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INCU (www.incu.org) is an association that provides the WCO and other organisations with a single point of contact with universities and research institutes that are active in the field of customs research, education and training.

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Contents

Editorial

In the last edition of the *World Customs Journal* I commented on the significant progress that had been made by the World Trade Organization (WTO) in relation to its trade facilitation agenda. Since that time, however, several hurdles have been struck and, as a result, the WTO membership has not yet seen its way clear to adopt the Protocol of Amendment that is a prerequisite to the Agreement on Trade Facilitation's entry into force.

Nevertheless, the principles of the Agreement are universally acknowledged, and continue to be addressed both nationally and internationally. The International Network of Customs Universities (INCU) has been particularly proactive in this regard, and I am pleased to report the success of the Inaugural INCU Global Conference, *Trade Facilitation Post-Bali: Putting Policy into Practice,* which was held in Baku, Republic of Azerbaijan in May this year.

The Special Reports in this edition of the *Journal* include the conference's opening remarks by H.E. Ambassador Roberto Azevêdo, Director-General of the WTO, and the Resolution that was subsequently passed. In his address, Director-General Azevêdo publicly recognised the significance of the INCU's role in promoting the trade facilitation agenda and, in response, the INCU has undertaken to continue to support the work of the WTO. Achievement of the Agreement's principles is specifically addressed by Hans-Michael Wolffgang and Edward Kafeero in their article in which they compare the provisions of the Agreement with those of the Revised Kyoto Convention and other World Customs Organization instruments.

Other contributors in this edition focus on the importance of collaboration among border management agencies. In this regard, Chang-Ryung Han and Rachel McGauran examine the benefits of information exchange; David Dill and Deborah Kopsick address ways of improving cooperation between customs and environmental agencies; and, in the context of combating transnational smuggling, Gautam Basu identifies the need for appropriate coordination within and across various governmental institutions.

At the request of our readers, the next edition of the *Journal* will include further studies in the field of excise, which is emerging as a major source of government revenue for many economies around the world due, in part, to the proliferation of Free Trade Agreements. We will also be formally recognising the first ten years of the INCU. On behalf of the Editorial Board, I again wish to thank all of you, our readers, for your support for the *World Customs Journal* and trust that you continue to benefit from its academic and practitioner contributions.

David Widdowson
Editor-in-Chief

Correction

In Sopagna Seng 2014, 'The facilitation of trade in Cambodia: challenges and possible solutions', *World Customs Journal*, vol. 8, no. 1, p. 119, the following sentence should read:

> In a further effort to improve import and export mechanisms, the pre-shipment inspection mechanism was eliminated in 2009, and has resulted in a respectable reduction in the time and number of documents required for importing and exporting.

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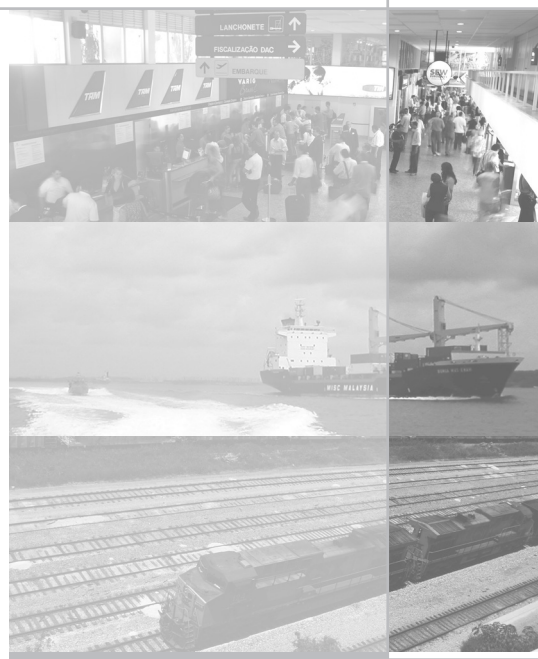

Section 1

Academic Contributions

Tracing trails: implications of tax information exchange programs for customs administrations[1]

Chang-Ryung Han and Rachel McGauran[2]

Abstract

The G20 recently agreed to adopt multilateral automatic tax information exchange as a global standard in the fight against cross-border tax fraud and evasion. The Organization for Economic Cooperation and Development (OECD) has, since the late 1980s, promoted tax information exchange between tax authorities to help its member states identify residents' incomes and assets contained in tax havens. The global customs community could benefit from a similar type of endeavour as cross-border trade on which customs administrations impose levies is as susceptible to tax evasion as other cross-border economic activities. Additionally, revenue generated by customs administrations accounts for a considerable share of government tax revenue. The World Customs Organization (WCO) has developed a variety of instruments and tools dealing with the exchange of customs information for its Members. Customs administrations hoping to enhance the exchange of customs information can focus on identifying trails that trade transactions leave not only in export countries and other competing import countries but also in the trade payment process.

1. Introduction

Discussions on fiscal transparency and the exchange of tax information were top of the agenda for G8 leaders who met in Lough Erne, Northern Ireland in June 2013. During the G20 summit that ensued in St Petersburg, the global leaders agreed to adopt multilateral automatic tax information exchange as a new global norm to tackle cross-border tax evasion and avoidance. In fact, efforts to control cross-border tax evasion and avoidance which exploit tax havens began as early as the 1960s.[3] However, the global leaders' renewed concern can be attributed to the global financial crisis of 2007-08 and subsequent global tax scandals involving tax havens (Scott 2012; Tobin & Walsh 2013). Irrespective of whether tax havens can be held to account for the global financial crisis,[4] global leaders, prioritising the restoration of strong and sustainable growth in the world economy, have emphasised the importance of fair tax revenue and fighting cross-border tax evasion and avoidance (Nicodeme 2009; Cameron 2013).

The ultimate goal of tax information exchange is to locate and levy taxes on hidden tax bases which, due to bank secrecy laws and national jurisdictions, remain concealed. The Organisation for Economic Cooperation and Development (OECD) has, since the late 1980s, promoted tax information exchange between tax authorities to help its member states identify residents' incomes and assets contained in tax havens. The OECD's tax information exchange initiative does not include information concerning customs duties. Furthermore, the G20's renewed focus on cross-border tax evasion and avoidance does not take into account the global customs community's concerns and activities, in spite of the fact that cross-border trade on which customs administrations impose levies is as susceptible to tax evasion

as other cross-border economic activities. Additionally, revenue accrued by customs administrations accounts for a considerable share (in some cases up to 30%) of government tax revenue.

Fulfilling one of their primary roles, levying taxes on cross-border trade and chasing illicit trade transactions, customs administrations have come to realise that information exchange with foreign customs administrations and with other domestic relevant authorities is necessary. The global customs community has explored ways to exchange trade data for over a decade. In this respect, the OECD's tax information exchange initiative with support from the G20 should lead to a renewed impetus amongst the global customs community. Analysis of the progress of tax information exchange and implications of such an exchange of information would be useful for customs administrations and could lead to renewed momentum in terms of inter-connectivity of those agencies.

2. Tax information exchange

2.1 Background

Cross-border tax evasion and avoidance, issues which G20 leaders have agreed to tackle, stem from an increased tax base mobility and the resultant tax competition (Avi-Yonah 2000; Genschel & Schwarz 2011). Since the 1950s, as the world has become increasingly globalised, cross-border mobility of taxable assets and activities, such as capital, labour, corporations, goods and services, has increased greatly (Nicodeme 2009). However, unlike taxpayers operating across borders, tax authorities remain confined to their national borders (OECD 2012). It has therefore become increasingly difficult for tax authorities to identify undeclared tax bases,[5] unless taxpayers declare their incomes and assets overseas honestly (Thuronyi 2001). As the tax burden for taxpayers depends on the withholding taxes of source countries, that is, those countries where taxpayers work and invest, some taxpayers have moved workplace, assets, and businesses to low-tax jurisdictions to avoid a higher rate of taxation. Some small countries[6] have lowered their tax rates and enhanced bank secrecy laws to attract new tax bases and afford protection to those who would otherwise face prosecution in their countries of residence (Keen & Ligthart 2006; Genschel & Schwarz 2011).

The OECD launched an initiative in the late 1990s aimed at encouraging its members to harmonise their tax rates to reduce tax differentials whilst simultaneously persuading low-tax jurisdictions to raise their tax rates. However, this initiative triggered much discussion about possible infringements on national tax sovereignty. The OECD reorientated its focus on the exchange of information on a tax base where countries do not need to relinquish any of their national tax sovereignty in taxing their own residents, and can help others to exercise their sovereignty in taxing their citizens (Keen & Ligthart 2006; Nicodeme 2009). The OECD has endeavoured to encourage exchanges of tax information between tax havens and other countries for over a decade. After the financial crisis of 2007-08 and the resultant focus on fiscal transparency, the G20 committed to the establishment of a new global standard for *automatic* exchange of tax information.

2.2 Types of information exchange and legal frameworks

There are three main types of tax information sharing: on request, automatic, and spontaneous. Information exchange on request involves transmitting tax information in response to a specific request from the residence country. An automatic exchange of information enables tax authorities of the source country to pass all tax-relevant information, periodically, to the residence country with whom they have agreed to exchange information. In the latter concept, spontaneous information exchange, the authorities of one country, on their own initiative, send information which may be acquired in the course of an audit to the tax authorities of another country, believing that it would be of interest to them (Keen & Ligthart 2006).

The most common form of information exchange is known as information exchange on request. However, since information exchange on request is premised on requests for information on specific taxpayers, the tax authorities have difficulties in making use of this type of information exchange without a grounded suspicion of an instance of tax evasion or avoidance. In addition, information sharing with another country is not necessarily in a country's best interests (Keen & Ligthart 2006; OECD 2012) and information is not transmitted as efficiently or as promptly as those countries that require the information would expect. Thus, the European Union (EU) and the United States of America (US) have opted to support automatic exchange of tax information.

Table 1: Types of information exchange and their legal frameworks

	Bilateral approach	**Multilateral approach**
Exchange on request	• Double taxation treaties • Tax Information Exchange Agreements	• EU Mutual Assistance Recovery Directive • OECD *Multilateral Convention on Mutual Administrative Assistance in Tax Matters*
Automatic exchange	• Double taxation treaties (e.g., FATCA of the US) • OECD *Multilateral Convention on Mutual Administrative Assistance in Tax Matters*	• EU Savings Tax Directive • EU Administrative Cooperation Directive

Source: Han & McGauran 2013.

Irrespective of the different types of information exchange, tax information exchange is always predicated on a legal foundation (Keen & Ligthart 2006). There are a number of legal instruments in place to support tax information exchange. These instruments are categorised in three forms: double taxation treaties, multilateral conventions, and other bilateral agreements outside tax treaties. Most tax information is exchanged through double taxation treaties which are concluded to avoid double taxation[7] and to prevent cross-border tax evasion (Thuronyi 2001). Many countries have also entered into bilateral agreements solely concerned with information sharing.[8] These agreements are sometimes intended to strengthen information sharing provisions in existing applicable double taxation treaties (Keen & Ligthart 2006). The bilateral approach, however, entails not only considerable costs with regard to the negotiation and amendment of agreements (Thuronyi 2001) but also engenders difficulties associated with the third-country problem: non-cooperating third countries benefit more from information exchange cooperation than cooperating countries due to an increase in the inbound flow of tax-base evading tax in the so-called 'cooperative countries' (Genschel & Schwarz 2011).

In response to these problems, a number of multilateral agreements on information exchange have been concluded. The major multilateral instruments are the EU Mutual Assistance Recovery Directive, the EU Savings Tax Directive, and the OECD Multilateral Convention on Mutual Administrative Assistance in Tax Matters. The EU Mutual Assistance Recovery Directive[9] provides for the exchange of information on request on direct taxes and certain indirect taxes (value-added tax and excises) among authorities of the EU (Keen & Ligthart 2006). The EU Savings Tax Directive provides for automatic information exchange (as distinct from a simple request mechanism) on interest accrued from savings (OECD 2013b). The EU Administrative Cooperation Directive expands the scope of automatic information exchange to encompass income from employment, directors' fees, life insurance products, pensions, and immovable property (European Commission [EC] 2013).

The OECD *Multilateral Convention on Mutual Administrative Assistance in Tax Matters*[10] contains a provision for the automatic exchange of information on a broad array of taxes covering direct taxes and virtually every form of indirect taxes (excluding customs duties) levied at both national and local level (Genschel & Schwarz 2011). However, the Convention's automatic exchange framework is not a typical multilateral agreement. The information exchanges are based on a unique set of integrated bilateral treaties; they require a separate agreement between the competent authorities of the parties which can be entered into by two or more parties thus allowing for a single agreement with several parties (with actual automatic exchanges taking place on a bilateral basis) (Keen & Ligthart 2006; OECD 2013b). The Convention was amended in response to a demand from the G20 in 2009 to align it to the international standard on exchanges of information and to open it to all countries, in particular to ensure that developing countries could benefit from the new, more transparent, environment. As of December 2013, the number of signatories to the Convention is 61[11] (OECD 2013a).

Table 2: Automatic tax information exchange systems

	The current EU Savings Tax Directive	**The revised EU Savings Tax Directive**	**The EU Administrative Cooperation Directive**	**The Foreign Accounts Tax Compliance Act of the US**
Subject of information exchange	Savings income	Savings income, Investment funds, pensions and innovative financial instruments, and payments made through trusts and foundations	Income from employment, directors' fees, life insurance products, pensions, and immovable property	Foreign accounts of the US taxpayers
Contracting parties	26[12] EU member states	27 EU member states	27 EU member states	Ireland, Denmark, Germany, Japan, Mexico, Norway, Spain, Switzerland, and UK (9)
Effective date	July 2005	Adoption before the end of 2013	January 2013	March 2010

Source: Han & McGauran 2013.

