transports 80% of international goods. The advantage of ocean transport lies mainly in the vast quantity of goods that can be transported over great distances. This is reflected in the low transport cost per weight and distance (Kummer 2010a, pp. 91-2). Liner shipping is an internationally significant operating mode and is mainly used for container traffic. In terms of demand, liner shipping service providers serve an anonymous transport market (Böhme 1997, p. 544). The increasing relevance of container shipping has led to the modernisation of entire ports and their infrastructures in major trading nations and resulted in a certain heterogeneity of worldwide infrastructure (Nuhn & Hesse 2006, p. 273). Along with ocean shipping, airfreight makes up over one-third of transport volume based on the value of the goods, although this still accounts for only 3% of movements worldwide (Crabtree et al. 2011). As a means of transport, only 15% of aircraft are 'freight only' since the joint transportation of passengers and freight offers the advantage of more flight routes (IATA 2010, p. 3). Compared with other means of transport, the regional extension of markets increases the difficulty of accurately forecasting demand and the high concentration of value goods for the carrier (Herron 1968).

Generally speaking, the simplest form of transporting physical goods (that is, only one loading operation which is immediately followed by delivery to the consignee) is neither economical nor even completely achievable in terms of international logistics. Among the inland carriers, inland navigation shows a very heterogeneous state of development worldwide and, in most cases, uses natural conditions (Hilling

1996, p. 38). Trends in rail transport reveal that modern logistics tends to restrict the use of carriers to regular block train and single wagon transport between highly developed handling centres whereas, in an international context, complexity increases markedly due to technical specifications and case-specific requirements and their organisation (Heidmeier & Siegmann 2008, pp. 743-5; Kummer 2010b, p. 131). Pipeline is another transport mode where the product and case-specific requirements have contributed to its relative unpopularity (Proft 1997, pp. 906-8).

On the other hand, evidence shows that there are only a few states where road transport is not the dominant mode of transport. In most countries, the supply side of transport services can be described as 'atomised' since it is dominated by a large number of small and medium sized companies. The structures and the more informal way of processing goods negatively affects the willingness to change and a carrier's innovation in using modern IT systems to carry out business processes. However, the versatility of road transport cannot be matched by any other mode of transport (Hilling 1996, pp. 157-96; Klaus 2010, pp. 202-3). Road freight transport requires roads and transshipment facilities in addition to vehicles and various actors involved in infrastructure. While transshipment facilities are mostly set up and run by private institutions, roads are planned, built and maintained by public institutions (Aberle 2009, pp. 162-7). Since calculating distances is extremely costly for a great number of transport-related aspects of country studies and it is not possible to use fixed schedules of transport, calculations during the planning phase are usually based on linear distance plus a detour factor (Berens & Körling 1983; Wildemann 2010, p. 215). The interplay between actors and means of transport is expressed in the quality and speed of transport. So far, it has not been possible to establish reliable figures – even in highly developed countries – due to the complexity of research. As a result, benchmarks are used during planning phases (Spiekermann & Wegener 2005). The known facts and spread of international transport services lead to planning being focused on the models of container shipping, airfreight and inland road freight transport.

4.2.3 Warehousing

The number of warehouses depends on the geographical size of the distribution area, the customer's expected response time, value of the goods stored, lead time, respective transport costs, transshipment points and other qualitative factors (Ihde 2001, p. 44). The decision whether or not to warehouse in a new distribution region will depend primarily on the expected supply service. However, it can also be influenced by bundling the effects that can be realised by the temporal decoupling of supply from transport (Bretzke 2010, pp. 172-82). An article's value is defined as a reference which correlates to its total procurement costs plus the pro rata costs of deployed transformation (Wood 2002, p. 256). This is multiplied by the inventory interest (%) which includes the capital commitment costs (%) plus further costs such as loss of value, deterioration and spoilage, shrinkage as well as insurance costs. There can also be company- or product-specific variables (Bowersox & Closs 1996, p. 257; Flaherty 2003, p. 337; Long 2004, p. 345; Schieck 2008, p. 356; Bretzke 2010, pp. 180-1). The formula for warehouse optimisation, taking service level and transport costs into account, can therefore be defined as follows (Liesegang & Wohlgemuth 1997, p. 963; Bretzke 2010, p. 219):

$$Z = \frac{\text{Annual requirement}}{Optimal\ order\ quanity} * Transaction\ costs + Value\ of\ goods * Inventory\ interest * \left(\frac{Optimal\ order\ quantity}{2} + Safety\ stocks\right) \rightarrow MIN$$

The level of safety stocks depends on the spread of demand which is expressed by σ (standard deviation of forecasting errors) (Pfohl 2010, p. 102). The safety factor can be calculated by an interpolation to the delivery service level (Gudehus 2005, p. 386).

$$Safety\ stocks = Safety\ factor * \sigma Safety\ stocks = Safety\ factor * \sigma$$

Safety factor = (2 ∗ delivery service level - 1)/(1 - delivery service level)^0,2

In addition to warehousing costs, the geographical location plays a part in the planning process. During the strategic planning phase, it is possible to establish the point where minimal transportation costs are achieved. The decision about where to locate the site is influenced by the geographic sales area of a product, sales quantity and transportation costs. The formula for determining the position coordinates for the optimum warehousing location for transport (Gudehus 2005, pp. 861-4) is as follows:

$$x_s = \sum_i \Lambda_i * x_i / ((x_i - x_s)^2 + (y_i - y_s)^2)^{1/2} / \sum_i \Lambda_i / ((x_j - x_s)^2 + (y_j - y_s)^2)^{1/2}$$

$$y_s = \sum_i \Lambda_i * y_i / ((x_i - x_s)^2 + (y_i - y_s)^2)^{1/2} / \sum_i \Lambda_i / ((x_j - x_s)^2 + (y_j - y_s)^2)^{1/2}$$

Xs,i,j = x-Coordinate of potential location (s), source (i) and sink (j)

Xs,i,j = y-Coordinate of potential location (s), source (i) and sink (j)

Λ_i *= detour factor*

Detailed location factors and local conditions are excluded at the early stages of planning and postponed to the later practical planning and implementation stages since their parameters are very hard to define (Specht 1998, p. 95; Schieck 2008, p. 348; Bretzke 2010, p. 163).

4.3 Developing the distribution structure

The framework for developing the distribution structure requires the processes and delivery strategy to be defined. As no storage is envisaged for contract-specific deliveries, the framework conditions have a direct effect on the value chain as soon as the orders are received. Depending on the configuration of the transport chain, one has the choice of either quick delivery by airfreight or slower, less expensive delivery by sea freight. If pre-produced goods are to be distributed, the products can be put into storage, which leads to a decoupling within the distribution process. The delivery service must span the distribution site and customer, which means that there always has to be enough stock available. Replenishing stock at the distribution site will therefore only indirectly affect the delivery service (although it constitutes an important criterion for the optimisation of volume bundling). In this case, the optimal distribution strategy consists of achieving optimal storage and delivery costs whilst maintaining the same level of delivery service (Ballou 2004, p. 73).

Once the distribution structure has been defined (taking into account the framework conditions), the next step is to establish the aim of the delivery service strategy as well as the total costs involved. Alternative methods of constructing the entire system can be generated and evaluated by varying the adjustable parameters. The procedural model created can also be used to perform country assessments within this framework. In the following, we apply our abstract assessment model to German exports to Nigeria and Ecuador.

5. Two case studies: German exports to Nigeria and Ecuador

Both countries rank among the major petroleum exporters whose markets have not yet been opened up by German companies to any great extent. In the following case studies, demand is calculated by reference to the geographic distribution of the ten largest cities (*World Gazetteer* 2010). Besides the model calculations, we list information sources that can be used to analyse secondary data. Our criterion for choosing data analyses was that they be publicly available, and we primarily used data from the aforementioned publications (see section 2).

5.1 Processing

The differing costs for processing and the security of the entire value chain affect the performance indicator *CO1.1-Total Supply Chain Management Costs*, which is listed in the SCOR model as an absolute value. Possible surcharges are multiplied with the planned sales volume and concern the performance indicator *CO2.4-Cost to Deliver* (Supply Chain Council 2010, 2.4.1-2.4.12).

$$CO2.4 = sales * (pc_p + pc_s + pc_r)$$

Table 1: Costs of processing and security

	Nigeria	Ecuador
Value lost to power outages (% of sales) - (pc_p)	8.9%	3.4 %
Security cost (% of sales) - (pc_s)	2.6%	2.0 %
Losses due to theft, robbery, vandalism, and Arson attack against company (% of sales) - (pc_r)	4.1 %	3.5 %

Data source: World Bank 2011c

Besides costs, transactions also impact the temporal component, which is represented by the performance indicator of *RS1.1-Order Fulfilment Cycle Time*. However, due to the sequence of processes, it is placed in step *D3.12-Ship Product*. The calculation of the cycle time of customs processes at border crossings (clearance time) is based on this formula:

$$RS1.1 = pt_{po} * (100 - pt_{ps}) + (pt_{pi} * pt_{ps}) + (pt_{pi} * pt_{ps} * pt_{pm}$$

$$RS1.1 = pt_{po} * (100 - pt_{ps}) + (pt_{pi} * pt_{ps}) + (pt_{pi} * pt_{ps} * pt_{pm})$$

Table 2: Cycle time of customs processes at border crossings

	Nigeria	Ecuador
Clearance time without physical inspection (days) - (pt_{po})	3.81	1.86
Clearance time with physical inspection (days) - (pt_{ps})	6.40	3.13
Shipments with physical inspection (%) - (pt_{pi})	61	27
Shipments with multiple physical inspections (%) - (pt_{pm})	9	2

Data source: Arvis et al. 2010, pp. 38-40

5.2 Transport

The model divides the transport process into two stages: the initial leg (which is performed via air or sea freight), and the final leg (carried out using road transport). In the former, the factors of costs and transport time show opposing trends which affect the performance indicators CO1.1 und RS1.1. The calculation of the throughput times can be based on the values listed in the published schedules of airlines and shipping companies.

Throughput time runs from the end of the export procedures at the German airport to touchdown in the destination country. As connections are not offered throughout the week, this affects the waiting time of the dispatched freight in the departure airport. Average throughput time is calculated by adding the flight time to the waiting time at the departure airport. For the target airports, it was calculated on a day-by-day basis and the resulting value related to the number of airlines in the country. This approach reflects the ranking of the destination airport. The sum of the calculation factor results in the average throughput time (abbreviated to TT in the three tables below).

Table 3: Air transport to Nigeria

Target airport	Number of airlines	Number of flight days	Ø-TT	Calc. factor
Abuja (ABV)	2	7	1	0.5
Lagos (LOS)	1	7	1	0.25
Port Harcourt (PHC)	1	4	1.75	0.44

TT-flight: Germany to Nigeria ≈ 1 day

Data source: UBM Aviation 2010

Table 4: Air transport to Ecuador

Target airport	Number of airlines	Number of flight days	Ø-TT	Calc-factor
Quito (UIO)	3	4	1.75	1.75

TT-flight: Germany to Ecuador ≈ 2 days

Data source: UBM Aviation 2010

The assessment of sea freight transport basically adopts the same approach although there are important differences in the way the routes are arranged. Those flights where the ship departed early and arrived late at the destination seaport are irrelevant and were eliminated from the model (that is, they were not taken into account either by the average throughput time or calculation factor).

Table 5: Sea transport to Nigeria

Target port	Total number of lines	Relevant lines	Ø-TT	Calc. factor
Apapa (NGAPP)	60	13	21	7.38
Lagos (NGLOS)	12	3	21	1.70
Onne (NGONN)	38	8	28	6.05
Tincan (NGTIN)	81	13	19	6.68

TT-sea transport: Germany to Nigeria ≈ 22 days

Data source: INTTRA 2010

Table 6: Sea transport to Ecuador

Target port	Total number of lines	Relevant lines	Ø-TT	Calc. factor
Esmeraldas (ECESM)	20	7	26	11.38
Guayaquil (ECGYE)	61	7	21	9.19
Manta (ECMEC)	2	2	50	6.25

TT-sea transport: Germany to Ecuador ≈ 27 days

Data source: INTTRA 2010

Road haulage is used to complete the terminal leg from the seaport or airport. The structure of the supply side of the industry and the heterogeneity of transport modes means that there is no directly usable data available. In order to compute the distances involved, the detour factor was calculated by mapping the point-to-point aerial transit path (*patp* in the table below) to the real road distance for a significant number of transport routes. In addition, the route-related detour factors were weighted according to their demographic relevance (the latter calculated using the number of inhabitants of the respective end-destinations). For additional calculations, the road distance can be calculated by multiplying the weighted detour factor by the airline. In the case of direct delivery, the average distances to customers were calculated from the unloading/delivery site to the relevant cities, with the distances being weighted by the respective numbers of inhabitants. The unloading site was weighted either by the number of shipping lines or airlines from Germany.

Table 7: Road transport

	Nigeria	Ecuador
Detour factor (patp/road km)	1 / 1.245	1 / 1.299
Distance from airport to customer	472 km	257 km
Distance from port to customer	452 km	263 km

5.3 Warehousing

The warehouse site was established with the help of the calculation process for the optimal warehouse location for transport (see section 4.2), that is, the location which determines the distances of the initial leg from port or airport. The calculation was based on the nearest port or airport with a sufficient number of scheduled connections to ensure a good combination of carriers. Ports or airports with relatively few transport lines were given a lower value than those with a greater number even if the latter were closer. The relevant service level is represented by the distance of the warehouse from the customer, since this is where the delivery commences (depending on sufficient stocks).

Table 8: Warehouse

	Nigeria	Ecuador
Warehouse location (city nearby)	4°24’0 N 7°09’0 E (Ibadan)	2°05’0 S 79°88’0 W (Eloy Alfaro)
Distance warehouse to airport (IATA-Code)	178 km (LOS)	346 km (UIO)
Distance warehouse to port (UN/LOCODE)	181 km (NGAPP, NGTIN)	42 km (ECGYE)
Distance warehouse to customer	343 km	151 km

The different transport distances show the average costs of servicing the delivery area. This factor has to be multiplied by the transport costs of the carriers in the destination country in order to show how the distribution logistics affects the transport costs and thus the performance indicator CO1.1. As far as transit time is concerned, a valid country-specific speed factor is absent which would allow conclusions to be drawn from transport distances according to time requirements. Therefore, the calculation of the performance indicator RS1.1 cannot be entirely country-specific although model comparisons are possible if a benchmark figure of 60 km/hour per truck is used (Gudehus 2000, p. 248; Spiekermann & Wegener 2005). For example, a useful rounding factor on a daily basis would be 200 km = 0.5 days, 200 km up to 600 km = 1 day, and so on.