3. Implications for customs administrations

Even if goods cross borders, customs administrations do not engage in cross-border taxation as those agencies only impose customs duties and other taxes on goods in accordance with the destination principle. Nevertheless, the OECD's tax information exchange initiative has several implications for customs administrations. Information exchange with relevant authorities enables customs administrations to trace trails that traders leave behind and to identify elusive tax bases.

3.1 Information exchange between customs administrations

Goods upon which customs administrations levy taxes leave trails in both import and export countries. Customs administrations of such import countries could leverage data contained in export declarations

sourced from export countries when auditing import declarations to verify their accuracy by comparing import data and the corresponding export data. This kind of bilateral exchange of trade transaction data is best exemplified by the trade transparency unit (TTU) of the United States Immigration Customs Enforcement (US ICE) and similar organisations found throughout Argentina, Brazil, Colombia, Paraguay, Mexico and Panama (Zdanowicz 2009). These TTUs collected and compared import/export declarations from the US with export/import declarations of the other participating countries to identify any anomalies in trade transactions.

Operation Deluge, a collaboration between US ICE and Brazilian authorities conducted in 2006, focused on the analysis of trade transactions data and resulted in the detection of the evasion of Brazilian Customs duties and taxes amounting to more than USD200 million. Goods which have a global reach and benefit from global consummation, however, may require a different approach. Multinational corporations (MNCs) trade globally-sold goods *intra firm* and are less likely to leave a visible trail of discrepancies between export and import declarations. However, they could leave differing trails in different import countries. Customs administrations could identify price differentials among the same goods which can lead to the detection of under/over valuation, by comparing import declarations of different countries. In practice, several customs administrations unofficially managed to exchange information on the prices of goods that were exported by MNCs. There is little evidence about how much information was exchanged and how such exchanged information was used to detect under/over valuation of MNCs; nonetheless, an analysis of the prices of identical goods traded amongst MNCs could potentially help to tackle the issue of transfer pricing and MNCs. The establishment of an *intra-firm* trade database, and the sharing of information concerning the price of goods traded *intra-firm* between customs administrations, could prove to be an effective remedy to the issue of transfer pricing amongst MNCs.

In response to the need for trade information exchange between customs administrations, the global customs community has developed various mechanisms for exchanging information. These mechanisms are suitable for both enforcement and trade facilitation purposes, and include the exchange of best practices, intelligence, and individual trade transactions. The WCO has also provided instruments and frameworks to support information exchange between customs administrations. The WCO Council adopted the *International Convention on Mutual Administrative Assistance for the Prevention, Investigation and Repression of Customs Offences* (known as the Nairobi Convention) in 1977 to enable multilateral mutual assistance including the exchange of enforcement intelligence and assistance during investigations. Then, in 2003, the WCO developed the *International Convention on Mutual Administrative Assistance in Customs Matters* (the Johannesburg Convention); however, this Convention has not entered into force. The WCO revised a Model Bilateral Agreement on Mutual Administrative Assistance in Customs Matters for a more enhanced mutual assistance process in 2004. Based on the WCO Model Bilateral, many customs administrations have concluded mutual administrative assistance agreements, including MOUs, and have exchanged enforcement information and intelligence spontaneously or on request.

The World Trade Organization's (WTO) Trade Facilitation Agreement, announced in December 2013 at the WTO ministerial conference in Bali, advocates that trade information be exchanged between customs administrations on request.[13] In addition, the WCO has developed the Globally Networked Customs framework to standardise and facilitate the exchange of commercial and enforcement information. Recently, several customs administrations have succeeded in exchanging not only static information, such as information on authorised economic operators, but also recurring commercial data, such as export and transit data. The WCO is undertaking standardisation of the information exchange cases in the form of modules called "utility blocks" to ensure that the information contained therein is shared with other customs administrations. To accelerate the exchange of enforcement information, the WCO operates the Customs Enforcement Network (CEN) platform, which encompasses databases and communication tools. The WCO encourages the exchange of information regarding smuggling of illegal drugs, tobacco, counterfeits goods, and endangered flora and fauna via the CEN database and coordinates enforcement operations and projects via CENcomm.

The global customs community has a distinct advantage over tax authorities in the realm of information exchange. Trade data exchange is less complex than tax information exchange. Unlike tax information which tax authorities source from financial institutions to share with foreign tax authorities, records of trade transactions already exist within customs administrations. In addition, customs administrations do not face the 'third-country problem' when exchanging trade data. In other words, the trade tax base (that is, trade transactions) is not as mobile as other tax bases (for example, capital) in terms of taxation; the mobility of trade transactions is determined by importers; trade taxes are imposed in the destination country, and high trade tax rates and trade data exchange do not have a direct influence on importers when deciding which goods to import. In spite of the favourable environment which is alleged to exist for customs information exchange, the WCO has faced significant hurdles in its efforts to facilitate information exchange. Compared to tax authorities, customs administrations of import countries do not have a legal basis from which to claim information on export goods and exporters from customs administrations of export countries. In practical terms, tax authorities of residence countries can request information on their residents' incomes and assets from their counterparts based in source countries because they have a right to impose taxes on the incomes and assets of their residents living in source countries. In contrast, customs administrations of import countries do not have the right to take any measures on exporters of export countries as they often encounter difficulties obtaining corresponding export data from customs administrations of export countries. However, if the need to share data is mutual between the customs administrations, the exchange of export data can be easily effected. To prevent an imbalance in the provision of information between customs administrations, customs information exchange would ideally be conducted on an automatic basis and not on request.

3.2 Information exchange with tax authorities

Importers leave trails not only during the customs clearance process but also whilst filing tax returns and processing trade payments. Customs administrations can uncover hidden tax bases and help tax authorities improve their enforcement performance by comparing customs' trade data and relevant data from tax authorities.

As far as information exchange between customs administrations and tax authorities is concerned, customs administrations are not as dependent on information from tax authorities regarding traders' incomes and assets in their daily activities as is imagined. Nonetheless, information regarding imports and exports from tax authorities could prove beneficial: information which pertains to purchases and sales from the perspective of the tax authorities. In other words, traders' imports/exports of goods from/to other countries are seen as purchases/sales of goods from the perspective of tax authorities. Since all imports are supposed to be reported as purchases (that is, cost) to tax authorities, a comparison between customs administrations' import data and tax authorities' purchase data could theoretically result in the detection of undeclared or misdeclared tax bases for both parties.

It is important to note, however, that information exchange between customs administrations and tax authorities may not be mutually beneficial. Tax authorities can benefit from customs' trade data because trade data are compiled on a trade transaction basis, and thus it is easy for tax authorities to identify which import or export transactions are not reported as purchases or sales by comparing taxpayers' (traders') tax return documents and customs trade data. However, tax information does not necessarily serve customs administrations in the detection of illicit trade because electronically sharable tax information is usually maintained per business unit and includes aggregate quarterly sales and purchases figures for each business, and no information on individual sales/purchases. Thus, customs administrations need to receive additional specific information from tax authorities to identify whether there are undeclared imports/exports among reported purchases/sales. In other words, electronically sharable tax information is at an aggregate level for customs administrations, even information pertaining to individual businesses. It could be useful in gauging each trader's business transaction volume during certain assessment periods

but it is less useful in the detection of illicit trade transactions, as illustrated in the experiences of the Finnish and Korean customs administrations.

Finnish Customs and the Finnish tax authority exchange information from import/export declarations and VAT recapitulative statements. Unlike import/export declarations which are maintained on a transactional basis, VAT recapitulative statements include information on the total supplies to other taxpayers on a quarterly basis. Analysing each declaration using VAT recapitulative statements does not automatically lead to the detection of VAT fraud cases but is useful in identifying abnormal transactions. The Korea Customs Service (KCS) also regularly exchanges information on tax bases such as trade transactions, quarterly purchases and sales of traders with tax authorities. The Korean example demonstrates that the introduction of automated systems to customs and tax authorities is important in exchanging information on tax bases because the electronic recording of traders' trade activities and systematic management of them are essential in identifying relevant data and collecting such data from the other party. The experience of the KCS suggests that the exchange of information on tax bases serves as a reference point to narrow down investigative targets rather than a guarantee of the detection of evasion of customs duties and taxes.

Unlike with the exchange of information between customs administrations and tax authorities, customs administrations can benefit from detailed transactional information from tax authorities, especially with respect to taxing transfer pricing. Customs administrations and tax authorities address the same tax bases (transfer prices of MNCs), and have the same goal (the collection of more tax) but each approaches the issue from a different perspective. Customs administrations concentrate on importers' undervaluation whereas tax authorities zero in on MNCs' overvaluation (Blouin, Robinson & Seidman 2012). Trade taxes (for example, customs duties and VAT) are imposed on the values of the goods whereas corporate income tax is levied on net profit – the difference between sales and purchases – and the more purchases, the less tax payment. Some MNCs report two different transfer prices[14] to customs administrations and tax authorities to minimise their tax payment. A comparison of MNCs' import and purchase data for a particular commodity helps customs administrations and tax authorities to identify decoupled transfer prices. The decoupled transfer prices are likely to result in the detection of either customs duty evasion or corporate income tax evasion, although customs administrations and tax authorities need to coordinate their respective audits. The WCO and the OECD have engaged in a cooperative endeavour[15] to harmonise customs valuation and taxation on transfer pricing (Ping & Silberztein 2007).

In addition to sharing ordinary trade data, customs administrations can help tax authorities to detect cross-border tax evasion by sharing export and import declarations pertaining to the means of payment (for example, cash). Some residents may declare their exports of cash to Customs when leaving for other countries and purchase immobile assets overseas with the exported cash without reporting these assets to tax authorities of residence countries; some residents may declare their imports of cash earned overseas to Customs, not reporting the income to tax authorities. Thus, if customs administrations share export or import declarations of monetary instruments with tax authorities, tax authorities can detect unreported cash-based incomes and assets. Furthermore, exchange of cash export/import declarations between customs administrations can enhance tax authorities' ability to detect unreported cash-based incomes and assets. In other words, when some residents declare their cash exports to Customs of departure countries but not to Customs of arrival countries, then tax authorities of residence (arrival) countries have little chance of discovering unreported cash-based incomes and assets. However, exchange of information on cash export/import declarations between customs administrations can make a difference in the detection of unreported cash-based incomes and assets.

Customs administrations can benefit from tax information not only in the detection of illicit trade but also in the collection of unpaid trade taxes. Customs administrations have difficulties in dealing with traders' default on tax payment because many administrations do not have the requisite information on traders' incomes and assets which could enable them to collect the tax due. As customs administrations do not

have the requisite information to hand to enforce payment on trade taxes, traders can continue with their domestic businesses even if they default. Information exchange could prove beneficial for customs administrations in these instances and help to ensure the recovery of unpaid trade taxes from traders, leveraging tax information including traders' incomes, assets, and domestic business transactions.

Exchange of information between customs administrations and tax authorities covers not only tax bases, such as trade transactions, purchases, sales, incomes, and assets, but also investigative cases. Customs administrations and tax authorities can encounter the other party's enforcement targets, while examining or investigating their own enforcement targets. Unlike French Customs and tax authorities that have an obligation to inform the other party of any suspicious cases that they encounter while conducting examinations for their own purposes, most customs administrations and tax authorities will hesitate to share with the other party their findings related to the other party under the pretext of protection of the privacy of traders or taxpayers and of respect for the other party's turf. However, information on investigative cases is more useful and efficient than that on tax bases in the detection of their enforcement targets.

In Finland, prior to exchanging information on investigative cases between customs administrations and tax authorities, assessment on illegal and informal economies is made by the Gray Economy Information Unit of the Finnish tax authority in consultation with Finnish Customs in order to better aim to enforcement targets. In the course of conducting surveys on the gray economy and developing compliance reports of suspicious taxpayers, the unit collects information about suspicious individuals from the tax authority, Customs, and the pension service. Customs administration's criminal investigation unit and tax administration's VAT Anti Fraud Unit regularly exchange intelligence and early warnings on VAT returns and conduct joint operations to tackle missing trader inter-community (MTIC) fraud cases. In Korea, investigative information exchange between the customs administration and tax authority is concentrated on cross-border tax evasion. Whereas the customs administration informs the tax authority of cases where evasion of corporate income tax is suspected, while investigating the flight of capital overseas and money laundering, the tax authority hands over the cases that are related to money laundering and capital flight uncovered during the investigation of cross-border tax evasion to the customs administration.

4. Conclusions

Although it manifests itself in a different manner, tax evasion is as firmly embedded in cross-border trade as it is in cross-border economic activities, such as saving and investing. Illicit trade which exploits the disconnected trade data flows between export countries and import countries has posed a serious threat to the tax revenues of many developing and some developed countries which are dependent on international trade. Information exchange is as important for the global customs community as it is for tax authorities. Recent initiatives by the G20 leaders and the OECD, such as its multilateral automatic tax information exchange initiative, have significant implications for customs administrations in identifying elusive tax bases and combating illicit trade. The fact that an exchange mechanism such as tax information exchange already exists within tax administrations might galvanise customs administrations into action and lead to the resumption of discussions regarding customs information exchange.

The global customs community, taking into account the challenging reality of customs information exchange, needs to examine an alternative information source which they can leverage in the combat against illicit trade and even money laundering-trade payment data, while striving for customs information exchange. Customs administrations have conventionally dealt with the movement of goods but have somewhat ignored the movement of trade payments. Even if trade data exchange is enforced between customs administrations as tax information exchange is between tax authorities, it may not result in the detection of illicit trade. Trade data exchange is based on the misleading assumption that export

declarations are more accurate than import declarations. However, given the fact that customs authorities focus more on import declarations than export declarations, the accuracy of export declarations is of little consequence for customs administrations. To this day, only a small number of customs administrations have switched their focus from the examination of the movement of goods to the direction in which payment flows. This methodology, examining both the flow of payment and goods, can lead to the discovery of important indicators in the detection of illicit trade transactions.

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Notes

1 The views expressed in this article are those of the authors and do not necessarily represent those of the WCO or WCO policy.

2 The authors are grateful to Robert Ireland and Man-hee Jo of the WCO, Leea Hoffman of Finnish Customs, and Matthew Yongho Joo of the Korea Customs Service for their insightful input.

3 The US tried to hold a tight rein on tax havens in the 1960s (*The Economist* 2013). The OECD in 1998 introduced the Harmful Tax Practices initiative to discourage the use of preferential tax regimes and to encourage effective information exchange among tax authorities. As part of the initiative, the OECD produced a list of tax havens in 2000 (Dharmapala 2008).

4 It is true that many special purpose entities/vehicles were located in tax havens/offshore financial centres. However, according to many scholars and professionals, tax havens are not necessarily a cause of the global financial crisis of 2007-08 (Palan 2010).5 Many countries tax their residents' overseas income and assets in accordance with the residence principle (Genschel & Schwarz 2011).

6 For small countries, a cut of tax rates is likely to bring in more revenue gain by an increase in inbound flow of tax base than revenue loss by it (Keen & Ligthart 2006; Genschel & Schwarz 2011). However, contradictory evidence is also provided that tax havens may not intensify tax competition to the extent that might be anticipated (Tobin & Walsh 2013).

7 Most countries assert a right to tax both residents on their worldwide income from domestic and foreign sources under the residence principle and domestic income earned by domestic or foreign owners under the source principle (Genschel & Schwarz, 2011).

8 Many double taxation treaties are concluded on the basis of the OECD Model Tax Convention on Income and on Capital (Owens & Bennett 2008) and the OECD Model Agreement on Exchange of Information on Tax Matters became the basis for Tax Information Exchange Agreements (TIEAs) (Nicodeme 2009).

9 This Directive was originally introduced in 1976 in the name of the EC Mutual Assistance Directive and was adopted in 2010 after consolidation following a number of revisions (O'Shea 2010).

10 In addition to automatic information exchange, the Convention features tax examination abroad and simultaneous tax examinations and international assistance in the collection of tax debts (Keen & Ligthart 2006).

11 The number of contracting parties to the Convention was only nine by 2003 and increased to 17 by 2009. Since 2010, 44 countries have signed the Convention.

12 Austria and Luxembourg have been allowed, for a transitional period, to apply a withholding tax instead of engaging in the automatic exchange of information on savings. However, Luxembourg will move to the automatic exchange of information from 2015 (EC 2013).

13 Trade information exchange between customs administrations is indicated in Article 12 Customs Cooperation of the WTO's Trade Facilitation Agreement.

14 According to the OECD and the WTO guidelines concerning transfer pricing, transfer prices used for customs duties and corporate income tax do not need to be identical to be consistent (Blouin, Robinson & Seidman 2012).

15 The WCO and the OECD had two joint conferences in Belgium, in 2006 and 2007, to seek to harmonise two different approaches and two joint workshops, in Korea in 2012 and South Africa in 2013, to train customs officers and tax officers about transfer pricing.

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Combating illicit trade and transnational smuggling: key challenges for customs and border control agencies

Gautam Basu

Abstract

Customs and border control agencies face key challenges in preventing illicit trade and disrupting transnational smuggling operations. Maintaining the delicate balance between facilitating legitimate trade flows while concurrently deterring those that are illicit is a complex operational task. This paper identifies and delves deeper into three of those challenges: the scale of complexity of physical transportation geography in border management, adaptive capabilities of concealment, evasion, structural and operational flexibility by professional smugglers, and institutional coordination problems which may arise in customs and border control management.

1. Introduction

National customs and border control agencies typically have a parallel mandate in which to facilitate the flows of licit and legal trade while concurrently deterring illicit and illegal trade. Illicit trade encompasses a diverse range of commodities and services that creates the formation of black markets around the world. The World Economic Forum has defined illicit trade as 'money, goods or value gained from illegal and generally [or commonly viewed to be] unethical activity' which generates 'economic, social, environmental or political harms' (World Economic Forum 2012, p. 1). The logistics process by which illicit traders move their products to market is known as transnational smuggling. The United Nations Office of Drugs and Crime (UNODC) estimates the global illicit narcotics trade between USD350 billion and USD425 billion per year (UNODC 2012). The European Commission (EC) estimates that the direct loss in customs revenue for smuggled cigarettes is approximately Euro10 billion a year within the European Union (European Commission 2008). The global arms market is approximately USD60 billion per year, of which 10-20% is estimated to be illicitly traded (United Nations Office on Disarmament Affairs [UNODA] 2012). The trafficking of endangered species and animal parts such as ivory, tiger skins, and rhino horns is estimated to be a USD19 billion per year trade (Havoscope 2013). The smuggling of illegal migrants is big business for criminal organisations where fees upwards of USD75,000 can be had for smuggling an illegal Chinese citizen to the United States of America (US) (Keefe 2011).

Due to the secretive nature and lack of verifiable data on illicit trade, it is difficult to calculate with absolute precision the market size of trade, however most customs, border and law enforcement officials, policymakers, and academics agree illicit trade results in major financial and social costs to global society. Customs and border control agencies face a formidable task in disrupting illicit trade flows and dismantling organisations involved with smuggling operations. The purpose of this paper is to identify structural and operational flexibility attributes possessed by transnational smuggling organisations and to address the key customs and border control challenges such as the management of physical transport geography and institutional coordination problems that exist within an inter-organisational context.

2. Shared history between customs authorities, illicit trade and transnational smuggling

Customs authorities, illicit trade and smuggling share a common history. In 13th century England, wool smuggling became rampant soon after King Edward I created a national customs organisation to collect duties on traded goods (Williams 1959). John Jacob Astor became America's first multi-millionaire and made his fortune smuggling illicit alcohol, violating America's first alcohol prohibition in the early 1800s (Andreas 2013). The history of political economy has shown that prohibition or restriction on certain forms of trade often creates economic incentives and opportunities for illicit trade activity and smuggling. Criminal entrepreneurs involved in illicit trade are opportunistic by nature and seek to exploit market and regulatory arbitrage opportunities for economic gain. Cross-border smuggling is a logistics-intensive process that can be viewed as a core competency for transnational criminal organisations involved in illicit trade activities (Basu 2013). Transnational smuggling involves the clandestine transportation and conveyance of illicit goods and/or people across national borders. Modern-day smugglers use novel, flexible, stealthy logistics methods, assets, and systems to smuggle illegal goods across national borders in order to avoid the risk of detection and apprehension.

From a policy perspective, illicit trade tests the governance structures that regulate the global economy. The institutions that regulate economic trade have not been adequately prepared to deal systematically with the phenomena of illicit trade. Policymakers often underestimate how flexible, innovative and influential transnational criminal organisations have become. Many decision makers sometimes have the mistaken belief that the right mix of policy, regulation and law enforcement will somehow halt the flow of illicit goods, services and people. The reality is that illicit trade is a complex phenomenon that requires a deeper understanding and multi-faceted solution-based approach.

2.1 Illegal narcotics

The trafficking of illegal narcotics such as heroin, cocaine, and other psycho-active chemicals is a major business for transnational criminal organisations. The illicit narcotics trade imposes heavy health, social, and enforcement costs on society. In recent years, the trade has taken a very violent path with over 60,000 deaths and 25,000 disappearances in Mexico in the last seven years, attributable to the turf war which has erupted between the various Mexican drug cartels (Priest 2013). National governmental institutions are often at odds in considering illegal drugs as either a health or a criminal problem, evidenced by the differing views on law enforcement, criminalisation and penalties assigned to drug offenders in different countries. Combating the illegal narcotics trade is a focal point for many customs and border control agencies.

2.2 Environmental (endangered wildlife and hazardous waste)

Environmental illicit trade involves the market exchange of endangered wildlife and the cross-border movement and disposal of hazardous materials and toxic waste. The endangered wildlife trade is diverse, ranging from live animals and plants to a vast array of wildlife products derived from them including food products, exotic leather goods, wooden musical instruments, timber and medicines (Convention on International Trade in Endangered Species of Wild Fauna and Flora [CITES] 1975). In the last twenty years, the trans-boundary movements of hazardous wastes and their disposal have become a major environmental issue. As disposal facilities for hazardous waste become scarcer and more costly in developed OECD countries, developing nations in Africa and Asia have been used as dumping grounds. These developing countries frequently lack the capacity to deal with the waste in an environmentally sound manner (United Nations Environmental Program [UNEP] 1992).

Table 1: Illicit markets and associated policies

Illicit market	Major policies associated with illicit markets
Illegal narcotics	Single Convention of Narcotics Drugs (1961); Convention on Psychotropic Drugs (1971); United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988)
Environmental	Convention on Trade in Endangered Species of Wild Fauna and Flora (CITES); the Montreal Protocol on Substances that Deplete the Ozone Layer (ODS); the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal; the Stockholm Convention on Persistent Organic Pollutions (POPs); the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Cartagena Protocol on Bio-safety
Tobacco & cigarettes	World Health Organization (WHO) Framework Convention on Tobacco Control
Weapons/Military	United Nations Office for Disarmament Affairs (Arms Trade Treaty), UN Security Council Resolutions 1373 and 1456; WCO Recommendation on the Insertion in National Statistical Nomenclatures of Subheadings to Facilitate the Monitoring and Control of Products Specified in the Protocol Concerning Firearms covered by the UN Convention against Transnational Organized Crime; WCO Recommendation concerning the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, their parts and components and ammunition, supplementing the United Nations Convention against Transnational Organized Crime
Migrants/Sex workers	United Nations Convention against Transnational Organized Crime; the United Nations Protocol to Prevent, Suppress, and Punish Trafficking in Persons, Especially Women and Children, and United Nations Protocol against the Smuggling of Migrants by Land, Sea, and Air
Stolen arts & cultural artefacts	United Nations Education, Scientific, and Cultural Organization (UNESCO) Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property (1970)

Sources: WHO, CITES, UNODA, UNODC, UNESCO, WCO, World Bank.

2.3 Cigarettes, alcohol and pharmaceuticals

Variations between different nations' tax and price structures on high-demand licit commodities such as cigarettes, alcohol and pharmaceutical drugs provide large economic incentives for transnational smuggling. In 2000, it was estimated that between 6% and 8.5% of the global consumption of cigarettes was smuggled (World Bank 2000). In the US and EU alone, the volume of illicit trade is estimated to be 62 billion and 58 billion cigarettes per year respectively (Joossens & Raw 2008). Customs authorities in Germany have had a major issue with the mass smuggling of cigarettes across their eastern borders. Pharmaceutical products such as analgesics, antibiotics, multivitamins, and anabolic steroids are popular smuggled commodities. The Mexican drug cartels have now entered the illicit market and are considered an alternative supply for popular pain medications such as Oxycontin and Vicodin.

2.4 Illicit military and arms trafficking

The Arms Trade Treaty (ATT) was passed by the UN General Assembly in June 2013. The treaty covers the illicit trade of battle tanks, armoured combat vehicles, large-calibre artillery systems, combat aircraft, attack helicopters, warships, missiles and missile launchers, and small arms and light weapons, and prohibits member states from transferring conventional weapons if they violate arms embargoes or if they promote acts of genocide, crimes against humanity or war crimes (UNODA 2013). The treaty members are also considering whether to (de)authorise the export of arms where the weapons would be used to violate international human rights laws or employed by terrorists or organised crime. The World Customs Organization (WCO) plays a crucial role in the operational implementation of this treaty.

2.5 Migrant smuggling

The smuggling of migrants has become a lucrative business for transnational criminal organisations. Article 3(a) of the UN 'Protocol against the Smuggling of Migrants' (UNODC 2004, Annex III) defines the 'smuggling of migrants' as 'the procurement, in order to obtain, directly or indirectly, a financial or other material benefit, of the illegal entry of a person into a State Party of which the person is not a national or a permanent resident' and Article 3(b) defines 'illegal entry' as 'crossing borders without complying with the necessary requirements for legal entry into the receiving state (UNODC 2004, pp. 54-55). The Protocol also covers fraudulent documentation such as passports and ID cards as a criminal offence. Illegal migrants are often mistreated and abused on their journeys to their destination country and sometimes used as sex workers. Countries such as Turkey, Serbia, Bulgaria, Panama and Mexico have been known for staging and transit operations for migrants illegally into the US and EU. Customs and immigration enforcement officials have been burdened by the influx of illegal migrants and tracking down the organised smuggling rings responsible for this trade.

2.6 Stolen art and cultural artefacts

The illicit trade in art and cultural artefacts includes products of archaeological excavation, elements of historical monuments, antiques over 100 years old (coins, engraved seals), objects of ethnological interest, and artistic works which include paintings, sculptures, historical books, postage stamps, cinematographic, photographic, sound archives, furniture and musical instruments (UNESCO 1970). Typically, the black market supply for cultural artefacts arises from theft or looting. Artefacts are 'often those that have been discovered and unearthed at archeological digs and then transported internationally through a middleman to often unsuspecting collectors, museums, antique dealers, and auction houses' (Wikipedia, quoting the Archeological Institute of America 2003). The highly publicised case of the 2004 art heist worth EUR19 million from the Munch Museum in Norway and the subsequent illegal smuggling and distribution of the paintings highlights the problem.