Table 9: Order-related delivery process

	Nigeria		**Ecuador**	
Carrier into target country	Air transport	Sea transport	Air transport	Sea transport
TT into target country (days)	1	22	2	27
TT processing (days)	6	6	2	2
TT to customer (days)	1	1	0.5	0.5
Total days	**8**	**29**	**4.5**	**29.5**

Table 10: Distribution of pre-produced goods

	Nigeria		**Ecuador**	
Carrier into target country	Air transport	Sea transport	Air transport	Sea transport
TT into target country (days)	1	22	2	27
TT processing (days)	6	6	2	2
TT to warehouse (days)	0.5	0.5	1	0.5
Total days	**7.5**	**28.5**	**5**	**29.5**

The performance indicator CO1.1 in the order-specific delivery process can therefore be expanded to reflect the effects of the chosen mode of transport as well as country-specific conditions. The more time taken to replenish warehouse stock, the larger the warehouse inventory and the greater the uncertainty in planning; the framework conditions for distributing pre-produced goods affect tied-up capital in warehouses and thus performance indicator CO2.4. Moreover, the effects can be analysed specifically in terms of the respective mode of transport (for example, by looking separately at the expense of airfreight compared to sea freight).

6. Conclusions and further research

The model shows that success in distribution logistics is heavily dependent on the external framework conditions. Moreover, when discussing the methodology, we presented a planning model which offers assessment methods using publicly available data and which can also be adapted to the needs of the case in question. For example, the determination of demand based on the number of inhabitants can be adjusted through more specific analyses of the customer base. Furthermore, the model can provide the decision-taking bodies of a country with a process-orientated identification, as well as suggestions for generally improving the weaknesses revealed by a comparison with other countries.

Standardised primary data represents another area of research and will enable future models to be designed in even greater detail. At present, the objects of analysis are the turnaround times for the various modes of transport, the import procedures for ports and airports and the travelling times in road transport. In the last case, data from the tracking of consignments and analysis of the vehicles' GPS-data

would be most helpful. In addition, the complex effects and interdependencies could be captured more realistically by developing further calculation models (that is, for international road transport, inland water navigation, non-scheduled air and sea freight, as well as rail freight). A further promising area of research is the analysis of information flows and country-specific assessments taking company-specific requirements into account. Finally, with respect to the SCOR model, more research is needed to achieve both greater precision in the performance indicators for country-specific factors and their extension by replenishing processes in multi-stage storage systems.

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Franz Vallée

Dr Franz Vallée is professor and head of the logistics chair at the University of Applied Science in Münster, Germany. His experience is based on academic research and practical business projects. In his earlier career, he was Chief Information Officer at a global cement producer and was responsible for planning, implementation and operation of worldwide supply chains.

Michael Dircksen

Michael Dircksen has completed a diploma in Business Administration and an MSc in Logistics. His almost completed PhD thesis is on the logistical export processes from Germany into the major petroleum exporting countries.

Developing performance measurement for the Russian Customs Service

Alexey Gubin

Abstract

This paper examines customs performance measures and various indicators in light of the drawbacks to and limitations of the current system of performance measurement adopted by the Russian Federal Customs Service (FCS). The existing system of customs performance measurement is far from perfect and, to some extent, can cause problems in itself. For example, it is difficult to use, is resource-intensive and does not measure the results of activities objectively. In other words, it is in need of improvement. This paper explains how performance can be measured in a way that improves the current system by ensuring it achieves the objectives of the FCS more comprehensively and enhances its overall effectiveness and efficiency.

Introduction

The measurement of customs performance assumes great importance for researchers and practitioners in terms of national security, use of limited public resources, development of the national economy, and facilitation of foreign trade.

On the one hand, the Federal Customs Service (FCS) of the Russian Federation achieved impressive results in 2010, especially considering that it oversees the largest customs territory in the world. The value of foreign trade reached USD625.4 billion (export – USD396.4 billion; import – USD229 billion); customs duties and taxes amounted to USD142.7 billion; there were 4,116 criminal cases; and illegal imports and exports amounted to USD363 million.

On the other hand, the FCS also consumes considerable resources: it has a complex structure comprising eight regional customs departments, four specialised regional departments, 104 customs offices, 572 customs stations, eight ancillary institutions; and a total staff of 68,189. Its costs total more than USD2 billion.

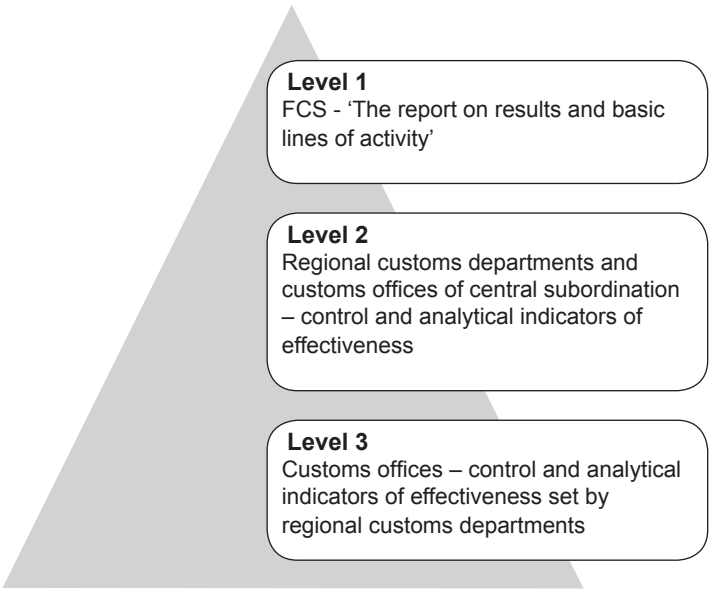
These figures say nothing about the effectiveness and efficiency of the Russian customs service. Nevertheless, how well the customs service is performing and what indicators should be adopted for this purpose are among the most fundamental questions confronting society, government and central customs administrations today.

Current performance measurement system of the FCS of Russia

The FCS has established a three-level system of performance measurement, shown in Figure 1.

The first level is mostly for external use. Each year, the FCS prepares a report on the results and basic lines of activity ('the Report') which serves to implement the methods of medium-term budgetary planning. The Report focuses on results in the budgetary process in accordance with the principle of efficient spending of funds established by the Russian Budgetary Code.

Figure 1: Current performance measurement system of the FCS



Source: Federal Customs Service (FCS) of the Russian Federation

The main purpose of the Report is to provide the information necessary for drawing up the government report on the results and objectives of budgetary policy; projecting the financial plan and federal budget for the next fiscal year (based on the most efficient expenditure of budget funds); and implementing state policy both generally and in relation to the activities of the federal enforcement authorities.

The Report establishes the strategic objectives of the FCS.[1] The first is to increase the level of compliance with the customs legislation of the Russian Federation, and to ensure the full and timely payment of customs duties, taxes and customs charges. The Report underlines the importance of this objective which is to provide a stable source of revenue for the federal budget. The increase in revenue helps to solve problems of macroeconomic stability and integrate the Russian economy into the international market.

In the Report, these strategic objectives are linked to the goal of promoting the state's social and economic development. So, for example, Strategic Objective 1 serves to maintain macroeconomic stability, increase the competitiveness of Russian enterprises and develop international economic cooperation.

There are 11 indicators that will measure the attainment of this objective for 2011.

1. No more than 40% of the total number of cases brought before the courts by customs authorities shall be dismissed.
2. The Federal Budget Law regarding the collection of customs debts payable shall be implemented in 100% of cases.
3. The customs debts paid by operators involved in foreign trade which infringe the payment terms established by standard documents shall be no more than 1.15% of the total sum of customs debts paid to the federal budget.

Strategic Objective 1 is further divided into four tasks.

Task 1.1. Reducing the outstanding customs debts to the federal budget as well as reinforcing and optimising the control measures which prevent such debts from arising in the first place.

- The sum of retired debts on customs payments and fines shall be no less than USD626 million.
- The debts resulting from the unlawful use of privileges (including their improper use), shall be no more than USD15 million in total.
- The debts arising from guarantee certificates shall be no more than USD3 million in total.

Task 1.2. Strengthening controls on the accuracy of customs declarations.

- The customs payments made as a result of corrections in the customs duties payable on the goods shall be no less than 97.5% of the total sum of customs payments charged by the results of such corrections.
- The difference in the indicators of import to the Russian Federation (according to the FCS of Russia) and export from the Russian Federation (according to the International Monetary Fund) shall be no more than 10%.

Task 1.3. Increasing the effectiveness of currency inspection.

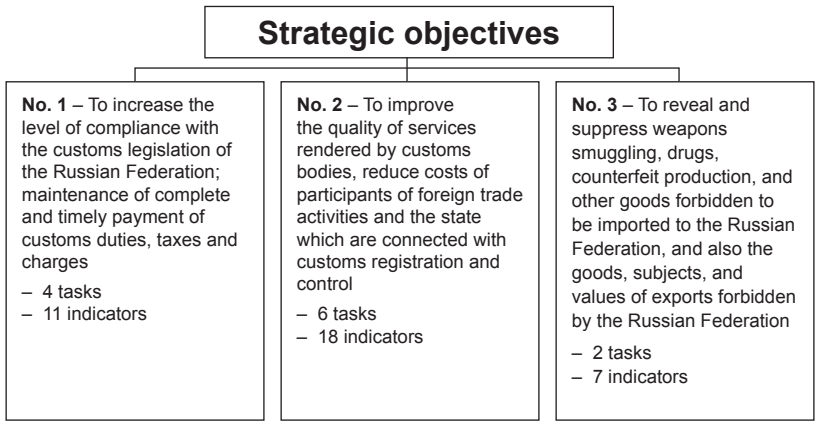
- Violations of the currency legislation of the Russian Federation shall be no less than USD1.08 billion in terms of value.

Task 1.4. Improving the enforcement of legislation and carrying out of controls by customs authorities as well as improving the legality of legal decisions, actions or omissions.

- The number of cases relating to administrative offences in which sanctions are imposed and processing is not halted due to appeals/protests, as a proportion of the total number of decisions relating to administrative offences.

Figure 2 below identifies briefly all three strategic objectives of the FCS, together with the number of tasks and indicators to achieve these objectives.

Figure 2: The report on results and basic lines of activity (methodology)



Source: Federal Customs Service (FCS) of the Russian Federation

The second and third levels of performance measurement (see Figure 1) are intended for internal use in evaluating the performance of customs bodies. The control indicators categorise performance as 'good', 'satisfactory' or 'unsatisfactory'. There are 51 indicators for each quarter (including sub-indicators), calculated as a progressive total. Each indicator has a numerical value and, together, they cover all fields of activity.

The current list (for 2011) of performance indicators for the FCS of Russia is as follows:[2]

1. The effectiveness of controls in ensuring correct calculations, as well as the timely and complete payment of customs charges and other payments transferred to the federal budget (five indicators).
2. The effectiveness of customs authorities' cost controls within the framework of risk controls.
3. The amount of customs payments and penalties collected as a proportion of the total of customs payments additionally charged and the penalties imposed resulting from customs inspections after release (taking into account the customs payments and penalties returned or cancelled).
4. The effectiveness of customs inspections following the release of goods as a proportion of the total number of inspections performed in relation to each type of customs control.
5. The increased levels of information and openness of customs authorities (two indicators).
6. The effectiveness of the customs authorities' use of risk control systems (three indicators; four sub-indicators).
7. The effectiveness of customs controls of timber exports (two indicators, 10 sub-indicators for each kind of timber).
8. The effectiveness of the customs authorities' inspection techniques in relation to goods and vehicles.
9. The time savings in carrying out customs procedures at cross-border check points for cars (two indicators).
10. The number of counterfeit goods discovered.
11. The monitoring of compliance with prohibitions and restrictions (non-tariff).
12. The effectiveness of currency controls (two indicators).
13. The effectiveness of the customs authorities' controls to ensure the correct classification of goods according to the HS of the Customs Union.
14. The average time needed to react to evidence of fissionable and radioactive materials crossing the customs border and to goods exhibiting increased levels of ionising radiation (three indicators each for airport, railway and automobile check points).
15. The monitoring of compliance with time limits for transferring electronic copies of customs declarations to the central database of the unified automated information system of the FCS (two indicators).
16. The percentage of goods imported by car which are released by border customs authorities in relation to the total number of goods imported by car which are released.
17. The legality of decisions taken by customs authorities (three indicators).
18. Customs investigations and audits (two indicators).
19. The consistency of budgetary funds expenditure.
20. The consistency of capital investments expenditure.
21. Reduction in the difference between the indicators of import from China to Russia and the indicators of export from China to Russia for surplus goods.

The indicators are to be used by the regional customs departments and directly subordinate customs offices. On the third level, regional customs departments set the values of indicators for each subordinate customs office. In addition to control effectiveness indicators, there are analytical indicators[3] which are used to analyse performance. These are examined in the same way as the other indicators but their results do not influence the total evaluation of the customs authorities' performance. The reason for this is that it is not always possible to calculate such indicators objectively owing to the influence of various uncontrolled factors.

This concludes the general overview of the performance measurement system used by the Russian customs service. As already mentioned, the system has three levels and many indicators; it measures the performance of each customs office as well as the FCS as a whole. The following section examines the problems which need to be addressed in order to improve the system as a whole.

Problem statement

Currently, it is difficult to carry out an adequate evaluation of customs performance for the following reasons.

First, there are some gaps in the theory. There is no uniform understanding of what the key results should be, which reflects the absence of a common understanding of customs service priorities amongst experts and practitioners. Obviously, supporters of trade liberalisation will view performance standards differently than autocrats. Indicators such as time savings in the performance of customs formalities, a reduction in the number of customs controls and growth in international trade help to maximise the facilitation of foreign trade. Nevertheless, national security demands that certain customs examinations and inspections be carried out. This suggests that the criteria and indicators of customs performance do not always reflect the results of activities objectively.

Accordingly, it is difficult to measure customs performance today because:

- There is no agreement on what the results of customs performance should be.
- The criteria and indicators of customs performance do not reflect the results of activities objectively.
- The existing system is both difficult to use and resource-intensive.

In order to be successful, any solution must employ a methodology that reflects the characteristics of these problems. Therefore, it is necessary to:

- divide the results of customs activities into categories
- formulate the objectives of the customs service
- design indicators which adequately reflect the results of the customs activity in question.

The overview of indicators above shows that most are linked to customs revenue. Without belittling the value of fiscal incomes, it should be noted that the indicator itself often does not reflect customs performance but only the external economic conditions. In our opinion, ensuring the stable source of revenue to the federal budget really depends on a high level of compliance with customs legislation as well as the complete and timely payment of customs debts. The share of oil and gas revenue as export duties is levied by customs authorities and used to repay the deficits in the federal budget and maintain the Russian Federation's reserve fund. However, the efforts of the customs authorities in guaranteeing compliance with customs legislation are minimal. On the other hand, the exports of oil, natural gas and oil products are controlled without difficulty: their prices are known (and therefore cannot be underestimated) and only a limited number of companies are involved in their export.