3. Key challenges in combating illicit trade and transnational smuggling for customs and border control management

Global customs and border control agencies face an interesting paradox in managing two parallel mandates. The first mandate deals with the effective facilitation of legitimate and legal trade flows of goods, services, people and capital. The second relates to the interdiction of and halting the flows of illicit commodities, services, and the apprehension and prosecution of individuals facilitating illicit trade. This parallel mandate can lead to operational inefficiencies within legitimate supply chains leading to increased cost, delivery disruption, time delays, interruptions in the smooth flow of products and services, traffic and port congestion, and longer cycle times (Lee & Whang 2005).

Businesses and government actors describe their frustration as a perception that regulatory controls are

not always compatible with operational needs (Grainger 2007). Customs and border control agencies conduct their own operations to stop and deter illicit trade to minimise transnational smuggling operations, reduce the supply of contraband goods and disrupt criminal networks. The process by which these agencies achieve their objectives is through border interdiction, collection of information and intelligence, investigations into criminal networks, deployment of anti-smuggling technologies, prosecution of individuals associated with professional smuggling rings, facilitation of training and education, and the fostering of cooperation between international customs agencies (Clark & Sanctuary 1992). Typical performance indicators used to measure the effectiveness of anti-smuggling efforts include the number of seizures, quantities and value of illicit commodities seized, numbers of individuals charged and convicted, length of sentence, and the proportion of illegal importations detected (Wagstaff & Maynard 1988). All but the last of these are fairly easy to measure but in isolation provide only a partial account of the control agency's effectiveness in deterring illicit trade flows. For example, increased seizures are often seen as evidence for increased effectiveness; however, it can be argued that they merely reflect higher importation levels. A more holistic performance management system which includes both demand and supply indicators is needed to assess the effectiveness of disruption of illicit trade flows.

The purpose of this paper is not to delve into the performance and efficiency metrics of customs and border control but to identify key structural and operational challenges that those agencies tasked with combating illicit trade currently face. These challenges are underpinned by three factors:

1. Resource constraints and scale complexity of transportation geography
2. Interdiction-adaptation cycle between customs/border enforcement and transnational smugglers
3. Institutional and inter-organisational coordination problems.

3.1 Resource constraints and scale complexity of transportation geography

The movement of people and goods across time and space relates to the mobility dimension of transportation geography. Transportation geography involves transport infrastructure, such as marine ports, bridges, roads, rail tracks, and airports, as well as terminal hubs and distribution centres that form the basis for a complex spatial system. The analysis of transportation geography entails the exploration of the linkages between spatial constraints, attributes of the origin and destination, the extent, the nature, and the purpose of the movements (Rodrigue, Comtis & Slack 2006). The last three items are of particular importance to customs and border control and security agencies in regard to the facilitation of legitimate trade and deterrence of illicit trade. Mobility interweaves with the construction of nations on multiple scales and with the control of movement as demarcating the boundary between those flows that are wanted and those flows which are to be excluded (Jensen 2013). As US Department of Homeland Security Deputy Secretary James Loy pointed out:

> We must secure nearly 7,500 miles of land border with Canada and Mexico, across which more than 500 million people, 130 million motor vehicles, and 2.5 million rail cars pass every year. We also patrol almost 95,000 miles of shoreline and navigable waters, and 361 ports that see 8,000 foreign flag vessels, 9 million containers of cargo, and nearly 200 million cruise and ferry passengers every year. We have some 422 primary airports and another 124 commercial service airports that see 30,000 flights and 1.8 million passengers every day. There are approximately 110,000 miles of highway and 220,000 miles of rail track that cut across our nation, and 590,000 bridges dotting America's biggest cities and smallest towns. This vast infrastructure supports an economy of more than $1 trillion in gross domestic product (US DHS 14 June 2004).

Professional smugglers often have a good understanding of transport geography. They use this knowledge when making decisions regarding transportation routes, modes, use of specific transport infrastructure and transshipment hubs. Smugglers use either formal or informal border crossings to get contraband across borders. Informal border crossings are often porous and traversed by foot, by horse or all-terrain

vehicles. Heroin originating from Afghanistan is often smuggled through the Kyrgyzstan-Kazakhstan border as it is very porous. Not only is it easy to walk across undetected but large vehicles with contraband cargoes also cross illegally (Townsend 2006). Simple resources at formal border checkpoints, such as drug-sniffer dogs are lacking in developing countries, thus smugglers run rampant in central Asian republics moving everything from illegal narcotics and illicit arms to oil and endangered wildlife.

Along with the sheer scale of managing the physical transport security of borders, agencies are commonly faced with resource constraints. These constraints can be in the form of human, financial, infrastructural and technological resources. Customs, immigration, and quarantine inspectors are faced with the operational challenge of having to accommodate exponential growth in trade volumes with only a finite amount of control resources, such as manpower and facilities at their disposal (Grainger 2007). The US Congress acknowledged this and allocated more manpower and resources in recent years and realised some successes in interdiction rates from illicit cross-border activities (US GAO 2009). US senator Pete Domenici commented on the challenges of controlling transnational smuggling activities:

> I understand that we're shooting at floating targets. I mean, you do well in the southeast border and they [drug traffickers] move to the southwest. We'll load up the southwest border, traffickers move operations elsewhere. What happens next? It's tricky. Nonetheless, we have to continue the war on drugs. For us to sustain resources, you have to have a few field victories of significant size that are measurable. We have to take that to the [congressional] floor and tell them we put an additional $1.7 billion into border control and it's doing something. And it can't be measured by manpower, it has to be measured in results (Andreas 2013).

While it is impossible to physically monitor, control, and secure borders through manpower alone, the use of advanced technologies, such as unmanned aerial vehicles (UAV), embedded sensor and actuator solutions in transport assets, cargo shipment data mining with risk analytics, next generation surveillance cameras, x-ray technologies, and robotics have aided customs and border patrol agencies in deterring the flow of illicit trade and smuggling operations. By leveraging technology, Customs can alleviate some of the burdens associated with managing the physical scale of transport geography.

3.2 Interdiction-adaptation cycle between customs/border enforcement and transnational smugglers

The institutional friction generated between customs/border patrol agencies and transnational smugglers creates an interdiction-adaptation cycle. Customs and border enforcement initiatives focus on interdicting and disrupting the flows of illicit trade by air, sea, and land. These initiatives utilise advanced military-style technologies and control methods, customised for anti-smuggling efforts. These same customs and border interdiction campaigns create distinct transaction costs for smugglers and trigger adaptation mechanisms (Basu 2014b). The risk of detection and apprehension by customs and law enforcement agencies forces smuggling organisations to incur specific transaction costs related to *concealment* and *evasion*. Concealment costs are the costs associated with avoiding the risk of detection by customs officials, border patrols, and police. Evasion costs are the costs associated with evading arrest, prosecution, and taxes by customs and law enforcement authorities. These transaction costs are a direct result of law enforcement interdiction, which facilitate adaptation responses by smugglers, emphasising concealment, evasion, structural, and operational flexibility capabilities. The constant cat-and-mouse game between law enforcement and criminal organisations involved in smuggling creates an interdiction-adaptation cycle (Basu 2013). This interdiction-adaptation cycle can vary in time from days and months to years and decades.

3.2.1 Interdiction efforts of customs, border control and law enforcement agencies

Customs, border control and law enforcement agencies plan and operationalise interdiction initiatives designed to deter flows of international illicit trade. These agencies receive funding from their respective

governments and allocate human and technological resources accordingly. During the last few decades, there have been massive investments in anti-smuggling initiatives. For example, in the US, government funding for combating illegal drug smuggling increased from USD219 million in 1981 to USD800 million in 1999, where the majority of the funding went to the US Customs and Border Patrol and the Drug Enforcement Agency (US Office of National Drug Control Policy 2000). Concurrently, customs and border patrol resources were increased on the southwest US-Mexico border to stem the tide of illicit drug flows from 3,389 agents in 1993 to 7,231 agents in 1998 (US Department of Justice 2004).

In conjunction with funding and human resource surges, advanced technologies were utilised in interdiction efforts. Military equipment and technology initially designed for war and combat were increasingly made available and customised to deter smugglers. For example, the North American Aerospace Defense Command, which was built to track incoming Soviet missiles, was refocused to track smugglers; x-ray technology designed to detect Soviet missile warheads in trucks was adapted for use by US Customs to find illicit trade shipments in cargo trucks; the Airborne Warning and Control System surveillance planes began to monitor suspected international smuggling flights; the Defense Advanced Research Projects Agency (DARPA) began research efforts on anti-submarine warfare to develop listening devices to detect drug smugglers (Barry 2011).

3.2.2 Adaptation capabilities of transnational smugglers

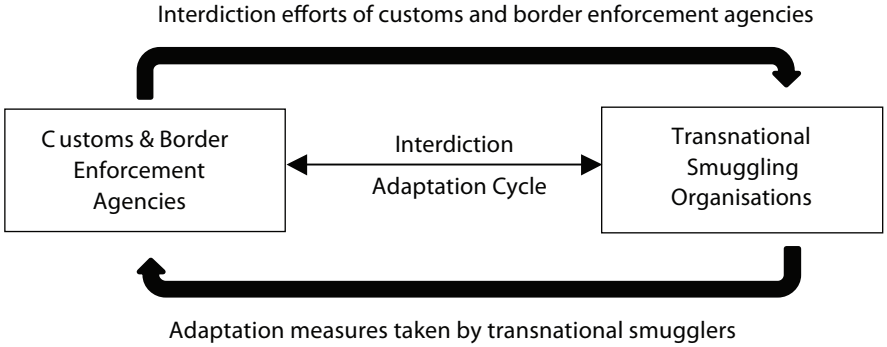
As law enforcement funding, human and technological resources intensified, illicit trade smugglers employed their own adaptation strategies. Professional smugglers adapt by learning from the environment. A Canadian customs official stated: 'They are continuously learning. Every time we go to court, we have to disclose how we got them and they learn from that and adapt. The amount of change and advancement in concealment methods from the 1980s and early 1990s is nothing compared to what it is like now. It's just incredible' (Schneider 2000). The evolution of smuggling technologies is a factor in structural flexibility. Drug traffickers used fast boats and fishing trawlers in the 1970s and 1980s for smuggling. In the 1990s and 2000s, drug smugglers started using semi-submersible vessels and are currently using unmanned aerial vehicles or drones for smuggling purposes (FBI 2010).

Organisations engaged in smuggling developed specific capabilities to circumvent interdiction. Smugglers incur unique transaction costs of concealment and evasion based on the risks of detection and arrest by law enforcement agencies (Basu 2014b). Thus, smugglers acquired capabilities around concealment and evasion to increase their probabilities of successful smuggling operations by strengthening these capabilities. Concealment capabilities include customised transport assets with special compartments designed to conceal contraband, elusive transport routes, and secretive arrangements with financial institutions for the purpose of laundering money generated from illicit activities. Evasion capabilities include bribes to customs and border security officials, and high-speed or stealthy transport assets designed to outrun and evade law enforcement radar when operations are detected.

In addition to this, smugglers exhibit various levels of structural and operational flexibility to elude interdiction. Structural flexibility includes adaptation to legal, regulatory, and competitive environments by smugglers; flexible organisational and relationship structures, in the case of incarceration, death, or role changes in the smuggling organisation; and the diversification of illicit product portfolio structures, for example, drug smuggling to human smuggling (Basu 2013). Smuggling rings also employ operational flexibility to maintain levels of elusiveness from border control. Transnational smuggling typically involves multi-mode, multi-leg transportation shipments with various transport assets used for the smuggling operation. Drug smugglers have been quite agile in shifting their transportation routes when customs and border interdiction rates increased. Colombian cocaine traffickers traditionally smuggled contraband via Caribbean routes in the 1980s. As interdiction rates rose, Colombian smugglers shifted routes by using Mexico as a transshipment route to move drugs into the US. As the transport routings became more dynamic, the interchangeability of transport assets was enhanced for flexibility based on the modal characteristics of the smuggling operation. Professional smugglers either piggyback on to

legitimate conveyances like commercial airlines, merchant marine vessels, passenger/cargo railways, military aircraft, and commercial trucks or use their own customised transportation assets such as border catapults, specially designed road vehicles, fast boats, and semi- and fully submersible vessels, not to mention human mules (Basu 2013). The location of transshipment hubs and illicit distribution centres is frequently changed to mitigate the risk of police raids. Smugglers are astute at gathering counter-intelligence regarding operational routines of customs and border patrols and transportation flow patterns to calculate the optimal timing of border crossing. Pretty young women have particular uses for smuggling rings, as they are sent on many missions to collect information about rivals, police, border patrols, politicians, and anything the cartel wants to find out about (Grillo 2012). The logistical flexibility of smuggling rings creates an environment of operational elusiveness and is a key challenge for customs, border and law enforcement officials.

Figure 1: Interdiction-adaptation cycle between customs/border enforcement and smugglers

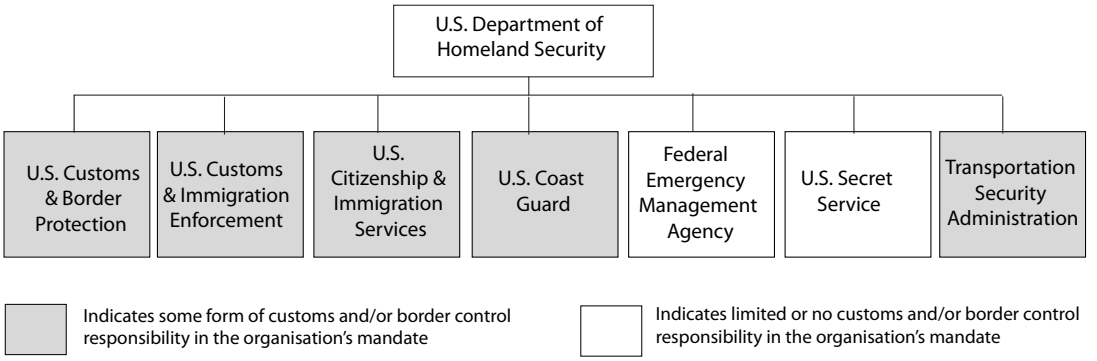


3.3 Institutional and inter-organisational coordination problems

From the time institutional governance structures began to be differentiated into departments and agencies there have been complaints that one agency does not know what the other is doing, and that their programs are contradictory, redundant or both (Hall 1978). Proper coordination within and across the various governmental institutions is necessary to achieve levels of effectiveness and efficiency. Institutional governance structures are forms of power and authority, patterns of relationship, rights, and obligations among the people within organisations (Newman 2001). Coordination is a form of organising that enhances the ability of individuals or organisations to work together in fulfilling a desired objective and can be thought of as an end state in which policies and programs of the government are characterised by minimal redundancy, incoherence, and lacunae (Kochen & Deutsch 1980).