According to the Report, ensuring the consistent collection of a significant part of the federal budget will allow the state to create and use such financial mechanisms to increase the competitiveness of Russian enterprises as well as to establish conditions for their innovative development and use of protectionist

customs tariff policy measures. However, this statement contains an inherent contradiction, that is, protectionist customs tariff policy will negatively affect the income of the federal budget insofar as setting customs duties at protectionist rates will hinder trade.

Research results

The foregoing analysis of the current customs performance measurement system enables us to draw the following conclusions.

1. The system is too complex; calculation is very resource-intensive, costly and barely manageable. There are three levels of measurement with almost 90 indicators, which is too many. Each quarter, over 50 indicators have to be calculated and each has its own method of computation.

2. Some of the indicators resemble a 'Procrustean bed' for customs offices (that is, they are too inflexible). The most difficult indicators to develop are those measuring law enforcement activities. For example, the third strategic objective of the Report concerns 'revealing and suppressing the smuggling of weapons, drugs, counterfeit production and other goods prohibited from entering the Russian Federation as well as the goods, subjects and the values of exports forbidden by the Russian Federation'.[4] According to the Report, the importance of this objective lies in the need to safeguard the economic security of the state. Considering the current criminal involvement in foreign trade, difficult operative conditions and criminal activity in frontier regions, phenomena such as contraband not only represent a considerable threat to the interests of economic security but also create conditions favourable to international criminals involved in drugs and terrorism.

The first indicator for measuring the attainment of Strategic Objective 3 is the amount of imported goods which customs authorities detain for infringements of legislation in relation to the total of imported goods. The value of this indicator is defined by the following formula:

$$D = \frac{Sdet\_gds + Supd\_gds + Shs\_IPP\_gds + Scurr\_gds}{Sdom.cons\_gds} \times 100$$

Where:

Sdet_gds = total value of goods detained during the law enforcement activities of customs authorities

Supd_gds = value of the goods as a result of their updating

Shs_IPP_gds = value of the goods calculated as a result of carrying out controls ensuring the correct origin and classification of the goods in accordance with the Harmonised System of the Customs Union, compliance with the prohibitions and restrictions imposed by the legislation of the Russian Federation as well as the protection of intellectual property rights

Scurr_gds = the total value of goods imported into the Russian Federation which infringe the currency legislation of the Russian Federation

Sdom.cons_gds = the total value of the goods released under the customs regime of domestic consumption.

The increase in value of an indicator should be no less than 1.6% of the expense of carrying out the preventive actions aimed at reducing latent criminality in a field of customs activity.

In our opinion, this indicator is incorrect. The activities should be directed towards preventing crimes instead of revealing them once they have been committed. Besides, the indicator established for the customs authority states that imports which infringe customs requirements shall be no less than 1.6% of

the total value of the goods. If, as a result of preventive actions, the volume of infringements falls below this value, it doesn't necessarily mean that the customs authorities are not performing satisfactorily.

The most difficult task is to measure the attainment of such an objective. The customs service reveals offences in the external economic sphere and imposes various sanctions on traders accordingly. The basic indicator of the effectiveness of law enforcement by the FCS is the total number of penalties.

This results in a paradoxical situation: the worse the compliance with customs legislation, the higher the number of criminal cases and penalties and, therefore, the better the results of law enforcement activities.

3. Accordingly, the emphasis is not on outputs (as stated in the example above), but on outcomes and not on a decrease in criminality but on the number of criminals apprehended. Not much importance is attached to what is happening to foreign trade and how much revenue customs offices are contributing to the federal budget. The main concern is how effectively the customs service is contributing to the country's economic development. The final point is a complex issue involving economic growth, structural shifts in the economy, the improvement of conditions and the population's quality of life.

In our opinion, non-compliance with the customs legislation has a number of negative consequences for the economy:

- The effectiveness of customs regulation will be reduced (for example, the rate of customs duties is 10% but only 5% of the customs value of the goods has actually been paid). The main reasons may be both dishonesty of foreign trade operators and the reduction of prices by suppliers if Russia is a large market for them. Consequently, more goods will be imported to the domestic market due to their low price.
- Domestic producers of similar competing goods will suffer losses because, once protective tariffs have been introduced, it will be presumed that the prices of imported goods will be higher. As a consequence, they will not be competitive and will lose their share of the domestic market.
- If the decrease in the amount of customs payments has been caused by tax evasion, legal importers are likely to suffer. They pay their customs debts in full and, as a result, their goods will be more expensive and less competitive.

The consequences of failing to ensure the complete payment of customs debts are the decline of the federal budget, fall in domestic production, and increased criminal involvement in foreign trade. It is therefore necessary to design the indicators of such outcomes.

4. There is a lack of input from the business community, government and other (especially foreign) stakeholders. The following survey (Table 1) by the World Bank, 'Doing Business', provides an example.

Table 1: Doing Business 2011, Trading across Borders: data for the Russian Federation

Indicator	Russian Federation	Eastern Europe & Central Asia	OECD
Documents to export (number)	8	6.4	4.4
Time to export (days)	36	26.7	10.9
Cost to export (USD per container)	1,850	1,651.7	1,058.7
Documents to import (number)	13	7.6	4.9
Time to import (days)	36	28.1	11.4
Cost to import (USD per container)	1,850	1,845.4	1,106.3

Source: World Bank 2011.

Contrary to the FCS Report, this research suggests that the situation is far from optimistic. Russia ranks 162 out of 183 economies; it takes three times as many days to export or import goods than in OECD countries; and the costs are higher. Of course, the customs service is not the only actor but it plays a key role in the facilitation of foreign trade.

5. There is no evaluation of the efficiency in using resources. The Report only provides information on the distribution of budgetary expenses between objectives and tasks. There are only two control indicators of efficiency which relate to resources: the consistency of budgetary expenditure and capital investments expenditure. Niven uses the same example in his book describing the implementation of balanced scorecards for non-commercial organisations. He states that the only goal for the Department of Defense (DoD) in relation to procurement is the percentage of procurement funds requested and appropriated by Congress as compared to the identified needs of the DoD. This is a measure of inputs and lobbying success but says nothing about what results have been achieved with the funds appropriated.[5]

6. The responsibility for performance is not shared by the staff generally. Only the director of the customs office has personal responsibility. However, in order to achieve optimal performance, each employee should be measured by personal indicators and held personally responsible for their performance.

7. Most indicators are retrospective and not prospective in nature. However, only the latter indicators enable the organisation to make adjustments based on result.[6]

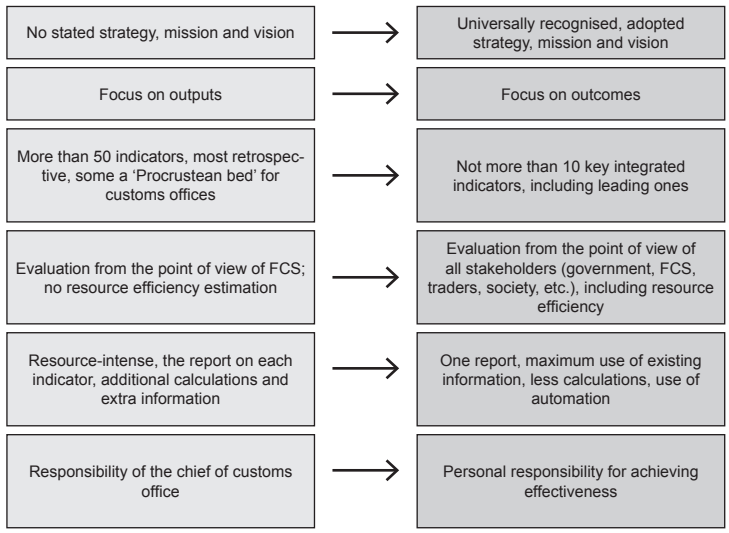
The conclusion, generally-speaking, is that this system is difficult to use, resource-intensive and does not fully reflect the results of activities impartially. In other words, it needs improvement.

The development of a performance measurement system holds the key to increasing customs performance.

Ways of developing a system to measure performance

By exposing the deficiencies in the existing system of customs performance measurement, we can determine how to improve it, as Figure 3 below shows.

Figure 3: Summary of recommendations for developing indicators to measure the effectiveness of controls



First, the FCS should elaborate its strategy, mission, and vision. Although there is the 'FCS Strategy to 2020', it is a strategy for development.[7] The strategy ensures the entire organisation is focused on achieving the overall goals.[8]

The Balanced Scorecard invented by Kaplan and Norton emphasises the realisation of the strategy rather than the strategy itself.[9] The problem is that most organisations never achieve their strategies. The Balanced 'Scorecard uses measurement as a new language to describe the key elements in the achievement of the strategy. The use of measurement is critical to the achievement of strategy',[10] performance indicators must seek to provide the universally recognised strategy with a mission and values. In this case, 'universally' means that it is evaluated from the point of view of all stakeholders (that is, government, FCS, traders, society, and so on) and takes resource efficiency into consideration.

The focus should be on outcomes not outputs. Outcome indicators shift the focus from activities to results, from how a program operates to the benefits it brings.[11] Outcomes demonstrate results and provide guidance on how to allocate resources. Focusing on outcomes, rather than inputs or outputs, serves to point the entire organisation towards its true aims. Accountability is also enhanced when the focus shifts to outcomes.[12]

There should be approximately 10 indicators of performance in the system of measurement. Limiting the indicators means increasing the commitment to monitor strategic measures and reducing the dependency on operational indicators.[13] According to Holloway, 'The selection of KPIs [key performance indicators] should not be dictated by the fact that they may be easy to measure or have been used previously but rather that they deliver a meaningful indication of outcomes related to objectives.'[14]

Holloway maintains that 'It is therefore important that KPIs utilise existing data sources as much as possible ... dipping into an information stream that already exists (say, as part of logistics processes) is preferable to creating an entirely new stream of information. This becomes a simple cost/benefit exercise.[15]

The indicators of performance should satisfy the basic criteria of the '4Cs': clarity, completeness, (lack of) complexity and consistency.

Moreover, the productivity indicators should correspond to the 'SMART' concept and should be: specific, measurable, achievable, relevant and time certain.[16] There is also a need to develop customs performance indicators measuring resource consumption. We need to focus on outcomes as well as outputs. For example, the weight and cost of the drugs detained does not tell us much in itself; general tendencies that decrease their importation are more important.

Conclusions

The existing system of customs performance measurement is far from perfect and in some ways presents its own problems. According to the arguments presented above, it is nevertheless possible to improve the current system of performance measurement, ensure it contributes to the achievement of FCS objectives, make it less resource-intensive and generally improve its effectiveness and efficiency.

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Alexey Gubin

After graduating from university, Professor Dr Alexey Gubin served in the Russian Customs Service from 1993 to 1996 as chief inspector, Department of Customs Valuation and Currency Control. In 1999, he obtained a postgraduate degree in science (economics) from the Russian Customs Academy. His dissertation was on the 'Improvement of methodology to estimate the economic results of activity of the Customs Service of the Russian Federation'.

Alexey is currently a professor at the Russian Customs Academy where he teaches 'Economics of customs administration'. He has published extensively and has produced a wide range of educational materials. His current research interests are in customs performance measurement.

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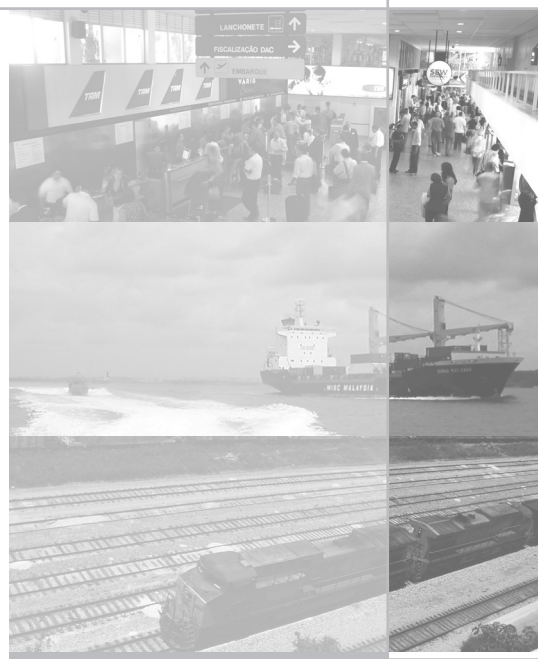

Section 2

Practitioner Contributions

Reversing the trend: low cost and low risk methods for assuring proper duty payments

Holm Kappler

Abstract

This paper examines the extent to which commodity classification errors may contribute to customs revenue shortfalls. It identifies the root causes of this chronic problem and the traditional approaches that have been applied to address traditional community classification monitoring and enforcement, with little evidence of success. It then discusses other approaches that are worthy of examination, such as artificial intelligence technologies, to monitor Harmonized System (HS) declarations that affect duty underpayments, commodity data quality, systems integrity, and risk assessment.

Introduction

It is estimated that 120,000 vehicles currently driving the streets of Los Angeles, California are stolen. With so many stolen cars on the road, one might expect that a significant number would be identified by the police … even by chance ... yet very few are.

To address its stolen car problem, the Los Angeles Police Department installed automated licence plate readers on its squad cars. Prior to the installation of the readers, police officers were capable of verifying about 15 cars per hour. Now, a single machine reads and verifies as many as 240 licence plates per minute. During its first day on the job, one licence plate reader identified 17 stolen cars while driving through the parking lot of a suburban Los Angeles shopping mall. The traditional "hit-or-miss" approach rarely yielded more than a handful of positive IDs during an entire year.

For decades, commodity reporting errors have presented a similar problem for customs authorities. Millions of customs declarations are filed each year containing commodity classification errors, but only a small number of them are ever detected.

This paper examines the extent to which commodity classification errors may contribute to customs revenue shortfalls. It discusses the root causes of this chronic problem, and explores how innovative monitoring and enforcement technologies could be used by Customs to automatically identify commodity reporting and duty payment errors.

Background

Despite the overall trend towards lower tariffs and freer trade, customs duties remain a significant source of income for many countries. During the period 2001-06, the share of trade tax revenue in terms of total tax receipts amounted on average to 2.5% in high-income countries, 18.1% in middle-income countries and 22% in low-income countries. In nine countries, tariff receipts accounted for more than half of all tax revenue in at least one year during this period (Baunsgaard & Keen 2009).

The problem of tariff revenue dependency has been exacerbated by the global economic recession of 2008, which has resulted in plummeting trade volumes and falling revenues (Seth 2009). It has therefore become even more crucial for middle- and low-income countries to ensure that duties are properly assessed and collected.

For many countries, collecting duties has been a challenge. In Africa, the tariff collection rate (that is, the ratio of actual tariff revenue to hypothetical tariff revenue had the statutory tariff rate been applied) is frequently under 70%, and in some cases does not reach 50% (Baunsgaard & Keen 2009).

Misclassification of commodities is widely recognised as the single greatest cause of non-compliance, but it is often ignored as a source of significant revenue. This is largely due to the perception among customs authorities that (1) classification errors do not account for very much revenue, and (2) detecting classification errors requires too much effort and expense (Bolton & Hand 2002).

A recent report by the Auditor General of Canada revealed that one out of every three entry lines is misclassified (Auditor General of Canada 2010). Apart from the less obvious negative fiscal impact on such areas as trade statistics/trade policy, risk assessment/targeting, and customs controls/admissibility, it is estimated that USD22 billion per year is owed to government treasuries worldwide because of misclassification alone.[1]

Table 1 shows an estimation of the amount of duty underpayments due to misclassification for countries whose duty revenue accounts for more than 20% of overall government revenues.

Table 1: Estimated duty underpayments due to misclassification

Country	Value of Imports (in USD billions)	Average Rate of Duty (Trade weighted)	Ratio of Duties to Total Gov't Revenues (%)	Duty Collections (in USD millions)	Duty Underpayments (in USD millions)
Maldives	1.4	20.60%	72.501	288.4	7.30
Swaziland	1.3	8.90%	65.963	115.7	2.93
Kuwait	21.3	5.00%	63.561	1,065.0	26.94
Gambia	0.3	14.50%	53.3	43.5	1.10
Madagascar	3.8	9.30%	49.231	353.4	8.94
Bahamas	3.0	22.80%	47.19	684.0	17.31
Saint Vincent and the Grenadines	0.3	12.00%	44.903	36.0	0.91
United Arab Emirates	104.7	4.20%	43.52	4,397.4	111.25
Namibia	4.0	9.30%	42.573	372.0	9.41
Vanuatu	0.2	19.70%	37.91	39.4	1.00
Belize	0.5	15.90%	37.23	79.5	2.01
Bangladesh	17.3	9.20%	35.636	1,591.6	40.27
Senegal	6.5	8.90%	34.7	578.5	14.64
Sudan	9.8	14.00%	34.55	1,372.0	34.71
Oman	22.9	4.90%	31.8	1,122.1	28.39
Cote d'Ivoire	8.0	6.60%	30.541	528.0	13.36
Bahrain	6.1	6.40%	30.324	390.4	9.88
Uganda	4.5	11.10%	29.404	499.5	12.64
Botswana	5.1	7.50%	24.187	382.5	9.68
Ghana	9.1	8.60%	24.084	782.6	19.80
Philippines	50.0	5.90%	22.454	2,950.0	74.64
Guinea	1.9	11.90%	21.703	226.1	5.72
Guinea-Bissau	0.1	13.50%	20.48	13.5	0.34

Source: Extrapolated from WTO Country Profiles, IMF Survey to determine the percentage of national revenue represented by customs duties, 2011, and Auditor General of Canada reports concerning compliance measurement 1994, 1997, 2001, 2003, 2007, and 2010.

Root causes of misclassification

Formally known as the 'Harmonized Commodity Description and Coding System', the Harmonized System (HS) is the global standard used by Customs to classify all imported products. HS codes are used by nearly 200 countries for a variety of purposes including duty and tax assessment, determination/enforcement of admissibility rules, risk assessment/targeting, and tracking trade flows.[2]

Although much has been written about the generally poor state of customs commodity reporting (Bagai & Wilson 2006), very little consideration has been given to its cause(s).

Primary contributors to misclassification are:

HS complexity

The HS is a structured multipurpose nomenclature, organised into 21 Sections and 96 Chapters. Goods are generally classified by what they are (and sometimes what they are made from, and/or what they are used for), and according to a strict (and often complex) set of rules and legal notes. Frequently, commodity classification is not straightforward and additional research or input from HS experts is needed.

To acknowledge the complexity of the HS and to assist its users, the World Customs Organization (WCO) has developed a substantial number of publications and databases over the years. While these are wonderful products (the four volume HS Explanatory Notes, in particular, are indispensable tools for HS classification), the instruments were designed for customs officers and other experts. They were not designed with the international trader in mind. And they were not designed with electronic data processing in mind.

These factors contribute to the difficulties associated with properly classifying products in the HS (Singh & Sahu 2004).

Gaps in terminology

Although the HS has been designed to cover goods of every kind, it does not describe every kind of good explicitly. More importantly, products are seldom described in everyday language. HS commodity descriptions are often extremely technical, legalistic and sometimes impenetrable by anyone other than a domain expert. This gap that exists between how products are expressed by trade and how they are described in the HS is exemplified as follows:

The commercial description:

"woven ladies raincoat, rubberized cotton"

is properly associated to the HS headings/subheadings that provide for:

ARTICLES OF APPAREL AND CLOTHING ACCESSORIES,
NOT KNITTED OR CROCHETED

62.10	Garments, made-up of fabrics of heading 56.02, 56.03, 59.03, 59.06 or 59.07
6210.30	- Other garments, of the type described in subheadings 6202.11 to 6202.19

Reliance on third parties

Since the cost of developing in-house HS classification expertise is beyond the reach of most companies (especially small and medium size enterprises), this function is commonly handed over to third parties such as clearing agents or customs brokers.

While it may be cost effective to subcontract the commodity reporting function to a customs broker or clearing agent, these entities do not bear the legal or financial liabilities associated with customs compliance.

This factor, combined with thinning margins, have compelled many third party service providers to treat HS classification as a clerical or data entry function rather than as one of knowledge management. When faced with deficiencies in commercial product data, clearing agents often do not consult with their clients and, instead, choose the more expedient route of assigning a code based on what was done previously for the same or a similar company.[3] In developing countries, the problem is compounded by the fact that many clearing agents are not well trained in HS classification, and most do not have classification reference materials or tools at their disposal (Nkoma 2007).

Improper tools

In addition to the lack of availability of proper tools, another important factor in the chronic misclassification of goods is the pervasive use of keyword-based search tools. These tools, which are used heavily by importers and brokers alike, are typically integrated into HS reference and global trade management/customs compliance systems. They function by searching indiscriminately for exact or partial term matches without regard for context or hierarchical structure, and normally present a long list of potential, mostly irrelevant and often erroneous HS classification candidates. Some keyword tools are enhanced with Boolean operators (that is, 'AND', 'OR', and 'NOT') and expand search terms with synonyms, but none are capable of truly reading and understanding complex goods descriptions. Keyword tools do not apply HS classification rules or take into account Section/Chapter notes; they do not process weights or measures; and they cannot match to residual headings/subheadings (that is, 'Other').

For example, a search of the item 'Paper shredder' in several of the most popular web-based HS reference tools produced the following results (Table 2):

Table 2: Search term example, 'Paper shredder'

Organisation	HS search tool	Number of potential matches	Includes correct code?
UNCTAD	ASYCUDA Online Harmonised Commodities Code database	0	No
USITC	HTS Online Reference Tool ("contains all")	0	No
USITC	HTS Online Reference Tool ("contains any")	822	No
HMRC	UK Trade Tariff	149	No
European Commission	TARIC	0	No
UPS	Tradeability Harmonizer	15*	Yes
FedEx	Global Trade Manager ("search for all of these words")	0	No
FedEx	Global Trade Manager ("search for any of these words")	156	No
DHL	Trade Automation Service Interactive Classifier	35	No
Export.gov	Customs Info	1,000**	No
Singapore Government	TradeXchange	0	No

* UPS tool returns a maximum of 15 potential matches

** Customs Info tool returns a maximum of 1,000 potential matches

On the whole, keyword-based HS tools present unacceptably low levels of precision (the measure of relevance of returned results) and recall (the measure of accuracy of returned results).

Lack of oversight

Customs itself can share the blame for perpetually high rates of commodity classification error. At one time, customs officers examined and assessed every entry. However, as the volume of cross-border trade increased, customs authorities could no longer maintain their level of vigilance without disrupting the movement of goods. Today, most customs authorities do not monitor the accuracy of commodity declarations in a comprehensive manner. Instead, voluntary compliance regimes are employed, whereby responsibility and risks have been transferred from Customs to traders (Desiderio & Bergami 2011).

The result of this paradigm shift has been more uncertainty in the quality and accuracy of reported commodity data, as well as a diminution in the likelihood that an importer/broker error will be detected (Auditor General of Canada 2010).

Attempts at solving the problem

Traditionally, commodity classification monitoring and enforcement have been addressed by a number of approaches (sometimes in combination) including:

Risk management/risk assessment

In broad terms, risk management is defined as 'a technique for the systematic identification and implementation of all the measures necessary to limit the likelihood of risks occurring' (DG Taxation and Customs Union, EU Commission 2007). Risk analysis and risk assessment is 'the systematic determination of risk management priorities by evaluating and comparing the level of risk against predetermined standards, target risk levels or other criteria' (WCO 1999).

Risk assessment is widely accepted as the only practical approach to monitoring customs entries within an environment of increasing trade volumes and declining or stagnant verification resources. Risk management is widely promoted as a best practice as it allows Customs to focus its limited resources on areas of concern while at the same time facilitating trade (WCO 2007).

There is a wide variety of customs management systems that provide some risk assessment functionality. None however, are capable of assessing the accuracy of a declared HS code by virtue of its narrative goods description. In order to flag potential misclassification, risk assessment systems employ selectivity factors which may have been assigned according to a variety of criteria, including:

- tariff differentiation
- industry or product group
- historical accuracy, or
- rate of duty.

In examining the effectiveness of the Canada Border Services Agency's risk management approach, Canada's Auditor General discovered that, despite a CAD150 million investment in automated systems for identifying high-risk people and goods, customs officers continue to rely more on their own analysis and judgment to select shipments for examination. In explaining this discretionary approach, customs officers admitted they mistrust the accuracy of the advance commercial information that is submitted to the agency's automated risk assessment tools (Auditor General of Canada 2007).

Thus, the old adage "garbage in – garbage out" is extremely relevant in a risk management environment. With commodity classification error rates averaging 30% (Auditor General of Canada 2010), input data cannot be considered reliable for risk assessment purposes. There is little doubt that risk assessment

systems extend Customs' limited reach in many important areas, however within these systems the cost of detecting commodity classification errors remains high and the likelihood of recovering unpaid duty revenues from misclassification remains low.

Post-entry audits

Generally acknowledged to be the most effective way of assuring proper classification and duty remittance, post-entry audits are also the most expensive since they require manual examination of documents by someone knowledgeable in HS classification.

In the 2009-10 fiscal year, the Canada Border Services Agency conducted about 2,700 compliance verifications, which resulted in the assessment of about CAD59 million in additional duties and taxes owing from importers. The Auditor General of Canada estimates that CAD6 in additional revenue can be recovered for every CAD1 invested in expert human review.

As enticing as these returns on investment may be, manual review can only be as effective as the size and knowledge of the audit staff. In most cases, Customs will simply not have enough manpower to properly examine each and every entry. Furthermore, the cost of properly training the army of auditors needed to carry out such an exercise would be prohibitively expensive.

Despite the efforts of such organisations as the WCO, the World Bank, and the International Monetary Fund (IMF) to build capacity in the area of post-entry verification, customs authorities have struggled to recruit and retain expert staff (Rosenberg 2007). In 2007, the United States Government Accountability Office revealed that U.S. Customs and Border Protection had frozen the number of 'maintenance of revenue' staff at 2003 levels, which at the time was 48% less than the quantity recommended in Customs' own Resource Allocation Model. The future of compliance monitoring and enforcement in the United States looks even more challenging as 25% of U.S. Customs trade employees become eligible for retirement within two years (United States Government Accountability Office 2007).

Pre-shipment inspection

Pre-shipment inspection (PSI) must be mentioned as a corollary to the audit approach. PSI companies provide for-fee compliance assurance services to countries lacking in monitoring capacity.[4] Like Customs, their success in detecting commodity reporting errors depends greatly on the training and knowledge of their audit staff. Because they constitute an outsourcing of customs responsibility, PSIs cannot be considered an attractive, long term solution to the problem of customs compliance monitoring and enforcement. The benefits and pitfalls of PSI have been discussed in many forums (see Anson, Cadot & Olarreaga 2006; Low 1995; Yang 2005) and the jury remains out on their ultimate effectiveness in combating duty evasion.

Incentives/penalties

One of the lowest cost approaches to improving the quality of commodity reporting involves the threat and imposition of monetary penalties for non-compliance. Sardonically known in many circles as 'incentives', fines have become an important tool for Customs in the voluntary compliance era, however their effect on compliance remains questionable. The government of Canada has employed the Administrative Monetary Penalties System (AMPS) since 2006. Under AMPS, approximately 1.8% of all customs entries are examined, and 0.19% are penalised. While non-compliance contraventions in Canada rose by 283% (from 6,348 to 24,328 per year), surprisingly penalty assessments fell by 21% (from 4,470 to 3,531 per year) between 2007 and 2010. This suggests that either the quality of compliance monitoring in Canada has deteriorated or Customs is forgiving many more violations. In either case, the message for importers and brokers is clear: the chances of getting caught and paying a fine in Canada are very small.

Beside the unlikelihood of a classification error being detected, the consequences do not appear to present much of an incentive either. In 2010, the average penalty assessment for failing to correct a classification error in Canada was only CAD68. This represents 0.51% of the value of the average import entry. Furthermore, 15.16% of non-compliance penalties issued by Customs were appealed and 29.67% of appeals were successful, suggesting an inconsistency in the application of Canada's compliance measurement and enforcement practices.

Manual review

No matter which approach (or combination of approaches) is employed, HS code verification ultimately requires examination of narrative data or documents by a human expert. This is why Customs normally requires importers to submit a plain language commercial product description in addition to the HS code.

> The description must be the normal trade description expressed in sufficiently precise terms to enable immediate and unambiguous identification and classification (this does not mean repetition of the description found in the Tariff Handbook alongside the relevant Commodity Code) (Tanzania Revenue Authority 2006).

Regrettably, this requirement is often ignored as many customs management systems have been programmed so that goods descriptions are automatically generated from the HS itself. This practice, known as 'HS cloning', guarantees that declared HS codes and their associated goods descriptions will always agree, and makes HS classification error detection almost impossible.

Other approaches

With so much revenue at stake, and so little evidence to suggest that traditional monitoring and compliance enforcement techniques have been successful, other approaches are clearly worth examining.

Automated HS error detection

One compelling project using automated HS error detection software was conducted in 2008 by 3CE Technologies, a Canadian technology company, at the request of the Zambia Revenue Authority (ZRA). 3CE, which specialises in HS classification and natural language processing, agreed to analyse one year's worth of commodity declarations using its HS code verification engine. The goal of the project was to identify HS classification errors, duty underpayments, and commodity reporting deficiencies.

The company's software, eponymously called '3CE', which uses proprietary artificial intelligence software to read, interpret and analyse readily available commercial commodity information, was developed with substantial input from industry domain and government experts. 3CE has successfully demonstrated high levels of reliability and accuracy in HS classification and HS code verification.[5]

3CE methodology

3CE was provided with two data sets extracted from ZRA's ASYCUDA++ customs management system:[6] a 'declaratory' set (SAD, which stands for 'Single Administrative Document') and a 'liquidation/accounting' set (IMP, which is simply shorthand for 'Imports'). It was necessary to provide two data sets because the SAD records included 'free text' product descriptions and origin information, while the IMP records included quantity and value data necessary for calculating duty underpayments.