Governmental agencies like customs and border control tend to favour top-down, 'command and control' hierarchical structures. Characteristics include standard operating procedures, clear mandates and guidelines for communications, formal information exchange, routine tasks, clearly delineated roles and responsibilities. The hierarchical structure works well so long as the agencies are well integrated and have clear mandates about what to do operationally. However, when the environmental uncertainty increases and tasks become more complex and less routine, the efficacy of hierarchies diminishes. Post 9/11, the US Congress created the Department of Homeland Security (DHS) which consolidated 22 departments and agencies with approximately 200,000 federal employees and its goal was to improve domestic security coordination and communication (US DHS 2013). Currently, the US DHS oversees Citizenship and Immigration Services; the Coast Guard; Customs and Border Protection; the Federal Emergency Management Agency; Immigration and Customs Enforcement; and Transportation Security Administration (Figure 2). Four of the six DHS agencies are involved in customs and/or border control-orientated mandates and tasks.

Figure 2: US Department of Homeland Security organisational structure



Source: US DHS.

As mentioned above, reorganising the DHS governance structure into its current form was a governmental response to the 9/11 disaster. However, there has been evidence that suggests that placing so many disparate agencies and departments under one roof has created more coordination problems than it has solved. A November 2008 US Government Accountability Office report found that almost one-third of DHS's major investments received funding without having the appropriate verification that they met mission requirements and needs and that more than one-quarter of major DHS investments were poorly planned or inadequately performing (GAO 2009).

Coordination problems between institutions also arise due to politics and power, resulting in turf battles. General experience has shown that agencies that were the closest together ideologically were the most difficult to coordinate (Savoie & Peters 1998). The organisations tend to fight over the same policy and budgetary resources, while more diverse organisations have found cooperation less threatening. Fighting over turf among similar organisations solidifies positions about the relative importance of their services. This has been the case with the US DHS and US Department of Justice. DHS must coordinate with other governmental agencies on national security and border management issues. Vying for political legitimacy has led to inter- and intra-agency conflict. For example, DHS and the Justice Department, which includes the FBI and Drug Enforcement Administration (DEA), are both tasked with gathering intelligence and sharing it with state and local law enforcement officials in several operations related to the ongoing drug violence on the US-Mexican border. DHS and FBI officials fought over which would play a lead role in security and law enforcement and lost focus on the primary objective of securing the border and disrupting drug cartels cross-border smuggling operations.

The global nature of the economy (including illicit trade) has forced customs and law enforcement agencies to collaborate and share intelligence on an international level. Globalisation means that foreign ministries have become increasingly central players in what had been domestic policy issues. In addition to this, regional free trade initiatives like the North American Free Trade Agreement (NAFTA), EU, and the Association of Southeast Asian Nations (ASEAN), and supply chain security initiatives like the Customs-Trade Partnership Against Terrorism (C-TPAT), Authorised Economic Operator (AEO) and Container Security Initiative (CSI) have placed new demands and requirements on customs agencies for improved coordination. The WCO articulated, in its vision and mission statements, the necessity of international cooperation and leadership in the area of developing management practices, tools, and techniques on an international level (WCO 2013). The sharing of intelligence related to transnational criminal organisations between national customs agencies, combined with information related to best practices in customs and border management and joint international training and education for domestic customs and border security officials should enhance coordination internationally.

4. Conclusions

The complexity of managing the facilitation of legitimate and legal trade while concurrently preventing illicit trade can be extremely demanding. The challenges presented by transnational smugglers in the form of physical border management of transportation geography with resource constraints, the interdiction-adaptation cycle between customs/border enforcement and smugglers, and issues related to customs and border control agencies' coordination require serious consideration about interactions between not just single agencies but about how networks of agencies interact, gather intelligence and disseminate critical information about illicit traders and cross-border smuggling operations. While the key challenges for customs and border control agencies highlighted in this paper are exigent, they can be addressed more effectively and efficiently. The challenge of maintaining the proper functioning of legitimate commerce and trade while simultaneously preventing and stopping illicit trade is the delicate balance customs and border enforcement agencies need to preserve and control.

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Old wine in new skins: analysis of the Trade Facilitation Agreement vis-à-vis the Revised Kyoto Convention

Hans-Michael Wolffgang and Edward Kafeero

Abstract

This paper mainly examines whether or not the celebrated Trade Facilitation Agreement (TFA) offers any ground-breaking provisions that are not in the Revised Kyoto Convention (RKC). A comparative study of the two 'laws' then reveals that the TFA is mainly a reflection of the RKC provisions. Besides, the very few aspects of the TFA which are not regulated by the RKC are, in fact, catered for by other instruments and tools of the World Customs Organization (WCO). From the above, and in light of the current impasse concerning the adoption of the Protocol of Amendment that would lead to incorporation of the TFA into the World Trade Organization's (WTO) legal framework, it is opined that even if the TFA were to fail to come into force, a further developed RKC – incorporating, for instance, some aspects of the 'SAFE Package' like the Authorised Economic Operator (AEO) – would make a perfect substitute.

1. Introduction

The Trade Facilitation Agreement (TFA) which is generally considered the main outcome of the 9th World Trade Organization (WTO) Ministerial Conference was hailed by many trade experts and politicians as a landmark agreement which, once implemented, would boost global economic growth. The TFA is intended to make importing and exporting across all WTO member countries more efficient and less costly by increasing transparency and improving customs procedures. It was estimated that reducing global trade costs by 1% would increase worldwide income by more than USD40 billion, 65% of which would accrue to developing countries (OECD 2013).

The importance of trade facilitation to global trade is therefore largely indisputable. What is questionable, however, is whether or not the TFA offers any ground-breaking provisions that are not in the RKC. To answer this question we need to embark on a systematic comparison of the two treaties. Moreover, the recent failure of the WTO General Council to adopt the Protocol of Amendment so as to insert the TFA in Annex 1A of the WTO Agreement makes this study pertinent insofar as it explores the possibility of retaining and further development of the TFA provisions through the RKC.

This paper also examines the status of the RKC from the context of public international law and in comparison with WTO law. The largely 'soft law' nature of the RKC and the advantages and disadvantages of this are elaborated. Besides, the implementation mechanisms of trade facilitation provisions, many of which have been in place for some time under the RKC regime are explained and the World Customs Organization's (WCO) role in all this is highlighted.

2. Comparing the relationship between the TFA and the RKC Provisions

2.1 An overview

Trade Facilitation Agreement Provisions		RKC Provisions
Article 1: Publication and availability of information	1. Publication	RKC[1] (GA § 4 (4.4) and § 9 (9.1, 9.2, 9.3)
	2. Information availability through the internet	RKC §§ 7 and 9 (9.1, 9.2, 9.3
	3. Enquiry points	RKC GA §§ 7 (Guidelines) and 9 (9.4, 9.5, 9.6, 9.7, 9.8
	4. Notification	RKC, GA § 9 (9.1, 9.2, 9.3);
Article 2: Opportunity to comment and information before entry into force and consultation	1. Opportunity to comment and information before entry into force	RKC, GA §§ 1 (1.3) and 9 (9.2)
	2. Consultations	RKC, GA §§ 1 (1.3), 6 (Guidelines), 7 (Guidelines) and 9 (9.4, 9.5, 9.6, 9.7)
Article 3: Advance Rulings	(Classifications)	RKC, GA § 9 (9.9)
	(Non-preferential Rules of Origin)	RKC, GA § 9
	(Valuation)	RKC, GA § 9
Article 4: Appeal or review procedure	1. Right of Appeal or Review	RKC, GA § 10
Article 5: Other measures to enhance impartiality, non-discrimination and transparency	1. Notifications for enhanced controls or inspections	RKC, GA § 6 (6.3, 6.4, 6.7)
	2. Detention	RKC, GA § 3, (3.6), 6 (6.1)
	3. Test procedures	RKC, GA § 3 (3.38)
Article 6: Disciplines on fees and charges imposed on or in connection with importation and exportation	1. General disciplines on fees and charges imposed on or in connection with importation or exportation	RKC, GA §§ 3 (3.2) and 9 (9.1); SA A § 1 (19)
	2. Specific disciplines on fees and charges imposed on or in connection with importation or exportation	RKC, GA §§ 3 (3.2) and 9 (9.7); SA A § 1 (19)
	3. Penalty disciplines	RKC, GA § 3 (3.39, 3.43), SA H §1 (19, 20, 21, 22, 23, 24, 25)

Trade Facilitation Agreement Provisions		RKC Provisions
Article 7: Release and Clearance of goods	1. Pre-arrival processing	RKC, GA §§ 3 (3.25) and 7; (Section 6.4 of the ICT Guidelines)
	2. Electronic payment	RKC, GA § 7 (7.1); Section 6.10 of the ICT Guidelines)
	3. Separation of release from final determination of customs duties, taxes, fees and charges	RKC, GA §§ 3 (3.13, 3.14, 3.17, 3.40), 4 (4.9) and 5 (5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7), 7 (Section 6.10 of the ICT Guidelines)
	4. Risk management	RKC, GA §§§ 6 (6.3, 6.4, 6.5) and 7 (Section 6.8 of the ICT Guidelines)
	5. Post-clearance audit	RKC, GA §§ 6 (6.6) and 7
	6. Establishment and publication of average release times	……..
	7. Trade facilitation measures for Authorised Economic Operators	RKC, GA §§ 3 (3.32) and 7 (Sections 6.15 and 9.3 of the ICT Guidelines)
	8. Expedited shipments	RKC, GA § 3
	9. Perishable goods	RKC, GA § 3 (3.34)
Article 8: Border agency cooperation		RKC, GA § 3 (3.35)
Article 9: Movement of goods under customs control intended for import		RKC, SA E §§ 1 and 2
Article 10: Formalities connected with importation, exportation and transit	1. Formalities and documentation requirements	RKC, GA § 3 (3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19)
	2. Acceptance of copies	RKC, GA § 3 (3.11, 3.12, 3.13, 3.14, 3.15, 3.16, 3.17, 3.18, 3.19) and § 7 (7.1, 7.2)
	3. Use of international standards	RKC, §§ 3 (3.11) and 7 (7.2)
	4. Single Window	RKC, GA § 3 (3.25)
	5. Pre-shipment inspection	……
	6. Use of customs brokers	RKC, GA §§ 3 (3.6, 3.7) and 8 (8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7)
	7. Common border procedures and uniform documentation requirements	RKC, GA § 3 (3.11, 3.20)
	8. Rejected goods	RKC, GA §§ 3, 4 (4.19)
	9. (a) Temporary admission of goods	RKC SA G § 1
	9. (b) Inward and Outward Processing	RKC SA F §§1, 2 and 3

Trade Facilitation Agreement Provisions		RKC Provisions
Article 11: Freedom of Transit		RKC, GA § 5; SA E §§ 1 and 2
Article 12: Customs Cooperation	1. Measures promoting compliance and cooperation	RKC, GA §§ 1 (1.3), 3 (3.27, 3.28, 3.29, 3.31, 3.32, 3.39), 6 (6.2, 6.3, 6.4, 6.5, 6.6, 6.8, 6.9, 6.10) and 9 (9.1, 9.2, 9.3, 9.4, 9.5); SA H § 1. (Standard 20, 23, 24 and 25)
	2. Exchange of information	RKC, GA §§ 6 (6.7) and 7 (7.1)
	3. Bilateral and regional agreements	RKC, GA § 6 (6.7)

Source: Adapted from the Draft Preliminary analysis of Section I (and Article 23) based on the WTO TF Toolkit and potential implications on WCO – Rev. 1, September 2014.

2.2 Significance of the similarities and differences between the TFA and RKC Provisions

In this section we comment on Articles 1 to 12 of the TFA and the corresponding provisions in the RKC, showing the similarities and differences between the two and highlighting the novelties of the TFA, as the case may be.

2.2.1 The TFA, Article 1: Publication and availability of information

Four issues are regulated by this Article. The first issue concerns prompt publication of information '*in a non-discriminatory and easily accessible manner in order to enable governments, traders and other interested parties to become acquainted with them*'. Such information may relate to importation, exportation and transit procedures and the required forms and documents, applied rates of duties and taxes imposed in connection with importation or exportation, or other aspects enumerated in the said article. The second concerns *availability of information through the internet*. And in this case, WTO Members are obliged to make available import, export or transit procedures and other relevant trade-related information on the internet; and whenever practicable, also to make it available in one of the WTO official languages. Third, WTO Members are required to establish and maintain *enquiry points* to answer reasonable enquiries of governments, traders and other interested parties on matters relating to publication of information contained in paragraph 1.1. Fourth, WTO Members are obliged to *notify* the Committee on Trade Facilitation the official place(s) where the items in subparagraphs 1.1.a. to 1.1.j. have been published and the URLs of website(s) referred to in paragraph 2.1, as well as the contact information of the enquiry points referred to in paragraph 3.1.