3CE's audit process involves feeding narrative product information (that is, goods descriptions) in a batch to a query processor and inference engine. The validation process begins with an attempt by 3CE to classify the goods independently from the declarant's goods description. 3CE then compares its result with the HS code declared. Fundamentally, 3CE detects classification errors by comparing the observed data with expected values.

When products are sufficiently described, 3CE is able to confirm correct codes and flag classification discrepancies with a high degree of confidence. When critical product information is missing, 3CE provides a range of potential HS codes that were available when the classification process was stopped.

3CE confidence factors are based on the relationship between the degree to which products have been specified (that is, to which HS level – chapter, heading, subheading – classification was possible), and the number of potential commodity codes returned. Thus, when a goods description was complete enough to enable identification of one potential code at the HS 6-digit subheading level, confidence in 3CE's result was placed at 90%. However, when 3CE found multiple potential codes at the HS 2-digit Chapter level, goods descriptions were considered substandard, and a lower confidence factor was assigned.

For the purposes of calculating duty losses, only records with a confidence factor of 70% or higher were considered.

When the classification audit was completed, a duty loss calculation was performed by matching the SAD records with the IMP records.

3CE results and observations – classification

A total of 856,501 SAD records were submitted to 3CE for evaluation, representing approximately 71,000 man-hours.[7] The total processing time for these records was approximately eight hours on a single instance of the 3CE software.

Of the 856,501 total SADs submitted, 830,521 records (96.97%) contained some narrative product information, and 25,980 records (3.03%) contained no narrative description whatsoever. Within the set of 830,521 records containing some narrative product detail, 3CE was successful in identifying the imported good on 762,986 records (91.87%). 3CE was unable to identify any discernible item on 67,535 records (8.13%) (for example, 'VELSPAN').

Despite the high level of product recognition, the majority of records still did not have sufficient product detail to enable validation of the declared HS code to the universal 6-digit subheading level. 3CE found that 731,763 of records (85.44%) were underspecified for the purpose of HS 6-digit subheading level validation.

The remaining 124,738 records (14.56%) were sufficiently detailed to enable validation of the declared HS code to the 6-digit level.

Within this set of fully-specified records, 3CE detected 37,066 HS classification discrepancies – an error rate of 29.72%. Some examples of classification errors and duty discrepancies detected by 3CE are identified in Appendix 1.

3CE results and observations – duty underpayments

Although actual duty payment information was not included in the SAD data, 3CE was able to extrapolate potential duty losses from accounting information provided in the IMP data.

In order to identify potential duty losses, 3CE examined the 37,066 records that were fully specified and incorrectly classified. 3CE compared the declared rate of customs duty associated with each incorrectly classified entry with the proper duty rate associated to the proper HS code. Since 3CE only looked at HS 6-digit subheading level discrepancies, it was necessary to associate the duty payment discrepancies to a range of duties in some cases, whereby the minimum, maximum, or average values were less than the value associated to the entry. 3CE also took into account the declared countries of origin and their associated preferential rates.

Using this method, 3CE was able to identify 3,175 records (8.56%) with a likely duty payment loss. The average applied rate of duty for incorrectly classified SAD records was 3.30%, whereas the average

rate of duty for these records should have been 10.81% according to 3CE. This created a duty payment gap of 7.51%.

Simple multiplication of the observed rate of classification error, the duty values of non-preferential entries and the duty payment gap, revealed an estimated duty underpayment of USD8.724 million for 2008.

Table 3: Estimated duty underpayments identified by 3CE

Total import duties assessed, 2008	USD 427,969,042
Observed rate of HS classification error	29.72%
Estimated value of duties from misclassification	USD 127,192,399
Observed ratio of non-preferential tariff treatment by value	91.33%
Estimated value of duties (Net of preferential treatment)	USD 116,164,818
Observed duty payment gap	7.51%
Estimated value of underpayments due to classification error, 2008	**USD 8,723,978**

Conclusions

There are numerous HS users, all of whom need simplified and automated access to the HS. They include:

- Customs officers – both HS experts and non-experts
- Statisticians, economists and trade analysts
- Trade negotiators
- Environmental organisations
- Other trade related government and international organisations (including NGOs)
- Customs brokers and freight forwarders
- Customs and international trade lawyers
- Shippers
- Importers and exporters
- Trade associations.

Things have changed since the HS was drafted in the ’70s and ’80s. As already noted, there has been an incredible increase in the volume and speed of international trade. There has also been an incredible increase in the turnover of the types of goods being traded. The uses of the HS have multiplied. The need for accuracy of HS classification information is greater than it has ever been. And finally, the state of automation today has made simplified and automated HS classification tools possible.

I believe that the Zambian project detailed above amply demonstrated the utility of automated and intelligent expert HS classification systems.

This paper has attempted to determine the extent to which commodity classification errors contribute to government revenue shortfalls. It has also explored the feasibility of using advanced technologies to comprehensively monitor HS declarations and detect duty underpayments.

Misclassification remains a chronic and costly problem for customs authorities worldwide largely because Customs has been unable to reconcile the cost of detecting classification errors with the revenues to be gained by detecting them.

A persuasive argument can be made for 100% verification when:

- the flow of trade is not impeded
- the revenues recovered exceed the cost of implementation and operation
- the processes and technologies used are reliable
- there is a demonstrable improvement in compliance and data quality.

When these criteria are met, unobtrusive and intelligent monitoring and enforcement technologies have the ability to provide broader benefits to Customs, including:

Building capacity. The use of intelligent automation technologies builds capacity by enabling effective and sustainable customs management. They fill gaps where monitoring is unsystematic and limited in scope; they enhance the effectiveness of risk assessment and targeting systems by assuring data quality; and they enable optimisation of resources.

At the same time, adoption of such technologies helps to build and protect Customs' knowledge assets, which promotes autonomy and reduces the need for outsourcing compliance management activities.

Assuring integrity. The adoption of automated compliance enforcement tools is consistent with GATT Article X, which addresses the need to administer laws, regulations, decisions and rulings related to imports and exports in a uniform, impartial and reasonable manner.

Eliminating discretion at the border provides trade stakeholders and investors with the assurance that the rule of law is applied. For the trade community, customs integrity means that the playing field is level, and that companies that invest in compliance management are not disadvantaged by those who do not.

Facilitating trade. The use of unobtrusive intelligent automation technologies facilitates trade by allowing Customs to eliminate outdated procedures (such as manual documentary checks) without diminishing its ability to monitor and control trade transactions. This reduces the likelihood of unnecessary audits, and streamlines throughput by enabling the identification of low-risk traders and goods.

Single window initiatives have become benchmarks for trade facilitation because they eliminate redundant procedures and promote standardisation. Proper and efficient use of single window systems depends critically on accurate HS classification. Compliance monitoring and enforcement technologies can play an important role in the accuracy and utility of single window systems.

Ultimately, discreet and intelligent monitoring technologies can facilitate trade by improving productivity and efficiency thereby allowing Customs to manage situations and not simply react to them.

Recommendations

Overall, the literature on HS classification errors is scant. The lack of information on the extent that these errors have impacted such areas as trade statistics, trade policy development, admissibility, and cargo risk assessment is unknown. Therefore, further study is warranted.

The examination of commodity reporting in Zambia has demonstrated that the use of intelligent, knowledge-based technologies can extend Customs' compliance management capabilities. Unfortunately, aside from that initiative, there are few examples of artificial intelligence used in a compliance management setting. Consequently, it would be instructive to conduct additional research in this area to determine the extent to which technologies of this type can support such areas as duty payments, commodity data quality, customs integrity, and risk assessment.

Appendix 1

Examples of HS classification errors and duty payment discrepancies discovered by 3CE automated audit of declarations made to the Zambian Revenue Authority.

		HS CODE	DUTY RATE (%)	TARIFF DESCRIPTION
"STARTER MOTOR" (Sample ID SAD1-27)				
x	SAD	85012000	5	Universal ac/dc motors of an output >37.5 W
✓	3CE	85114000	15	Starter motors and dual purpose starter-generators
				Duty discrepancy = 10%
"WHEEL BARROW" (Sample ID SAD1-4390)				
x	SAD	87131000	0	Invalid carriages, not mechanically propelled
✓	3CE	87168000	15	Vehicles, not mechanically propelled, nes
				Duty discrepancy = 15%
"LINE TRAP 630 Amps, 0.2mH" (Sample ID SAD1-20439)				
x	SAD	85045000	5	Inductors, nes
✓	3CE	85423300	15	Amplifiers...Electronic integrated circuits
				Duty discrepancy = 10%
"STC STEEL CHANNELS & BEAMS" (sample ID SAD1-20851)				
x	SAD	72166900	0	ANGLES,SHAPES..OF IRON/STEEL,NOT FURTHER WORKED TH
✓	3CE	73089010	15	gates of a kind used for agricultural or railway f
		73089020	15	Structures and parts of structures, nes, of iron o
		73089030	15	Structures and parts of structures, nes, of iron o
		73089040	15	Structures and parts of structures, nes, of iron o
		73089050	15	Structures and parts of structures, nes, of iron o
		73089090	15	Structures and parts of structures, nes, of iron o
				Duty discrepancy = 15%
"HYDRATED LIME" (sample ID SAD1-23056)				
x	SAD	25223000	5	Hydraulic lime
✓	3CE	25222000	25	Slaked lime
				Duty discrepancy = 20%
"FOUNDRY COKE" (Sample ID SAD1-52858)				
x	SAD	27082000	5	Pitch coke obtained from coal tar or from other mi
✓	3CE	27040000	15	Coke and semi-coke of coal, of lignite or of peat;
				Duty discrepancy = 10%

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Endnotes

1 Extrapolated from World Trade Organization (WTO) Country Profiles, International Monetary Fund (IMF) Survey to determine the percentage of national revenue represented by customs duties, 2011, and Auditor General of Canada reports concerning compliance measurement 1994, 1997, 2001, 2003, 2007, and 2010.

2 A more complete description of the Harmonized System and its uses can be obtained from the World Customs Organization (WCO), www.wcoomd.org.

3 In a recent, high profile example of broker negligence, UPS Customhouse Brokerage, Inc. was found guilty of failing to 'exercise the control and supervision necessary to reasonably conduct its customs business'. U.S. Customs and Border Protection fined UPS for repeatedly misclassifying goods under subheading 8473.30, despite repeated warnings and remedial training. UPS was eventually able to stop misuse of subheading 8473.30, but only by removing the tariff code from its computer system entirely so that its employees could not physically enter the number onto an Entry Summary. 'This is a sad statement about the level to which UPS had to descend to attain broker compliance. Moreover, while this measure did reduce the number of entries containing goods classified under 8473.30.9000 for a short time, a computer upgrade led to the reappearance of the tariff code in UPS' system. Once it returned to the system, UPS employees once again improperly used the tariff item despite CBP's continued warnings not to do so' (Pike & Parga 2009).

4 Across all countries using PSI between 1990 and 2000, estimated PSI fees amounted to an average of 1.3% of central government tax revenues (Yang 2005).

5 In 2006, 3CE scored 93% in an HS classification competition hosted by the World Customs Organization. This compared very favourably with the results of its expert human competitors who recorded average scores of 77% (for 100 government experts) and 68% (for 95 experts from the private sector). 3CE's audit results have been vetted independently by commodity classification experts. 3CE software is used by many organisations, including U.S. Customs and Border Protection, the United States Census Bureau, and the European Commission – Eurostat.

6 **A**utomated **SY**stem for **CU**stoms **Da**ta.

7 Assuming that it would take a human expert five minutes to examine one record.

Holm Kappler

Holm Kappler is currently an attorney and consultant specialising in customs tariff issues. Most recently he assisted the Association of Southeast Asian Nations (ASEAN) with the modernisation and simplification of the ASEAN Tariff Nomenclature. Holm was the Director of Tariff & Trade Affairs at the World Customs Organization from 1999 through 2003.

Trade facilitation and supply chain security: a globally integrated approach

Andrew Jackson

Abstract

This article provides real world 'practitioner' examples and case studies on IBM's multi-tiered approach to driving results in the critical areas of trade facilitation and supply chain security. It focuses on three key areas: 1. Global standards and initiatives; 2. Capacity building and knowledge transfer, and 3. Country-focused activity. The paper highlights not just the contribution that IBM has made in these areas but the increasing momentum in the development of programs and practices with mutually beneficial outcomes for governments and industry. Finally, it uses these examples and observations to provide some recommendations on how the globally integrated nature of international firms can be better leveraged to help drive efficiencies and competitiveness at the border.

IBM currently operates in over 170 countries and moves approximately USD20 billion + worth of goods around the globe annually. In addition, it employs over 400,000 people and had annual revenues of USD99.9 billion in 2010.[1] As a truly global provider of IT hardware, software, services and consulting, the company is able to provide unique insights into important developments in the global economy as a business, a committed corporate citizen and as an innovator.

This article provides a number of real world examples and case studies of IBM's global efforts in the areas of trade compliance and trade facilitation. These examples are separated into three distinct areas that reflect IBM's multi-tiered approach which could be summarised as 'Think Global – Act Local':

1. Global standards and initiatives

2. Capacity building and knowledge transfer

3. Country-focused activity.

Firstly, however, let's look at a recent example of the global capability and capacity of a truly multinational firm to drive significant benefit in the global community.

To help celebrate its 100-year anniversary in 2011, IBM is currently undertaking a worldwide *Celebration of Service*[2] initiative.

During the *Celebration of Service*, IBM volunteers, including current and past employees, are making history by sharing their time, skills and expertise at schools and community organisations worldwide. Nearing the middle of 2011 more than 300,000 IBMers in 120 countries had logged 2.5 million hours on over 5,000 projects and by mid-July more than 2.8 million hours of community service had been registered equivalent to 972 years of service.

Although obviously not directly relevant to trade compliance, this example provides a simple yet powerful illustration of a 'borderless' initiative that combined the skills and knowledge of IBM employees (past and present) worldwide to achieve significant social and community outcomes on a global scale in a

relatively short timeframe. While borderless trade may indeed be some way off, the nature of the modern global enterprise perhaps provides some insight into what we can aim to achieve in the future.

1. Global standards and initiatives

The top tier of IBM's globally integrated approach to trade compliance is active involvement in international trade compliance and trade facilitation fora.

The area where IBM has been most active in this sphere in recent years is Authorised Economic Operator (AEO) implementation under the auspices of the World Customs Organization's (WCO) SAFE Framework of Standards to Secure and Facilitate Global Trade[3] (IBM has previously contributed to this Journal on that topic; see Fletcher 2007).

IBM is also a member of the WCO's Private Sector Consultative Group and has participated in and presented at numerous forums such as the WCO Capacity Building Committee, Asia-Pacific Economic Cooperation (APEC) and Association of Southeast Asian Nations (ASEAN) on the topic of supply chain security, trade facilitation and customs compliance. In addition, we are active in numerous trade-focused industry associations and working groups across the globe (nearly 30 at last count[4]).