The same requirements of Article 1 of the TFA are extensively addressed by the RKC in chapters 4, 7 and 9 of the General Annex. In addition, the RKC has comprehensive guidelines which, even though they are not part of the legal text of the Convention and entail no legal obligations, contain important explanations of the provisions of the Convention and give examples of best practices or methods of application and future developments. Therefore, with regard to publication and availability of information, the TFA essentially adds political value to the already existing international trade facilitation standards and best practices of the RKC.

2.2.2 Article 2: Opportunity to comment, information before entry into force and consultation

This Article requires WTO Members, to the extent practicable and in a manner consistent with domestic legal systems, to provide traders and other interested parties with opportunities and an appropriate

time period to comment on the introduction or amendment of laws and regulations and regulations of general application related to the movement, release and clearance of goods, including goods in transit. WTO Members are also required to make new or amended laws and regulations available before their entry into force. RKC, General Annex § 1 (1.3) also requires that formal consultative relationships be maintained with the trade. And according to the RKC, General Annex § 9 (9.2), revised information is supposed to be made available sufficiently in advance of the entry into force of the changes. This is yet another manifestation of the spirit of the RKC in the WTO TFA.

2.2.3 Article 3: Advance rulings

First, it should be noted that an advance ruling (in the context of the TFA) '*is a written decision provided by a Member to an applicant prior to the importation of a good covered by the application that sets forth the treatment that the Member shall provide to the good at the time of importation with regard to (i) the good's tariff classification, and (ii) the origin of the good*' (TFA 3: 9.a.). In essence, the Article requires WTO Members to issue advance rulings regarding the tariff classification and the (non-preferential) origin of goods and sets the rules stipulating the issuance of advance rulings in a reasonable and time-bound manner, including cases where an application may be declined by WTO Members. In addition, pursuant to TFA 3: 9.b., WTO Members are encouraged to issue advance rulings for other areas such as customs valuation and requirements for relief or exemption from customs duties.

In the introduction to the WCO guidelines to chapter 9 of the General Annex, it is clear that availability of information on customs matters (to those who need it) is one of the key elements of trade facilitation. And when such information is requested, it is the responsibility of Customs to provide it completely and accurately and as soon as possible.[2] In addition, RKC, General Annex § 9 (9.9) stipulates that binding rulings shall be issued at the request of the interested person. In the general spirit of this paper, it is interesting to note that the guidelines to this standard go on to cover various aspects of binding rulings, including their scope, notification, time limits and use. All this demonstrates the depth of the RKC in regard to trade facilitation regulations – seen from both regulatory and implementation points of view.

2.2.4 Article 4: Appeal or review procedures

The gist of this Article is to oblige WTO Members to provide that any person to whom Customs issues an administrative decision has the right to administrative appeal or review, and/or judicial appeal or review; and that the administrative and judicial review should be carried out in a non-discriminatory manner.

The question of appeals/reviews in customs matters is also well catered for by the RKC in chapter 10 of the General Annex. The different standards therein provide for a transparent and multi-stage appeal process to avoid victimisation (and/or to prevent the perception thereof) by those affected by Customs' decisions. Undoubtedly, the availability of an independent judicial review as a final avenue of appeal is also intended to instil confidence among stakeholders in government institutions and in particular in customs administrations.

Concerning appeals, too, it is evident that the content of Article 4 of the TFA is almost entirely traceable to the RKC. We note, though, that in contrast to the RKC, the TFA brings out clearly and expressly the principle of 'non-discrimination', which is obviously central to all WTO law.

2.2.5 Article 5: Other measures to enhance impartiality, non-discrimination and transparency

In view of enhancing impartiality, non-discrimination, and transparency three measures are advanced by Article 5 of the TFA namely: (1) *notifications for enhanced controls or inspections*; (2) *detention*; and (3) *test procedures*. It should be noted that where a WTO Member adopts or maintains a system of notifications for enhancing controls or inspections in respect of foods, beverages or feedstuffs, that Member should follow certain principles such as 'risk-based' and 'uniform application' as paragraph 1 stipulates.

From the context of the RKC, one notices that chapter 6 of the General Annex set standards on customs control, risk management and cooperation with other customs administrations. It is true that these provisions do not relate directly to the notification system. Nevertheless, they could be vital in the implementation of Article 5 of the TFA.

2.2.6 Article 6: Disciplines on fees and charges imposed on or in connection with importation and exportation

Paragraph 1 of this Article essentially requires WTO Members to publish information on fees and charges imposed on or in connection with importation and exportation, and to review the fees and charges periodically with a view to reducing their number and diversity. Paragraph 2 goes further to state that '*fees and charges for customs processing:*

i. shall be limited in amount to the approximate cost of the services rendered on or in connection with the specific import or export operation in question; and

ii. are not required to be linked to a specific import or export operation provided they are levied for services that are closely connected to the customs processing of goods'.

Many standards of the RKC also stipulate that fees and charges shall be limited to the approximate cost of the services rendered.[3] Even penalty disciplines regulated by paragraph 3 of this Article are extensively addressed in Specific Annex H1 of the RKC.

2.2.7 Article 7: Release and clearance of goods

The Article contains provisions on pre-arrival processing; electronic payment; separation of release from final determination of customs duties, taxes, fees and charges; risk management; post-clearance audit; establishment and publication of average release times; trade facilitation measures for authorised operators; expedited shipments; and perishable goods. The central messages in all these provisions are the requirement for WTO Members to adopt or maintain procedures allowing for the submission of import documentation prior to the arrival of goods, and to allow electronic lodgement of such documents. The use of modern methods of management such as risk management and post-clearance audit are also emphasised.

The RKC also offers a number of standards which deal with prior lodgement and registration of goods declaration, which procedures create a balance between the interests of traders and customs administrations.[4]

TFA 7: 6 encourages WTO Members to measure and publish their average release time of goods periodically and in a consistent manner, using tools such as, *inter alia*, the WCO Time Release Study. It also encourages them to share with the Committee on Trade Facilitation their experiences in measuring average release times, including methodologies used, bottlenecks identified, and any resulting effects on efficiency. A similar provision, however, is absent in the RKC. Instead, it can be traced to the WCO's 'Guidelines for the immediate release of consignments by Customs' (WCO 2006).

2.2.8 Article 8: Border agency cooperation

According to this Article all national border authorities/agencies are supposed to cooperate with each other and coordinate border control and procedures to facilitate trade. Such cooperation and coordination may include '*alignment of working days and hours; alignment of procedures and formalities; development and sharing of common facilities; joint controls;* [and] *establishment of one stop border post control*'.

Chapter 3 of the General Annex to the RKC contains a number of provisions geared towards cooperation and coordination amongst border agencies. For instance, Transitional Standard 3.35 states that '*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 coordinated and, if possible, carried out at the same time*'.

2.2.9 Article 9: Movement of goods under customs control intended for import

This Article obligates WTO Members, '*to the extent practicable and provided all regulatory requirements are met,* [to] *allow goods intended for import to be moved … to another customs office … where the goods would be released or cleared*'. The type of movement of goods referred to in this Article can be categorised as *national transit procedure* which is extensively regulated by Specific Annex E of the RKC.

2.2.10 Article 10: Formalities connected with importation and exportation and transit

Basically, TFA 10 calls for regular review of formalities and documentation requirements to minimise the incidence and complexity of import, export and transit formalities. In other words, it calls for simplification of documentation requirements. WTO Members are supposed to ensure that such formalities and documentation requirements are as fast and efficient as possible. Thus, the Article under discussion inevitably tackles a number of aspects central to importation, exportation and transit namely: documentation requirements; acceptance of copies; use of international standards; single window; pre-shipment inspection; use of customs brokers; common border procedures and uniform documentation requirements; rejected goods; temporary admission of goods; and inward and outward processing.

Apart from pre-shipment inspection, chapters 3 and 8 of the General Annex and Specific Annexes C, G, F and E to the RKC address all the above-mentioned formalities with various standards, transitional standards and recommended practices to be followed. Indeed these provisions have been seen to be essential to customs modernisation.

2.2.11 Article 11: Freedom of transit

This Article contains a number of provisions relating to freedom of transit. Essentially, it requires that regulations or formalities in connection with traffic in transit be eliminated or reduced if they are no longer required; and that fees or charges may be imposed on transit only for transportation or if commensurate, with administrative expenses entailed or with the cost of services rendered. It includes several measures intended to facilitate transit procedures, including the pre-arrival declaration; and prohibits restrictive measures in relation to customs charges, formalities, and inspections other than at the offices of departure and destination. It also contains provisions relating to guarantees.

A close look at chapters 1 and 2 of Specific Annex E to the RKC, coupled with the respective guidelines, shows the centrality of the RKC to trade facilitation in the field of transit and transhipment. For instance, chapter 1 covers formalities at the office of departure, customs seals, formalities en route and termination of customs transit. And chapter 2 deals with transhipment.

2.2.12 Article 12: Customs cooperation

This Article contains various provisions which concern cooperation between customs administrations. For instance, it sets the terms and requirements for WTO Members to share information to ensure effective customs control while respecting the confidentiality of the information exchanged. The Article allows WTO Members flexibility in terms of establishing the legal basis for information exchange. Moreover, WTO Members may even enter into or maintain bilateral, plurilateral or regional agreements for sharing or exchanging customs information and data, including advance information.

Chapters 1, 3, 6 and 7 of the RKC also contain a number of provisions intended to realise customs cooperation and, ultimately, facilitate trade. For instance, Standard 6.7 stipulates that '*Customs shall seek to cooperate with other customs administrations and seek to conclude mutual administrative assistance agreements to enhance customs control*'.

The comparison made above clearly demonstrates how the provisions of the WTO TFA are largely a re-packaging of the principles and various rules, standards and best practices contained in the RKC. This assertion, however, is not meant to undermine the importance of the TFA. On the contrary, it is meant

to invigorate synergies between the WTO and the WCO in their continuous attempt to facilitate trade across the globe.

3. The status of the RKC in the context of public international law

3.1 *Pacta sunt servanda*

Public international law refers to those laws, rules, and principles of general application that deal with the conduct of nation states and international organisations among themselves as well as the relationships between nation states and international organisations with natural and juridical persons. Article 38 of the Statute of the International Court of Justice gives us the classical sources of public international law, beginning with 'international conventions'.[5]

Premised on the basic principle of *pacta sunt servanda* (that is, agreements must be kept), international conventions have gained currency as sources of international law. In fact, Article 26 of the Vienna Convention on the Law of Treaties (whose heading is *pacta sunt servanda*) states that every treaty in force is binding upon the parties to it and must be performed by them in good faith. Since the RKC is a duly recognised convention with 95 contracting parties as at 30 August 2014, it follows that a significant part of the international trading community is bound by the provisions of the RKC. Besides, there are even some countries which are not yet contracting parties to the RKC which, nevertheless, make substantive use of its provisions. Take, for example, a country like Burundi or Tanzania which are not contracting parties to the RKC which, nevertheless, implement many of its provisions by virtue of their membership of the East African Community Customs Union, whose customs law was largely drafted in accordance with the RKC (Kafeero 2009).

3.2 The 'hard law vs. soft law' discourse

'Hard law' refers to legally binding obligations that are precise (or can be made precise through adjudication or issuance of detailed regulations) and that delegate authority for interpreting and implementing the law (Abbott & Snidal 2000). On the contrary, 'soft law' refers to rules of conduct which, in principle, have no legally binding force but which may have practical effects (Snyder 1995).

The provisions of the RKC which are in the form of *Standards, Transitional Standards* and *Recommended Practices* tend to be general, exhortative and praxis-orientated rather than precise and regulatory. No wonder the RKC may be relegated by some jurists as mere 'soft law'. In addition, the RKC is not furnished with a dispute settlement mechanism which would monitor its implementation, interpret and enforce it.

'Soft law' is often criticised as weak and therefore not easy to implement. Such criticism is, to some extent, probably based on the word 'soft' which may misleadingly give an impression of law that is weak, unreliable, unenforceable, and other negative connotations. The reality, however, is that 'soft law' tends to cope better with diversity and allows greater flexibility for allowing non-state actors (Murphy 2006). This characteristic of 'soft law' is very important in the context of international trade facilitation which involves a number of stakeholders including states, the private sector, international organisations, non-governmental organisations, and many others.

It is not only the RKC that has elements of 'soft law'; the WTO TFA also contains a number of provisions that are typically 'soft law' in nature. Many of them are recommendatory, very general and imprecise, and hardly enforceable to the letter.[6] Therefore, in the context of the TFA versus the RKC, the 'hard law vs. soft law' discourse may not play a big role, for both conventions actually manifest a hybrid of 'hard' and 'soft' legislation.

4. Prospects for trade facilitation through the RKC

In his speech to the UNCTAD Trade and Development Board on 22 September 2014, the WTO Director-General Roberto Azevêdo said that the Bali package that delivered big gains for WTO Members 'is now at risk'. He said, 'At present, the future is uncertain', adding that if the impasse is not solved 'many areas of our work may suffer a freezing effect, including the areas of greatest interest to developing countries, such as agriculture'.[7]

The impasse is actually the failure by WTO Members to adopt, in July 2014, a Protocol of Amendment that would have incorporated the TFA into the WTO's legal framework, which adoption is a necessary step in the ratification process. This was because India insisted on seeing more progress toward a 'permanent solution' on food stockholding and suggested linking the two processes. India's statement during the WTO General Council Meeting of 24-25 July 2014 included, among other comments, the following:

> This is important so that the millions of farmers and the poor families who depend on domestic food stocks do not have to live in constant fear. To jeopardise the food security of millions at the altar of a mere anomaly in the rules is unacceptable. *India is of the view that the TFA must be implemented only as part of a single undertaking including the permanent solution on food security.* In order to fully understand and address the concerns of Members on the TF Agreement, my delegation is of the view that the adoption of the TF Protocol *be postponed till a permanent solution on public stockholding for food security is found* (emphases added).[8]

These recent developments which, to some extent, have led to questions about the WTO's capability to deliver on multilateral negotiations,[9] cannot but inspire those interested in trade facilitation to continue looking for (or expounding) other feasible international regulations for trade facilitation. In this regard, therefore, this paper may *inter alia* be seen as restoring hope in the sense that even if the TFA were to fail to come into force, the RKC would more or less make a perfect substitute.

In addition to the argument of considerable similarity between the TFA provisions and the RKC's standards and recommended practices, it should be noted that, in principle, there is a possibility to update the RKC to cater for some trade facilitation aspects that are currently beyond its scope. However, this possibility of updating the RKC is negatively affected by the recent and ongoing *proliferation of instruments and tools* under the auspices of the WCO. Whereas the discussion of the advantages and disadvantages of the said proliferation is beyond the scope of this paper, we cannot fail to note that it leads to the fragmentation of customs-related provisions, creates redundancies, and ultimately, affects the implementation.

5. Conclusions

There is much talk about the current impasse concerning the adoption of the Protocol of Amendment that would lead to incorporation of the TFA into the WTO's legal framework. This talk often tends to have more of a political character than a legal one. Indeed, India's position (which some commentators refer to as 'blackmail') has nothing to do with the text *per se* of the TFA. This position is ultimately political and may generally be regarded as a 'wake-up call' to all WTO Members to take all other post-Bali agenda, particularly public stockholding for food security, as equally important as trade facilitation provisions.

Without delving into the politics of the world trading system, this paper candidly exposes the fact that as much as the TFA is held in high esteem, almost all of its content is a reflection of the provisions of the RKC. In addition, some elements which are not addressed by the RKC are catered for by other instruments and tools developed by the WCO such as the 'SAFE Package', the 'Data Model', the 'Coordinated Management Compendium', and some other WCO instruments and tools.

Lastly, it has been reiterated that developing and less-developed countries stand to gain more from the implementation of the TFA.[10] But it is also true that every country has its priorities. Now, if the countries that are purportedly to gain most from the TFA prefer to concurrently fix the issue of food security and other pertinent concerns in the agricultural sector, then so be it; after all, trade facilitation can still be successfully steered by the RKC and other related WCO instruments and tools. Indeed, an updated RKC would even be more modern and comprehensive than the TFA.

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Notes

1 When reference is made to the Revised Kyoto Convention (RKC), this includes both the legal texts and the guidelines. 'GA' means General Annex to the RKC and 'SA' means Specific Annex.

2 See also RKC, GA § 9 (9.1).

3 See, for instance, RKC, GA §§ 3 (3.2) and 9 (9.7).

4 The following are relevant to the provisions of Article 7 of the Agreement on Trade Facilitation: RKC, GA §§ 3, 6 and 7.

5 Article 38 of the Statute of the International Court of Justice reads:

1. The Court, whose function is to decide in accordance with international law such disputes as are submitted to it, shall apply:
   a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states;
   b. international custom, as evidence of a general practice accepted as law;
   c. the general principles of law recognized by civilized nations;
   d. subject to the provisions of Article 59, judicial decisions and the teachings of the most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law.
2. This provision shall not prejudice the power of the Court to decide a case *ex aequo et bono*, if the parties agree thereto.

6 Take, for instance, TFA 2: 1.1 which states: 'Each Member shall, to the *extent practicable and in a manner consistent with its domestic law and legal system*, provide opportunities and an appropriate time period to traders and other interested parties to comment on the proposed introduction or amendment of laws and regulations of general application related to the movement, release and clearance of goods, including goods in transit [emphasis added].

7 Viewed 28 September 2014, http://wto.org/english/news_e/spra_e/spra31_e.htm.

8 Press Information Bureau Government of India, Ministry of Commerce & Industry (25 July 2014, 20:35 IST), viewed 28 September 2014.

9 'Failing to agree on new rules for twenty years is *a very disturbing record*,' said WTO Director-General Roberto Azevêdo in his speech to the UNCTAD Trade and Development Board on 22 September 2014 [emphasis added].

10 'We must acknowledge that small countries are probably the ones who will suffer the most. Big countries have other options,' said WTO Director-General Roberto Azevêdo in his speech to the UNCTAD Trade and Development Board on 22 September 2014.

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Improving Australian border enforcement of IPR by referring to the Chinese experience

Min Li[1]

Abstract

The border enforcement of intellectual property rights (IPR), known as IPR customs protection, plays an important role in the national and global endeavour of combating IPR infringements especially in the growing trend in counterfeiting and piracy. Australia and China are among the countries that have put in place a comprehensive IPR border enforcement regime for this purpose. This paper analyses key aspects of Australia's regime compared with that of China, and proposes improvements to the former with reference to the Chinese experience to strengthen the customs protection of IPR in Australia.

1. Introduction

The main objective of the border enforcement of intellectual property rights (IPR) is to protect IPR from the cross-border traffic of infringing goods. Generally, this particular enforcement role is assumed by the national customs authority and is therefore often referred to as the customs protection of IPR. IPR border enforcement plays a critical part in the national IPR enforcement regime. Worsening trends in cross-border counterfeiting and piracy have prompted governments to expand their legislative and operational efforts to enhance IPR enforcement at their borders.[2] As can be seen in a number of international and regional initiatives led respectively by the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)[3] and the Anti-Counterfeiting Trade Agreement (ACTA),[4] IPR border enforcement has grown in significance with a substantial number of clauses included in these agreements.[5] This has led IPR stakeholders and others to pay increased attention to IPR border enforcement.

This growing interest necessitates a comprehensive study of national IPR border enforcement regimes. There is an emerging body of literature about these regimes, especially in relation to the United States of America (USA), the European Union (EU) and China[6] but little about Australia. This paper analyses key aspects of the Australian IPR border enforcement regime in comparison with that of China. Through such a comparative study, areas can be identified where the Australian IPR border enforcement regime could be significantly improved and strengthened by drawing on the experience of its Chinese counterpart. It is noteworthy that though the Chinese IPR regime may not be as sound as that of Australia as a whole, its IPR border protection, which has been tested by and developed through intensive operational practice,[7] is quite sophisticated and systematic. It conforms in most aspects to international norms and even exceeds international standards in some areas.

2. Overview of the Australian IPR border enforcement regime

The legal basis for IPR border enforcement in Australia lies in three sets of legislation, namely, the *Copyright Act 1968* (Cwth), *Trade Marks Act 1995* (Cwth), and *Olympic Insignia Protection Act 1987* (Cwth), supplemented respectively by the Copyright Regulations 1969 (Cwth), Trade Marks Regulations 1995 (Cwth), and Olympic Insignia Protection Regulations 1993 (Cwth). In their provisions concerning

infringing importation, these Acts and Regulations explicitly confer on the Australian Customs and Border Protection Service (ACBPS)[8] the power to seize goods suspected of infringing copyright, trade marks or protected Olympic expressions at the request of IPR holders.

To implement these provisions, ACBPS adopts and administers a scheme known as the Notice of Objection Scheme. Broadly described, the right owner, or in some cases an authorised user, can object, in advance, to the importation of goods infringing their copyright, trade mark or protected Olympic expressions by filing a Notice of Objection with ACBPS. A Notice of Objection is a legal document that requests ACBPS to seize imported goods that may infringe the relevant IPR. If suspected infringing goods are seized at the border, the objector will be notified that goods are being intercepted and they have 10 working days to pursue civil action (with a further possible extension of 10 working days approved by ACBPS' Chief Executive Officer) against the importer. In response, the importer may voluntarily forfeit the goods at any time prior to the commencement of legal action. Generally, if no court action is taken or the court finds no infringement, the seized goods will be released back to the importer. A Notice of Objection is valid for four years and may be renewed indefinitely to ensure ongoing protection. Though no application fee is required, security must be provided by the objector to cover expenses incurred in seizing the goods.[9]

3. Key aspects of the Australian IPR border enforcement regime in comparison with that of China

As noted above, Australian legislative provisions governing IPR border enforcement are incorporated into three different sets of IPR-related Acts and Regulations and are specifically integrated into the section in these laws dealing with importation regulations. These provisions provide the main source of authority and constitute the legal framework for ACBPS to enforce IPR at the border. At the same time, the Australian *Customs Act 1901* (Cwth) empowers the customs authority to take general border measures necessary for the fulfilment of its border duties. These measures are also available in relation to IPR border enforcement, though the Act does not specifically address the issue of IPR customs protection.

In contrast, China takes a quite different approach. None of China's IPR laws mentions IPR border enforcement except its Patent Law, Article 11 of which provides for the prohibition of, among other things, the importation of goods infringing patent rights.[10] However, its Customs Law in Article 91 clearly empowers the customs authority to take IPR border measures, such as the confiscation of IPR infringing goods and the imposition of a pecuniary penalty.[11] Based on the Customs Law, the State Council (that is, the highest administrative organ in China with legislative power) enacted the Regulations of the People's Republic of China (PRC) on Customs Protection of Intellectual Property Rights (IPR Customs Protection Regulations) and the General Administration of Customs in turn promulgated the Measures of the General Administration of Customs of the PRC for Implementing the Regulations of the PRC on Customs Protection of Intellectual Property Rights (Implementation Measures). These specialised regulations and measures make detailed provisions for IPR customs protection, thereby establishing a comprehensive IPR customs protection regime.

At the statutory level, China's IPR border enforcement legislation may seem much less elaborate than Australia's. However, this does not necessarily indicate a weaker legislative framework as a whole but is partly due to the common style of Chinese legislation, according to which laws are usually drafted in a broad-brush manner, leaving much discretion to the administrative authority to make detailed regulations. It is usually the administrative legislation, such as regulations, rules and measures, which plays the key role in law enforcement. In this case, the IPR Customs Protection Regulations and Implementation Measures constitute the direct legal basis for the actual border enforcement of IPR in China. The specialisation and sophistication of the provisions contained therein guarantee a comprehensive and enforceable legal framework for the Chinese IPR border enforcement regime. Moreover, Chinese legislation shows

prominent design features that would contribute to the efficacy of border enforcement of IPR in practice. Specifically, the 'enshrinement' of IPR protection in Customs Law and the use of the term 'customs protection' in the titles of the specialised instruments suggest that the Chinese legislative framework is designed from the perspective of the customs role. The benefits of this approach are manifold. First, it means that IPR customs protection is accorded top priority in customs work and, more importantly, is highly positioned within the national IPR enforcement framework. This not only provides a stronger incentive for Customs to keep improving IPR border measures but also attracts increased investment of national resources into IPR border enforcement. Secondly, along with the promulgation of specialised instruments comes the entrustment of more tailored enforcement means and powers for Customs which take into account both the customs enforcement needs and IPR specialty and may therefore significantly facilitate the implementation of border measures. Finally, the specialised legislation also provides a uniform basis for enforcement compared to the Australian situation where the relevant provisions are scattered in more than one statute.

4. The scope of IPR border enforcement

Under Australian law, IPR border enforcement extends only to copyright, trade marks and protected Olympic expressions. No other laws, for example, the *Designs Act 2003* (Cwth) or the *Patents Act 1990* (Cwth), provide for customs seizure of infringing goods. Moreover, IPR border enforcement only applies to imports under the relevant Acts. In comparison, Chinese IPR Customs Protection Regulations cover a broader scope of IPR, including trade marks, copyrights and copyright-related rights, and patent rights. Besides, the Olympic and World Exposition Insignia are also protected in accordance with the IPR Customs Protection Regulations under the relevant legislation.[12] Although Chinese legislation does not protect all types of IPR, it is more comprehensive in affording protection to all three major categories of IPR. It is worth noting that the copyright-related rights are also protected apart from the copyrights themselves. In addition, Chinese border enforcement is exercised not only in relation to imported goods but also to exported items.

Though Australia is not obliged under its international commitments to offer protection beyond trade marks, copyrights and importation,[13] the current scope has become inadequate for IPR protection. Taking into consideration Australia's national interest in innovation and the potentially massive economic loss that would be incurred by rights holders, it is imperative to expand customs protection to cover more categories of IPR, especially patent rights. Besides, as is stressed by the World Customs Organization (WCO), based on the experience of its member countries, customs authorities should be enabled to apply IPR border measures to both goods destined for export and in transit 'to ensure that customs have the tools necessary to fight effectively the growing problem of cross-border counterfeiting and piracy'.[14] Thus, ACBPS is expected to be much more effective in fighting cross-border counterfeiting and piracy by extending its IPR protection to both exports and goods in transit.

5. Modes of IPR border enforcement

As noted above, ACBPS seizes goods suspected of infringing IPR only if a valid Notice of Objection has been filed by the rights holder. The seized goods are only held for a certain period of time for the rights holder to take legal action and shall be released at the end of that period if no legal proceedings have been initiated, unless they are voluntarily forfeited by the importer. In other words, ACBPS does not take action *ex officio* but only acts upon the application of IPR rights holders.

Unlike Australia, China Customs is vested with the power to implement two modes of enforcement. Besides taking measures at the request of rights holders, it is also authorised to suspend, on its own initiative, the release of goods suspected of infringing IPR recorded with Customs. After suspending the release of goods, Customs notifies the rights holder, who may apply for the detention of the infringing

goods. Where goods are detained upon the rights holder's application, Customs will investigate and make a decision whether the goods detained infringe IPR and may impose an administrative penalty in case of infringement.