More importantly, however, we have worked with a number of countries worldwide on the development and implementation of their AEO programs and have been a strong proponent of the mutual recognition aspect of this process having assisted a number of countries in their efforts to improve Customs-to-Customs collaboration on AEO development. In recent years, we have joined programs in France, Hungary, Ireland, Japan, the Netherlands, United Kingdom, United States of America, Canada, Singapore, Spain, and Korea. We are also currently involved in program development and application processes in Germany, Malaysia, Denmark, the Czech Republic, Italy, Hong Kong, and the Philippines, and participated in Australia's pilot program in 2006-07.

We also participate in more than a dozen trade facilitation/compliance-focused programs worldwide (for example, Import Self Assessment, Accredited Client, Gold Card and Super Green Lane[5]) and are continually advocating the introduction of similar initiatives in other countries.

We have also worked closely with the World Bank via the Aid-for-Trade Facilitation initiative to develop a practical framework for improving Customs-to-Business relationships (see next section).

2. Capacity building and knowledge transfer

The second tier of IBM's approach to trade compliance is in the critical area of capacity building and leveraging our global exposure to customs processes and procedures to introduce some mutually beneficial initiatives that reflect best practice but are not onerous in terms of requiring significant resources or regulatory change.

This approach is not about applying for existing programs or adhering to existing standards but encouraging adoption of best practices in private/public sector collaboration – particularly in developing regions. This is consistent with IBM's stated focus on growth markets with emerging countries such as Brazil, China and India which are expected to have doubled the GDP growth of the developed world through to 2015.[6]

As mentioned earlier, one of IBM's initiatives in this area in recent years involved working with the World Bank on an Aid-for-Trade Facilitation project. At the 2005 World Trade Organization's (WTO) Hong Kong Trade Ministerial meeting, the Aid-for-Trade agenda was launched. Aid-for-Trade is the share of official development aid dedicated to building developing countries' physical, human, and institutional capacity to trade.

With the assistance of the TechAmerica industry association, IBM worked closely with the World Bank in 2009 and 2010 on a trade facilitation proposal designed to help developing countries create a 'Trusted Partner Framework' with the private sector.

This relatively low-cost, high-return initiative involves developing a 'trusted partner' framework based upon the capacity for multinational companies and international organisations to share their experiences in working with trade facilitation-focused customs authorities and governments. To help overcome differences in individual countries, this would involve a modular approach focusing on the following two areas:

Information availability and access. Access to timely, accurate and transparent information on customs requirements is often overlooked when considering trade facilitation improvements in customs-related activities. It is, however, one of the most critical tools for providing certainty for industry in cross-border trade. This increased certainty leads to more efficient and, importantly, more compliant transactions. Simple initiatives such as websites (in key languages), online gazettes of customs decisions, and the establishment of formal industry consultation procedures and guidelines can provide marked improvements in efficiency and compliance – for Customs and the trade.

Customs client manager (that is, a single point of contact for an industry or significant importer). Many modern customs administrations have established a 'client'-based approach to dealing with important industry sectors and/or companies. This usually takes the form of dedicated account managers that are assigned to look after a specific industry or group of companies. These account managers or client coordinators act as the first point of contact for the industry or company and liaise on a regular basis, providing information and helping to resolve issues. While they do not necessarily have the skills and/or authority to resolve all issues that arise, they do provide an efficient and reliable conduit for traders to access Customs. This, in turn, can have significant benefits for the customs authority concerned as many issues can be dealt with expeditiously (and compliantly) through this channel, thereby avoiding more formal, resource-intensive processes.

These initiatives were aimed at addressing a number common challenges faced by multinational companies in the global trading environment while also introducing some best practice approaches garnered from dealing with more than a hundred customs agencies worldwide.

To date, we have not been able to identify a specific country in which to undertake a pilot project, however, we have seen many countries begin to adopt elements of this program as their relationship with the private sector moves from an enforcement focus to a facilitation agenda.

3. Country-focused activity

The third tier in IBM's trade facilitation agenda involves a direct action approach to building relationships with individual customs authorities, and driving initiatives that achieve tangible results consistent with Tiers 1 and 2.

In recent years, IBM has worked directly with a number of countries, including some of our fastest growing markets, to help drive improvements in trade facilitation, compliance and supply chain security.

We have found that by creating trusted partnerships with Customs and other government agencies, we can realise tangible results for our business while contributing to the broader economic development goals of these countries through the promotion of more efficient customs operations.

The following examples detail some of IBM's efforts in this area:

South Africa – Advanced Accreditation/Preferred Trader Pilot Program

As members of the WCO, South Africa and the South African Revenue Service (SARS) have committed

to introduce WCO AEO standards. They have adopted a phased approach to AEO, ensuring it is implemented in a collaborative environment. Advanced Accreditation/Preferred Trader is a stepping stone to AEO that initially focuses on compliance.

IBM met with SARS in May 2009 and urged them to push forward with their commitment to implement an AEO program. We also volunteered our experience with implementing AEO programs in other countries around the world and offered to participate in a pilot program should one be developed.

SARS is now piloting an Advanced Accreditation/Preferred Trader Pilot Program with key clients in government priority industries in South Africa. IBM was invited to participate in the pilot due to our excellent relationship and willingness to share our global experience in the development and implementation of such programs.

India – Mutually beneficial border management initiatives

Based on the trust and relationship we built with Indian Customs, they recently allowed IBM to use 'along-side delivery' of shipments in Bangalore.

'Along-side delivery' means we are able to take delivery of shipments on the tarmac alongside the aircraft. This requires IBM cargo to be identified and de-palletised for delivery after the flight lands.

This has helped us clear our shipments within a few hours of landing in the country, as opposed to the previous clearance time of 10 to 12 hours. We have been able to improve our cycle time and are now looking to extend this arrangement to other ports.

Importantly, Indian Customs saves resources by avoiding moving the goods to warehouses, and with customs duties prepaid, they collect revenue faster.

Indonesia – 'Best Importer Award'

Through our engagements with Indonesian Customs and related government agencies, over time IBM has been able to establish an excellent working relationship that has benefited our business. As a result of our efforts, last year Customs recognised IBM with the 'Best Importer Award' based on our:

- honesty and integrity in all our interactions with Customs and other government agencies
- compliance with all regulatory requirements
- completeness and accuracy in all customs declarations
- responsiveness, completeness, accuracy and professionalism in all enquiries.

This is by no means an exhaustive list but is indicative of a genuine attempt to engage Customs at the operational level where most, if not all, meaningful reform needs to be executed. In many cases, IBM's progress with these issues has been facilitated by our willingness to share global best practices and articulate how public/private cooperation can result in mutual gains for all parties involved.

Conclusions and future challenges

Hopefully, this article has provided the reader with some insight into the strategic yet pragmatic multi-tiered approach IBM has taken in recent years towards trade compliance and supply chain security issues. Our aim is to create and sustain a secure, compliant and efficient supply chain for IBM while fulfilling our obligations as a leader in the global trade community. All of these efforts are built on a culture of trust and responsibility, and a foundation of compliant execution while also identifying and addressing exposures via a thorough internal self-detecting and self-reporting process. As evidenced by our *Celebration of Service* initiative, IBM is in a unique position to leverage its skills, experience and global reach beyond individual borders and traditional trading blocs to assist in the development of beneficial trade and security initiatives.

The global trade environment still faces many challenges with protectionist agendas still rife and non-tariff barriers continuing to proliferate. From the technology industry perspective, product stewardship, various restrictions on used/refurbished parts (including onerous inspection regimes) and country-specific labelling requirements continue to create unnecessary burdens on industry, often without achieving their intended policy outcomes.

On a positive note, IBM continues to see encouraging signs of increasing industry engagement on trade compliance and facilitation in its key markets and will continue to support, contribute and participate in this via the globally integrated model described above.

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Endnotes

1 See IBM Annual Report 2010 pp. 2, 54.

2 Viewed 21 July 2011, www.ibm.com/ibm100/us/en/service/.

3 www.wcoomd.org/files/1.%20Public%20files/PDFandDocuments/SAFE%20Framework_EN_2007_for_publication.pdf.

4 For example, Canadian Manufacturers and Exporters, US Chamber of Commerce, US-India Business Council, High Tech Supply Chain Security Coalition (HTSC2), Irish Business and Employers Confederation, Manufacturers Association of IT Products (India), AMCHAM Thailand.

5 Countries include the USA, France, Canada, China, Korea, India, Mexico, Taiwan, Thailand, Colombia, the Philippines and Peru.

6 See IBM Annual Report 2010, p. 5.

Andrew Jackson

Andrew Jackson is the Executive Program Manager, Growth Markets for IBM's Import Compliance Office, focusing on customs regulatory and supply chain security issues in emerging countries. He has previously engaged in high level dialogues in key Asia-Pacific economic forums such as ASEAN and APEC and was appointed Chairman of the US-ASEAN Business Council's Customs Working Group in early 2006. Andrew holds a Bachelors degree in communication and a Graduate Diploma in economics from the University of Canberra. Prior to joining IBM as Government Relations Executive in 2004, Andrew worked as IT Adviser to Senator the Hon. Richard Alston and for several Australian Government departments including the Australian Customs Service.

Customs Union between the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation within the framework of the Eurasian Economic Community

Igor Krotov

Abstract

This paper provides an overview of the current status of the Customs Union (CU), an integrated customs area which forms part of the Eurasian Economic Community (EurAsEC). It draws attention to the procedures in place or in the process of being determined, and identifies differences and similarities in those procedures when looked at from other countries' points of view. The paper concludes that the changes over the recent past have, to an extent, influenced customs matters and foreshadows that other countries may join the CU.

Introduction

The Customs Union of the Republic of Belarus, the Russian Federation and the Republic of Kazakhstan (the CU) is an integrated customs area which forms part of the Eurasian Economic Community (EurAsEC).[1] It has a population of 167 million, a total GDP of USD2 trillion and a goods turnover of USD900 billion. Its potential participants include the Republic of Tajikistan, the Kyrgyz Republic, the Republic of Uzbekistan, and the Republic of Armenia.

The establishment of the CU was formalised by the signing of the Treaty on the Establishment of an Integrated Customs Area and Formation of a Customs Union in 2007 (the CU Treaty). The related control agencies and regulatory environment were founded in 2007-10, and the CU came into effect on 1 January 2010. The member states aim to establish a single economic area and remove state borders to facilitate the freedom of movement and establishment of their citizens within the territory of the CU by 1 January 2012.

The Customs Union's administration system

The CU's regulatory system is similar to those of other customs unions. For example, the regulatory bodies of the European Customs Union are the European Council, the Council of Ministers and European Commission; those of the South African customs union are the Council of Ministers, Customs Union Commission and Customs Union Secretariat and – last but not least – in the Cooperation Council of the Arab States of the Gulf, the customs union is represented by the Supreme Council, Council of Ministers and General Secretariat. The following outlines the structure of the Eurasian Economic Community's (EurAsEC) customs union.

The CU is managed by the regulatory bodies of the EurAsEC. Its supreme body is the Interstate Council EurAsEC (the Mezhgossovet), which is a supranational institution established by the Treaty Establishing

the Eurasian Economic Community of 10 October 2000. The Mezhgossovet consists of state and government leaders of EurAsEC member states and is presided over by a chairman who is elected every six months. It meets several times a year to discuss the overarching strategic plan.

Also within the Mezhgossovet there is the Expert Council of the Customs Union. This body consists of five experts in the fields of law and international commerce from each member state. Its task is to review applications by natural and legal entities of member states to ensure that the legally binding decisions of the Customs Union Commission (CUC) comply with the regulations and policies of the CU. The Expert Council is supported in logistical matters by its secretariat, represented by the Legal Department of the CUC Secretariat.

The Agreement Establishing the Customs Union Commission of 6 October 2007 (the CUC Agreement) was signed at the same time as the CU Treaty. The CUC is a standing body whose main task is to ensure the proper functioning and development of the CU at the supranational level. To this end, it continuously monitors the implementation of its decisions by member states. Its members are the deputy governmental leaders of member states who meet at least once a month; like the Mezhgossovet, its chairman is elected biannually. The CUC acts on the authority of member states and its functions include implementing the resolutions passed by the Mezhgossovet, issuing recommendations on the formation and functioning of the CU, implementing international agreements and cooperating with the governmental agencies of member states. Since 1 January 2010, the CUC has been authorised to make decisions on the following issues:

- changing import customs duty rates
- maintaining the classification of goods for foreign economic activity
- setting tariff exemptions and tariff quotas
- defining the system of tariff preference
- introducing non-tariff regulations.

The decision-making procedure is defined in Article 7 of the CUC Agreement. The CUC's decisions are drawn up using special forms and require the signature of all its members. To date, the following decisions have been approved: Resolution of the Customs Union Commission, Letter of the Chairman of the Customs Union Commission, Letter of the Customs Union Commission, Note of the Customs Union Commission, Letter of the Executive Secretary of the Customs Union Commission, Letter of the Secretariat of the Customs Union Commission, and the Letter of the Deputy Secretary of the Customs Union Commission. It has also issued a separate application form for changing rates of import duty.

The CUC's instruments are legally binding on CU member states and take effect thirty calendar days after their official release. In cases of urgency, the CUC can bring forward its entry into force but not before the instrument's official release date. Its decisions are only deemed officially released once they have been published on its website (the documents of the CU will also appear in English translation). The CUC is also authorised to make non-binding recommendations.

In accordance with the terms of an agreement with the Russian government, the CUC is based in Moscow, the capital of the Russian Federation. The conditions for locating the CUC on Russian territory are defined in an agreement between it and the Russian government. According to the Commission's rules of procedure, meetings take place once a month and are closed to the public. The time and venue are determined at the previous meeting and the agenda agreed twenty days in advance. Meetings will only be considered legitimate if there is full attendance by CUC members. Extraordinary sessions can be convened either at the request of the Mezhgossovet or any CUC member.

The CUC heads a Committee on the Regulation of Foreign Commerce (the Committee) consisting of two representatives from the executive authorities of member states responsible for customs tariff and non-tariff regulation. The overall management of the Committee's activities is performed by a chairman

who is elected from the Committee members and appointed by the CUC. The chairman considers the introduction, application, amendment or termination of measures regulating foreign trade with non-member states. It also drafts recommendations for consideration by the CUC. Its budget is financed by the contributions of member states in proportion to their voting rights.

The CUC's executive body is the Secretariat. Its main tasks are to coordinate the activities of the Commission, Committee and the Mezhgossovet, to disseminate information and provide technical support. The Secretariat also prepares drafts of international treaties and resolutions and produces materials and recommendations on subjects such as the formation of a customs union, the functioning and establishment of an integrated customs territory, the monitoring and analysis of member states' legislation as well as compliance with international agreements and resolutions of the Mezhgossovet and CUC. The Secretariat also prepares the CUC's budget and reports on its implementation.

The Secretariat is headed by the CUC Executive Secretary which consists of one deputy from each member state (with the exception of the member state that the Executive Secretary represents). The Executive Secretary participates in meetings of the CUC and Mezhgossovet; and can also be authorised to plan the CUC's financial and material resources, conclude civil law agreements and appear at judicial proceedings.

The Secretariat's structure is regulated by Resolution No. 53 of the 'Structure of the Secretariat of the Customs Union Commission for 2011' which was passed by the Mezhgossovet on 5 July 2010. The Secretariat currently consists of the Commercial Policy Department; Customs Tariff and Non-tariff Regulation Department; Customs Administration Department; Department for the Policy of the Technical Regulation of Sanitary, Veterinary and Phytosanitary Measures; Financial Policy Department; Customs Statistics Centre (as the Statistics Department); Administrative Department; Legal Department; and the Department for Protective Measures in External Trade. The structure of the Secretariat and the number of its employees are reviewed annually.

The Measures for the Implementation of an Action Plan for the Formation of the Customs Union set up expert groups to draft reports on the following areas: customs and tariff regulation, non-tariff regulation, technical regulation implementation of sanitary, veterinary and phytosanitary measures, customs administration and statistics, indirect taxes, information technologies in the customs union, special protective, anti-dumping and compensation measures, and so on. In order to review a specific issue, the CUC establishes working groups including experts from member states and sub-groups.

The Secretariat also heads a Scientific and Expert Council (the SE Council), which acts as its specialist advisory body. It carries out scientific and legal assessments of proposed international treaties and resolutions of CU agencies, defines strategies for improving international cooperation involving the CU in terms of commercial, economic, monetary and fiscal policy, customs administration, control of tariff and non-tariff regulations, as well as external and internal trade statistics. The SE Council's activities are coordinated by the Executive Secretary who issues an order confirming its composition.

Disputes arising between members are settled by the Court of the Customs Union (the CU Court). Its task is to ensure compliance with CU legislation and settle disputes between member states. To date, the functions of the CU Court are performed by the Court of the EurAsEC which thereby follows the fundamental principles of equality, freedom, coordination, unity, observance of delegated rights, proportionality, trust, justice, consistency and double jeopardy. The member states, CU agencies and economic entities registered within the territory of the member states have standing to challenge the legitimacy of CU legislation or bring a complaint against a member state for violating its obligations.

The member states have also established the Associated Board of the Customs Administration of Member States (the Associated Board) to coordinate the actions of customs administrations, ensure that the CU's targets and objectives are met and that customs law and regulations relating to matters within the jurisdiction of national customs bodies are applied uniformly. The Associated Board consists of the

directors-general of customs administrations in member states. They are presided over by a chairman who is elected by the board from amongst its members. The Associated Board has a secretariat which provides organisation, information and technical support. Its functions are performed by the Customs Administration of the Russian Federation. The Associated Board coordinates the activities of customs authorities; contributes to the development of a common regulatory environment for customs matters; and ensures the consistent application of customs law as well as common procedures for customs clearance and control. It also facilitates the implementation of customs policy within CU territory.

Customs legislation of the Customs Union

There are ten major sources of customs legislation in the EurAsEC Customs Union:

1. The Treaty Establishing the Eurasian Economic Community of 10 October 2000
2. The Agreement Establishing an Integrated Customs Territory and Formation of a Customs Union of 6 October 2007
3. The Agreement on the Customs Union Commission of 6 October 2007
4. The Common Customs Tariff of the Customs Union of the Republic of Belarus, Republic of Kazakhstan and the Russian Federation
5. The Common non-tariff regulations (unified list of goods whose import/export is subject to prohibitions/limitations imposed by CU member states within the framework of the EurAsEC in relation to trade with third countries and having regard to the rule on limitations)
6. The Customs Code of the Customs Union 2010 (the CU CC)
7. Resolutions of the CUC regulating legal relationships within the CU in accordance with the CU CC and international treaties of the member states and having direct effect
8. International treaties[2]
9. The Customs Codes,[3] resolutions, laws and regulations of CU member states
10. General legal principles.

A number of agreements on customs clearance have been signed, including the Agreement between the governments of the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation of 12 December 2008 on the types of customs procedures and customs regimes; the agreement between the governments of the Republic of Belarus, Republic of Kazakhstan and the Russian Federation of 12 December 2008 on the procedure for goods customs declaration, and Resolution No. 4 of 12 December 2008 on the formation of a legal environment for the CU within the framework of the EurAsEC. This Resolution includes an attachment containing the following agreements and protocols:

- Protocol on the conditions and procedure of application, in exceptional circumstances, of import customs duties which differ from the rates of the common customs tariff
- Agreement on the conditions and mechanism of tariff quota implementation
- Protocol on the provision of tariff exemptions
- Protocol on the common system of tariff preferences within the CU
- Agreement on the procedure for declaring goods
- Agreement on the procedure for the calculation and payment of customs charges in the CU member states
- Agreement on the procedure for customs clearance and control in CU member states
- Agreement on the types of customs procedures and regimes
- Protocol on the uniform application of valuation rules for CU imports and exports
- Agreement on the procedure for declaring the value of CU imports and exports
- Agreement on the procedure for verifying the correct valuation of CU imports and exports

- Protocol on the exchange of information required for determining and verifying the customs valuation between customs agencies of the Republic of Belarus, the Republic of Kazakhstan and the Russian Federation
- Agreement on the rules for establishing the source of goods originating from developing and the least developed countries.

An information portal (www.tsouz.ru) has been set up in accordance with CUC Resolution No. 62 of 25 June 2009 on the establishment of an official information tool (internet portal) of the CUC. According to the Decision of Interstate Council EurAsEC No. 15 of 27 November 2009, the regulations published on the official site of the CUC have the same legal effect as the official printed publication. The CUC has also developed a common procedure for implementing its resolutions in member states.

Customs clearance

Customs clearance is performed according to the CU CC which entered into force on 1 July 2010. The CU CC is mainly based on the regulations of the *International Convention on the Simplification and Harmonization of Customs Procedures* (the revised Kyoto Convention). In general, the procedure for clearing CU imports and exports reflects the procedure in Russia since most regulations of Russian law are compliant with the revised Kyoto Convention. That said, citizens and foreign commerce agents should be aware of the following aspects.

1. The national residency principle. The CU CC stipulates that the customs declaration is subject to the national residency principle. Article 368 of the CU CC states that the declaration is to be submitted to the customs authorities of the country where the customs applicant resides or is registered. Therefore, Russian legal entities and private entrepreneurs must submit their declarations to the customs authorities of the Russian Federation. This is related to the fact that the customs code is the only piece of legislation which applies uniformly throughout the CU whereas others (regulating, for example, civil law, bank and tax legislation) apply only nationally. This transitional provision does not apply to natural persons transporting goods for personal use, or to the customs transit procedure. In the future the customs declaration may by submitted to the customs authorities of any country regardless of residence of applicant.

2. The procedure for customs declarations. Imported goods are subject to the following sequence of customs operations: the arrival of goods to the CU territory, their temporary storage at the arrival point or transportation in accordance with the transit procedure, and presentation to the customs authority where the customs declaration is to be submitted in accordance with the procedure chosen by the customs declarant. The export declaration is to be submitted in accordance with the export procedure and export customs operations are to be performed at the place of departure from the customs territory of the CU. Goods considered foreign for customs purposes are temporarily stored and transported within the CU territory under the transit procedure.

The main difference with the current procedure is as follows: foreign goods imported into any CU member state and released for free circulation as CU goods subject to the relevant customs procedure can be freely circulated within the entire CU territory. From 1 July 2010, the right to release goods for free circulation in the CU territory applied to goods originating from the Russian Federation, the Republic of Belarus, the Republic of Kazakhstan, as well as to goods deemed to be of a domestic nature for CU member states on this date. However, an exception to this rule applies to dutiable imports where the rate applied by a CU member state is lower than that in the common customs tariff. In this respect, Kazakhstan applied customs duties for the separate commodity items at a lower rate than those in the Common Customs Tariff before 1 January 2015. It is also possible to establish a similar rule on the basis of an international agreement dealing with vehicles imported by natural persons and released into free circulation during the period between the entry into force of the Common Customs Tariff of the

Customs Union (1 January 2010) and the commencement date of the CU. Such goods will be considered conditionally released and are not to be used outside the territory of the CU member state whose customs authority released them. The outstanding customs duties must be paid before they can be transported to the territory of another CU member state.

The CUC resolution No. 199 of 25 March 2010, on the mechanism for the assignment and distribution of customs duties (other equivalent duties, taxes and levies) breaks down the amount of import duties payable to each party as follows: the Republic of Belarus 4.70%; the Republic of Kazakhstan 7.33%, and the Russian Federation 87.97%.

3. Transit. The CU CC provides for a common customs transit procedure which – unlike the Russian customs code – does not divide the transit procedure into internal transit (that is, solely within the territory of the Russian Federation) and international transit (that is, through the territory of the Russian Federation). This amendment also serves to simplify legal implementation. The transit procedure is also subject to general provisions regarding declaration of goods in accordance with the selected procedure (Art. 27 CU CC). The transit declaration is one type of customs declaration: it is still possible to use transportation, commercial or other documents, as well as documents stipulated by international treaties (particularly a TIR carnet and accompanying documents). The list of data to be provided in the transit declaration has not undergone any significant changes, with the following exceptions:

- a transit declaration is to include at least the first six digits of the commodity code as required by the Commodity Classification of the CU (as opposed to four digits stipulated by the Customs Code of the Russian Federation) and information about the documents confirming compliance with border crossing restrictions (if the documents are sufficient for such transportation)
- certain information (that is, vehicle driver data, estimated transit time) is not required.

The transit declaration is to be submitted to the customs authority of destination in hard (paper) and soft (electronic) copies (the submission of a soft copy is currently a right, not an obligation). The transit applicant (according to the Russian CC, is a person authorised for customs transit) can be the shipper, freight forwarder (if they represent the CU member state), a representative of the CU member state party to a foreign transaction, or a person entitled to own, use and/or dispose of the goods. The CU CC clearly defines the cases to which the transit procedure applies: they include the transportation of CU goods from the customs office of exit to the customs office of arrival through the territory of a non-member state. The conditions under which customs transit procedure applies have not changed. One condition for placing goods under the transit procedure is that measures have to be taken which ensure compliance with customs transit. The steps to be taken have not changed (payment of customs duties, taxes, customs convoy and route definition) although the definition of the route serves to complement the first two measures.

There are many cases which are not subject to customs transit requirements. In the Russian CC, measures to ensure observance of customs transit are not required in relation to goods transported by the shipper, whereas in the CU CC these measures are not required if the functions of the customs declarant[4] are performed by the customs shipper, an authorised economic operator (AEO) or where the goods are transported by railway, pipeline, or power lines. As far as the customs service of the Republic of Belarus is concerned, the CU CC incorporates a provision permitting customs escort to be performed by customs officials as well as other organisations according to the legislation of the respective CU member state.

To complete the customs transit procedure the following requirements must be met:

- the goods have to be presented to the customs authority on request
- the shipper or other interested person must declare the goods or place them under temporary storage within three hours of completing the transit procedure.

4. Release of goods into free circulation. The CU CC lists the documents required for declaring the goods. CU member states cannot regulate this aspect themselves.

According to the CU, the import declaration must be submitted before the period of temporary storage expires (four months from the date on which goods are presented at the customs office arrival or the internal transit is completed). This gives enough time for a declarant to provide the customs clearance on time.

The period for releasing the goods has also been reduced by one working day (earlier in Russia, the goods were to be released no later than three working days after the customs declaration had been accepted, the documents needed for customs clearance submitted and the goods presented). The release period indicated in CU CC is one working day following the registration of the customs declaration. If necessary, the period for examining the goods by the customs authority can be extended by up to ten days subject to the written permission of the director-general of the relevant customs authority.

Also, the CU CC recognises the following grounds for releasing the goods into free circulation:

- submission to the customs authority of licences, certificates and other documents confirming that other types of state control stipulated by international treaties of CU member states have been complied with[5]
- compliance with the conditions of the relevant customs procedure in accordance with the CU CC
- payment of customs duties, taxes, or provision of an appropriate deposit.

5. Export. Certain provisions of the CU CC aim to simplify customs operations in order to stimulate business activity. The CU CC reduces the release period for exported goods not subject to export customs duties considerably – from the conventional two-day period to a minimum of four hours from the registration of the customs declaration. Also, the number of documents that exporters have to submit when applying for the export procedure in relation to goods not subject to export customs duties is reduced from fourteen to the following seven documents:

1. confirming the authority of the person submitting the customs declaration
2. confirming the conclusion of a foreign trade transaction, or other documents confirming the right of ownership, use and/or disposal of goods outside the foreign trade transaction boundaries, and other commercial documents the customs applicant can submit
3. relating to transportation (shipping)
4. confirming the observance of prohibitions and limitations
5. justifying the classification code claimed for the commodity within the Commodity classification for foreign trade activities
6. confirming payment of customs charges and/or provision of a relevant deposit
7. confirming compliance with currency exchange requirements, as stipulated by the currency legislation of CU member states.

It is particularly noticeable that documents confirming the customs value of the goods are not included on this list of documents. In addition, the fact that the CU CC defines the list of documents needed to submit a customs declaration prevents customs authorities from demanding additional documents when submitting a declaration for non-dutiable exports.

6. Persons performing customs activities. The CU CC extends the list of registered persons performing customs activities. It currently includes the customs representative, owner of a temporary storage warehouse, owner of a customs warehouse, customs shipper, owner of a duty free shop, and also introduces the concept of an AEO. In Russia, the AEO is intended to replace persons using the special customs clearance simplification provided in Article 68 of the Russian CC.

7. Remote release of goods. The CU CC provides the legal basis for introducing remote release technology which, along with preliminary notification and electronic declaration, aims to make customs clearance more efficient. Article 193(6) of the CU CC states that goods intended for preliminary declaration are to be presented to the customs authority registering the customs declaration and any other customs authority defined by the legislation of the CU member state, thirty calendar days from the date of registration. This is a progressive standard compared with the Russian CC, under which the goods intended for preliminary declaration are to be presented solely to the customs authority where the customs declaration was registered. The provisions of the CU increase the use of technology for the remote release of goods, including the use of a preliminary notification.

8. Transportation of goods intended for personal use. The main principles of the CU CC governing the customs procedures relating to goods intended for personal use transported by natural persons are almost identical to those of the Russian legislation.

The CU raises the limits for duty-free import; accordingly, natural persons can import goods (with the exception of vehicles) duty free, as accompanied or unaccompanied baggage which does not exceed 1,500 Euro in value and 50 kg in weight. If the these limits are exceeded, a unified customs duty and tax rate is applied to the excess amounting to 30 per cent of the customs value of the said goods and not less than 4 Euro per kilogram. In the case of alcoholic beverages and beer, the limit for duty free import is no more than three litres per natural person (being at least 18 years of age). If this limit is exceeded (from three to five litres), the duty rate is 10 Euro per litre of the volume in excess of three litres. For tobacco and tobacco products, the limit is no more than 200 cigarettes or 50 cigars (cigarillos) or 250 grams of tobacco, or an assortment of the above products provided the total weight does not exceed 250 grams per natural person (being at least 18 years of age).

According to the CU Treaty, if a natural person carries cash and/or travellers cheques into or out of the CU, the total amount of which exceeds USD10,000, the carrier must submit a passenger customs declaration in respect of the whole amount. However, if the total does not exceed USD10,000, the cash and/or travellers cheques can be declared voluntarily by the natural person. On the other hand, cash instruments, except for travellers cheques taken into or out of the CU, are subject to written declaration irrespective of the amount concerned.

Conclusions

Essentially, this paper reflects the current status of the CU. Its rules are not fully determined and are in process of formation. However, the new CU in the territory of the Commonwealth of Independent States (CIS) has been enacted and has the necessary institutions and legislation to regulate customs matters. More countries may join the CU in future: Tajikistan and Kyrgyzstan (Kyrgyzstan has been holding official negotiations on future accession from April 2011) are possible accession candidates and the Russian Federation is trying to persuade the Ukraine to join. However, the creation of the CU has been motivated by political considerations and, in this respect, it is possible that the new customs union will resemble the previous customs union within the CIS territory with the participation of the Russian Federation.

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Endnotes

1 In the framework of the World Customs Organization Eurasian Economic Community use the abbreviation EAEC.

2 According to the Protocol on the Procedure for the Entry into Force of International Agreements Intended to Form a Contractual Legal Framework for the Customs Union and for Withdrawal from and Accession to the Customs Union of 6 October 2007, international treaties, forming the basis of the Customs Union (CU), fall into two classes: international treaties in the framework of EurAsEC and international treaties intended to complete the formation of the contractual legal environment of the CU.

3 In the Republic of Belarus, the effective Customs Code will be amended; in the Russian Federation, the Federal Law on Customs Regulation in the Russian Federation has been passed, which will replace the effective Customs Code of the Russian Federation; in the Republic of Kazakhstan, a new Customs Code has been adopted.

4 According to the CC CU, a declarant is a person declaring the goods or in the name of whom the goods are declared.

5 For Russian participants in foreign trade activities, it should be noted that new export limitations were included in CU legislation – notification in case of import of encoding devices, licencing in case of import of alcohol products, etc.

Igor Krotov

Igor Krotov worked in the Russia Customs Service for eight years as a customs officer and as a lecturer at the Russian Customs Academy before joining the European Space Agency, Permanent Mission in the Russian Federation as Inventory and Customs officer in 2002. He holds a degree in economics from the Russian Customs Academy.

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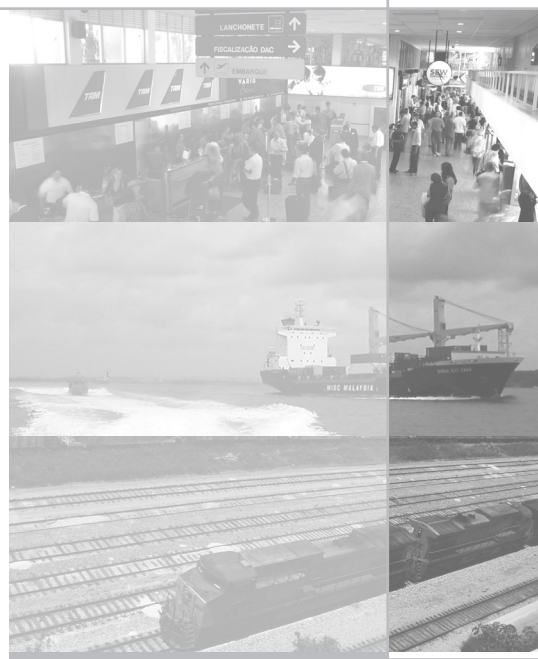

Section 3

Special Report

Professionalism in Customs and workforce development

WCO initiatives to equip Customs with whole-of-career development strategies and practices

Report prepared by Bénédicte Meille, Capacity Building Directorate
World Customs Organization

The World Customs Organization (WCO) has been developing initiatives and tools to enable the customs community to empower its organisational platforms and promote an efficient shift to organisations which are compliant, agile and adaptable.

The 2nd WCO Capacity Building Committee meeting held in Brussels from 3-5 May 2011 outlined the crucial importance of 'people development' for capacity building and customs modernisation. The meeting decided to trigger further reflection on methods of building professionalism in Customs.

Global, regional and national imperatives have reinforced the need for responsive customs organisations. Each organisation's human capital is one of their most valuable assets in keeping pace with an ever-changing environment. In order to continue contributing to today's economy and knowledge society, Customs must adopt appropriate and relevant 'fit-for-purpose' professional principles and practices in line with the *Customs in the 21st Century* approach adopted by the WCO.

Since 2006, with the establishment of the Capacity Building Directorate and the launch of the PICARD Program, the WCO in partnership with the International Network of Customs Universities (INCU) has led innovative initiatives aimed at establishing Customs as a profession. New platforms have strived to provide a cooperative framework for customs education and research, and to build solutions to increase the professional knowledge and standing of customs executives and practitioners. These initiatives have included the PICARD Professional Standards adopted in 2008 for Operational and Strategic Customs Managers.

The WCO has been promoting Customs as a coherent professional body which is specifically structured on the basis of the unique aspect of customs operating models, sharing specific and graduated knowledge, competencies and skills, and as one which is fully connected to today's economic and social challenges.

The importance of recognising Customs as a profession, with identified career paths, has led the WCO and its partners to contemplate encouraging national adoption of integrated education, training and development schemes provided by Customs and education authorities and, as well, initiating new approaches to Customs whole-of-career development strategies.

If people are the key enablers of any organisation, and if the workforce is the critical factor for ensuring the success of any capacity building initiative, the strategy to adopt is to have the right person at the right place, at the right time. Attracting talented people, aligning employee performance with the organisation's mission and value, proactively shaping the future workforce, and retaining the top performers are some of the strategic issues that customs organisations are facing.

To assist its Members with their understanding and implementation of professional qualifications and career paths specifically related to Customs, the WCO Secretariat was mandated by the 2nd Capacity Building Committee to develop a framework of practices and principles on 'people development' for all customs practitioners, and to set up a virtual working group to address this priority issue. The group

is to gather together officials from different parties such as customs administrations, academia, and the private sector, all of whom are responsible for – and specialists in – the area of capacity building, namely, human resource management, organisational development and/or change management.

The group's objectives are to:

- establish principles and standard frameworks to design comprehensive workforce development strategies and programs for customs administrations
- set professional standards for the profiles of all customs practitioners; and to define knowledge, skills and competencies for the main customs job profiles and career streams
- develop principles and methods of achieving the key concepts tied to the implementation of workforce development programs such as succession planning, mobility and portability, performance management and compensation management, recruitment and on-boarding, development and learning
- introduce a basic training framework and processes (policies and curricula) as a reference for overall learning and career progression schemes.

Established with a restricted number of active contributors in early September 2011, the group has decided to tackle the scope of its activities by examining approaches already adopted or under development by customs administrations, academia and the business community. It will collect principles and practices from these communities, conduct research to identify gaps and missing components, and adapt theoretical concepts and academic findings to customs operating models.

In order to facilitate the project coordination and work of the different contributors, the group agreed on the development of a set structure for the framework of principles. An outline has been adopted by the group around six main topical clusters which will articulate the core and technical components for a future roadmap for the customs profession. This will also help to rationalise the involvement of each group's members by identifying the precise scope of their contributions.

The first cluster will address the definition of customs jobs profiles including elements such as the job families in Customs, the competencies needed for each main function, and the developmental programs tied to each of them.

The next four clusters will explore the principles and practices of four core components of an integrated human capital development policy: the definition of a Workforce Development Strategy, the Recruitment and On-boarding policies, the definition of Career Development Paths and Training policy, and the definition of a Leadership and Management Development Path.

The last cluster will focus on the Career Development Tools and Practices, developing a toolbox for the implementation of concepts and techniques like Succession Planning, Mobility and Outplacement, Rotation and Posting, Talent Management, Personal Development Planning and Learning, a Performance Appraisal System, and a Professional Qualifications Framework.

Actively cooperating through a dedicated collaborative workspace on CLiKC! (the WCO Customs Learning and Knowledge Community portal) and frequent virtual meetings, the group expects its robust inter-sessional work to enable the framework to be presented to the WCO Council in June 2013.

In addition to the work started by the group around the structured framework's outline, the Capacity Building Directorate has also coordinated other early achievements. During the first semester 2011, a questionnaire was sent to seventeen Member administrations to develop a preliminary analysis on the practices needed to design the career development program. The first stage of a study on a Customs Qualifications Framework has been initiated to design a table of equivalence between the levels of competencies, professional tasks and academic/educational recognition following the standards set by other international organisations. This study will contribute to the scope of the Group's outcomes and promote enhanced portability and mobility among customs practitioners.

These WCO initiatives on professionalism in Customs aim to enhance the procedures and processes used by customs practitioners around the world and, in turn, to enable those practitioners to benefit from individual autonomy and responsibility in managing their careers as well as promoting organisational transparency and predictability by the introduction and use of career mapping.

The Capacity Building Directorate intends to support WCO administrations as they apply creative solutions to develop knowledge, skills and enhanced performance within their organisations, and to ensure that there is a strategic alignment between their needs, organisational goals and the allocation of resources. Those organisational stakes are critical as they will contribute directly to strong and effective customs administration regimes: they will cut costs not capabilities, maximise workforce productivity, and build a flexible, adaptable organisation.

Editor's note: The INCU is pleased to be working closely with the WCO on this important initiative that will build on the current Professional Standards and provide a comprehensive training and education framework for customs professionals at all levels.

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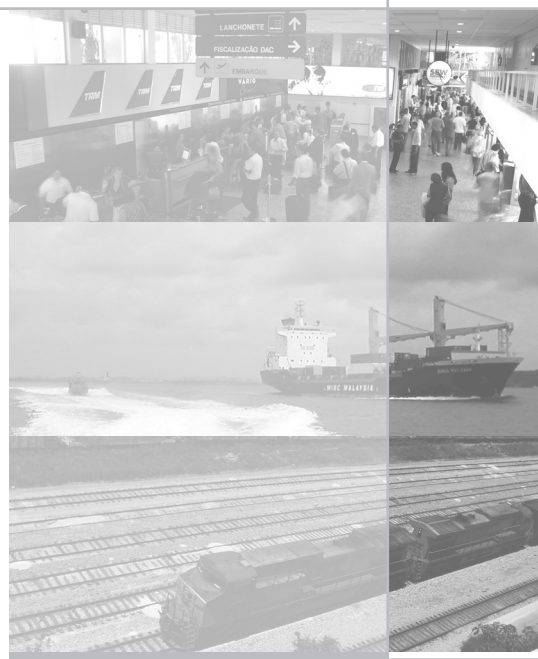

Section 4

Reference Material

Guidelines for contributors

The *World Customs Journal* invites authors to submit papers that relate to all aspects of customs activity, for example, law, policy, economics, administration, information and communications technologies. The Journal has a multi-dimensional focus on customs issues and the following broad categories should be used as a guide.

Research and theory

The suggested length for articles about research and theory is approximately 5,000 words per article. Longer items will be accepted, however, publication of items of 10,000 or more words may be spread over more than one issue of the Journal.

Original research and theoretical papers submitted will be reviewed using a 'double blind' or 'masked' process, that is, the identity of author/s and reviewer/s will not be made known to each other. This process may result in delays in publication, especially where modifications to papers are suggested to the author/s by the reviewer/s. Authors submitting original items that relate to research and theory are asked to include the following details separately from the body of the article:

- title of the paper
- names, positions, organisations, and contact details of each author
- bionotes (no more than 50 words for each author) together with a recent, high resolution, colour photograph for possible publication in the Journal
- an abstract of no more than 100 words for papers up to 5,000 words, **or for longer papers**, a summary of up to 600 words depending on the length and complexity of the paper.

Please note that previously refereed papers will not be refereed by the *World Customs Journal*.

Practical applications, including case studies, issues and solutions

These items are generally between 2,000 and 5,000 words per article. Authors of these items are asked to include bionotes (no more than 50 words for each author) together with a recent, high resolution, colour photograph for possible publication in the Journal. The Editorial Board will review articles that relate to practical applications.

Reviews of books, publications, systems and practices

The suggested length is between 350 and 800 words per review. The Editorial Board will review these items submitted for publication.

Papers published elsewhere

Authors of papers previously published should provide full citations of the publication/s in which their paper/s appeared. Where appropriate, authors are asked to obtain permission from the previous publishers to re-publish these items in the *World Customs Journal*, which will acknowledge these source/s. Copies of permissions obtained should accompany the article submitted for publication in the *World Customs Journal*.

Authors intending to offer their papers for publication elsewhere—in English and/or another language—are asked to advise the Editor-in-Chief of the names of those publications.

Where necessary and appropriate, and to ensure consistency in style, the editors will make any necessary changes in items submitted and accepted for publication, except where those items have been refereed and published elsewhere. Guidance on the editors' approach to style and referencing is available on the Journal's website.

Letters to the Editor

We invite Letters to the Editor that address items previously published in the Journal as well as topics related to all aspects of customs activity. Authors of letters are asked to include their name and address (or a pseudonym) for publication in the Journal. As well, authors are asked to provide full contact details so that, should the need arise, the Editor-in-Chief can contact them.

All items should be submitted in Microsoft Word or RTF, as email attachments, to the Editor-in-Chief: **editor@worldcustomsjournal.org**

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Dr Juha Hintsa is a Senior Researcher in global supply chain security management. He is one of the founding partners of the Global Customs Research Network, and the founder of the Cross-border Research Association (CBRA) in Lausanne, where he undertakes research into various aspects of supply chain security management in close collaboration with several multinational corporations. Juha's PhD thesis was on 'Post-2001 supply chain security: impacts on the private sector'.

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Elaine Eccleston

University of Canberra, Australia

Elaine Eccleston, BA, MA, developed the Information and Knowledge Management subjects taught at the University of Canberra. She was Manager, Information and Knowledge Management at the Australian Trade Commission, and has worked in these fields for the Australian Taxation Office, the Department of Foreign Affairs & Trade, and as Manager, Information & Records Management, BP Oil UK. She is Editor, at the Centre for Customs & Excise Studies, University of Canberra.

Dr Christopher Dallimore

Dr Christopher Dallimore studied Law and German at the University of Wales, Cardiff and obtained a Magister Legum at Trier University, Germany. His doctoral thesis was on the legal implications of supply chain security. For a number of years, Chris was Course Co-ordinator of the Master of Customs Administration postgraduate program at Münster University, Germany, and currently works for the Trusted Trade Alliance Europe GmbH. He is a lecturer at Münster University and translator of a number of legal texts.