Allowing Customs to act *ex officio* is a key feature of an effective border enforcement regime as 'In the vast majority of cases Customs officers are the only ones to know when and which allegedly infringing goods are transported'.[15] It may be argued that because IPR are private rights, the rights holders should take prime responsibility to protect their rights,[16] and it is therefore inappropriate for the customs authority to intervene. However, given the incidence of rampant counterfeiting and piracy, it is very much in the interest of not only the rights holders but also the public at large for Customs to assume a more active role in curtailing IPR infringements. This is especially true when one considers that an increasing number of infringing goods are found to be hazardous to human health and safety. The absence of the power to take border control measures *ex officio* would deprive ACBPS of an essential tool in combating IPR infringements to protect the interests of the public and rights holders.

6. The issue of *de minimis* goods

'*De minimis* goods' are defined in TRIPS as 'small quantities of goods of a non-commercial nature contained in travellers' personal luggage or sent in small consignments'.[17] It is an international practice to exempt *de minimis* goods from IPR border enforcement, though it is not mandatory under TRIPS to do so. The approach under Australian law on this issue is not explicit as there is no clear provision spelling out what its position is in this area. The provisions in Section 135 of Australian Copyright Law stipulate that copies to be seized by Customs have to be imported for certain commercial and trade purposes, which implies that copies imported for personal use are not subject to border measures. Similarly, it can be inferred from the legal text of Australian Trade Mark Law that *de minimis* imports infringing trade marks are also exempt from border enforcement.[18]

In contrast, China takes a much clearer stance on this issue by specifically providing in Article 31 of the IPR Customs Protection Regulations that where an individual brings or mails infringing articles exceeding a reasonable quantity for self-use on entry or exit, such articles shall be subject to IPR border enforcement. Interestingly, the provision addresses the *de minimis* goods issue by stating that Customs has the power to take enforcement measures in relation to goods beyond *de minimis* standard. The practical benefit of this approach is that the customs authority now has a clear and definite legal basis and statutory power to seize infringing goods that are contained in travellers' luggage or sent through the mail. Equally noteworthy are two key terms featured in this provision, namely 'personal use' and 'reasonable quantity', which not only provide direction and criteria for actual enforcement but also leave customs officers with the discretion and flexibility to make a judgment in light of the facts of each individual case. In summary, the Chinese approach to *de minimis* infringing goods is quite proactive, which is consistent with the recognition that growing cross-border counterfeiting and piracy calls for active and effective border measures.

With the increasing number of counterfeit or pirated commodities brought into Australia in travellers' luggage or by post, and the severe damage caused to interested parties in the Australian domestic market, ACBPS has increased its efforts in fighting IPR infringement by travellers or occurring through the post. The vagueness displayed in the relevant legislation, as shown above, does not help ACBPS to take an active role in its efforts and may undermine the effectiveness of IPR enforcement in the long term.

7. The issue of security in IPR border enforcement procedures

TRIPS provides that in border enforcement procedures, competent authorities shall have the authority to require the applicant for IPR protection to provide a security or an equivalent assurance sufficient to

protect the defendant and the competent authorities and to prevent abuse.[19] It is realised that the IPR rights holder may abuse customs protection procedures to engage in unfair competition which may cause damage to international traders as well as to the customs authority itself. The requirement for the payment of security can effectively inhibit the rights holder's incentive to abuse his or her rights. It also puts in place protection for the defendant who can be compensated by the security fund for possible loss or damage caused by unjustified border measures.

Under Australian law, the provision of security is also required in border enforcement procedures but it differs fundamentally from what is stipulated in TRIPS. According to the applicable statutory provisions,[20] Customs may not seize goods unless the rights holder provides a security to cover the expense that may be incurred by the authorities in seizing the goods. In practice, the applicant is required to sign a deed of undertaking when applying for border measures, under which the applicant shall repay to Customs such expenses.[21] Thus, the security requirement under Australian law is not intended to protect the defendant or prevent the rights holder's abuse of the border enforcement procedure.

In contrast, the Chinese IPR border enforcement regime has devised a much more sophisticated security mechanism which strikes a balance between different stakeholders' interests and achieves a fairer result in its implementation. Firstly, the Chinese security mechanism readily addresses the abuse problem and the protection of a defendant's interests. Specifically, the IPR Customs Protection Regulations provide in Article 14 that in applying for the detention of goods, the rights holder shall provide Customs with security which shall be used to indemnify the losses caused to the consignee or consignor because of inappropriate application, and to pay the warehousing, custody and disposal fees, etc. of the detained goods. The Regulations unequivocally indicate that one of the main purposes of the security is to cover an importer's or exporter's losses due to inappropriate application which has the effect of ensuring that the lawful interests of international traders are guaranteed. By identifying the issue of 'inappropriate application' and associating it with the payment of security, it discourages abusive applications for border enforcement and deters rights holders from engaging in unfair competition.

Secondly, the Chinese security mechanism has the merit of being sensitive to the financial burden on rights holders, especially small and medium-sized enterprises, in relation to the provision of security. In this connection, the Implementation Measures of IPR Customs Protection Regulations differentiate between two modes of border enforcement and provide for different sets of security rules for each. For border enforcement actions taken by Customs *ex officio*, the Implementation Measures limit the security to a maximum amount of RMB100,000 and further specify different amounts of security to be provided in proportion to the value of goods. The financial burden is further eased by the flexibility in permitting the security to be furnished in the form of cash or a letter of guarantee issued by a bank or non-bank financial institution.

Thirdly and more notably, the Chinese security mechanism introduces two innovative concepts, namely 'General Security' and 'Counter Security', which make the Chinese IPR border enforcement regime more facilitative and 'business-friendly' in operation. Under the 'General Security' provisions, trade mark rights holders are allowed to provide a one-off 'General Security' for all the seizures in one whole year, rather than providing security for every seizure. This facilitates access to the border protection of trade marks by saving rights holders' high administrative costs, especially for those trade mark rights holders who are the victims of frequent counterfeiting and otherwise have to provide security each time a suspected infringement arises. Under the 'Counter Security' provisions, which apply in the case of infringement of patent rights, if the consignee or consignor believes there is no infringement, they may request the release of the seized goods on the condition that they provide security equivalent to the value of goods. It is well known that infringement of patent rights is much more difficult to determine than that of a trade mark or copyright. Thus, there is a high probability that in such cases the rights holder may make an inappropriate application based on erroneous judgment, thereby unjustifiably delaying the customs clearance of the goods. Under these circumstances, to minimise the damages incurred by

the trader and the indirect losses of the rights holder who has to indemnify the trader for the damages caused by their inappropriate application, it is sensible to release the goods to avoid any or a greater loss being incurred. For this purpose, 'Counter Security' has been introduced into the Chinese IPR border enforcement regime whereby the interests of the rights holder may be met out of the security provided by the trader in case the infringement of patent rights is established.

Turning to the Australian legislation, it is fair to say that its security mechanism is underdeveloped and falls short of the standard set by TRIPS. By limiting itself to covering the expenses of seizing goods, it narrowly focuses its function on protecting customs' interests and fails to balance the interests of the different stakeholders involved. As a result, the defendant's lawful interests are overlooked in the Australian IPR border enforcement regime and the potential problem of abuse by rights holders is also left unaddressed.

8. Conclusions

The comparative analysis above reveals that the Chinese IPR border enforcement regime is more sophisticated and proactive in certain key aspects compared to that of Australia. Based on the Chinese approach, a number of recommendations may be made for reforms to the Australian IPR border enforcement regime in these areas.

Firstly, there is the need to readjust the legal framework of Australian IPR border enforcement around the role of the customs authority. The practical implementation of such a reform could involve adding IPR border enforcement clauses to the Australian Customs Act. In the long run, Australia may introduce specialised amendments into its relevant IPR laws tailored to the customs enforcement needs with a view to making the legislation more systemic and enforceable.

Secondly, an amendment to the Patents Act is recommended to expand IPR border enforcement to patent rights. Amendments to the Designs Act and other IPR Acts are also desirable, though less urgent, and could be introduced progressively in light of future developments.

Thirdly, ACBPS may be authorised to take action *ex officio*. To this end, apart from vesting ACBPS with the power to act on its own initiative, detailed provisions could be put in place specifying the procedure by which Customs will take action and interact with rights holders, importers and exporters.

Fourthly, separate clauses could be added to the relevant Acts to deal with the *de minimis* goods issue. For this purpose, ACBPS may be authorised to take measures at the border to seize goods exceeding the reasonable quantity for self-use when checking travellers' luggage or items sent through the post.

Finally, security provisions could be revised and expanded to make the policy objective inclusive of the interests of the different stakeholders concerned. Specifically, the use to which the security shall be put may be defined, among other things, to refer to 'indemnifying the losses caused to the consignee or consignor because of inappropriate application'. The amount of the security may therefore be linked to the value of the goods on a proportional basis, with the choice of different forms of security being allowed to ease the financial burden on applicants.

It is foreseeable that these reforms would significantly increase the efficacy of the Australian IPR border enforcement regime.

Notes

1 This paper was prepared as part of the author's study program at the University of Sydney.

2 The European Commission (EC) has overhauled its regulations governing IPR border enforcement three times and the current regulations came into force in 2004. (For more information, see Olivier Vrins & Marius Schneider 2006, *Enforcement of intellectual property rights through border measures*, Oxford University Press, New York.) The United States of America has been especially proactive in pursuing strengthened IPR border enforcement by keeping, reorganising and investing in personnel and resources. (For more information, see Timothy P Trainer & Vicki E Allums 2006, *Protecting intellectual property rights across borders*, Thomson-West, Minnesota.) As is illustrated below, China has also been enhancing its efforts to improve its IPR customs protection regime and enforcement performance.

3 *Marrakesh Agreement Establishing the World Trade Organization*, opened for signature 15 April 1994, 1867 UNTS 3 (entered into force 1 January 1995) annex 1C (*Agreement on Trade-Related Aspects of Intellectual Property Rights*).

4 *Anti-Counterfeiting Trade Agreement*, signed 1 October 2011, [2011] ATNIF 22 (not yet in force).

5 Part III of TRIPS provides for the enforcement of IPR and Section 4, Articles 51 to 60, specifically regulate "Special Requirements Related to Border Measures'. Likewise, ACTA, which mainly deals with IPR enforcement, devotes a separate section to 'Border Measures' in Articles 13 to 22, which set out detailed regulation of IPR enforcement at the border.

6 For EU and US-related literature, see Vrins & Schneider. For a China-related study, see 孟杨 [Meng Yang] 2008, 《海关法律概论》[Introduction of Customs Law]（中国海关出版社 [China Customs Press]; 董潇丽 [Dong Xiaoli] 2010, 《TRIPS协议下我国知识产权边境措施的完善》[To improve China's IPR border measures under TRIPS] 10南方论刊 South Journal of Theory 39.

7 According to official statistics, in 2011 China Customs seized 18,000 consignments of infringing imports and exports, involving 103 million pieces of goods with a total value of up to RMB516 million; see China Customs website www1.customs.gov.cn/tabid/46828/Default.aspx?interviewid=4.

8 In 2014, the Australian Customs and Border Protection Service (ACBPS) became part of the Department of Immigration and Border Protection.

9 ACBPS, 'Protecting intellectual property', www.customs.gov.au/site/page5369.asp. For more information about the scheme of Notice of Objection, see Guide to Lodging a Trade Mark Notice and Guide to Lodging a Copyright Notice as well as the corresponding forms, available on the ACBPS website.

10 《中华人民共和国专利法》 [Patent Law of the People's Republic of China] (People's Republic of China) Standing Committee of the National People's Congress, Order No. 11, 12 March 1984 (last amended 2008).

11 《中华人民共和国海关法》 [Customs Law of the People's Republic of China] (People's Republic of China) Standing Committee of the National People's Congress, Order No. 51, 22 January 1987 (amended 2000).

12 《奥林匹克标志保护条例》 [Regulations of the PRC on Olympic Insignia Protection] (People's Republic of China) State Council, Decree No. 345, 4 February 2002; 《世界博览会标志保护条例》 [Regulations of the PRC on World Exposition Insignia Protection] (People's Republic of China) State Council, Decree No. 422, 20 October 2004.

13 For example, TRIPS only requires WTO members to take action with respect to the importation of counterfeit trade mark or pirated copyright goods but at the same time encourages more extensive protection than this requirement.

14 World Customs Organization n.d., 'WCO model provisions for national legislation to implement fair and effective border measures consistent with the Agreement on trade-related aspects of intellectual property rights', ASEAN Project on the Protection of Intellectual Property Rights, www.ecap-project.org/archive/fileadmin/ecapII/pdf/en/ipr_enforcement/customs_handbook/annex3.pdf.

15 WCO n.d., 'WCO model provisions …', p. 24.

16 Sub-Committee on Customs Procedures of Asia Pacific Economic Cooperation, *IPR enforcement strategies* (September 2006), Asia Pacific Economic Cooperation, www.apec.org/Groups/Committee-on-Trade-and-Investment/Intellectual-Property-Rights-Experts-Group/~/media/Files/Groups/IP/06_sccp_IPR_Strategies_Inventory.ashx.

17 See Article 60 of TRIPS.

18 This conclusion is confirmed by Australian official responses in the review of Australia's compliance with TRIPS by the WTO Council of Trade-related Aspects of IPR. See 'Council for trade-related aspects of intellectual property rights: checklist of issues on enforcement: responses from Australia', WTO Doc IP/N/6/AUS/1 (16 September 1997).

19 See Article 53 of TRIPS.

20 See Section 135AA of the *Copyright Act 1968*, Section 133 of the *Trade Marks Act 1995*, and Section 54 of the *Olympic Insignia Protection Act 1987*.

21 ACBPS, Guide to Lodging a Trade Mark Notice and Guide to Lodging a Copyright Notice, www.customs.gov.au/site/page5369.asp.

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Improving cooperation between customs and environmental agencies to prevent illegal transboundary shipments of hazardous waste

David C Dill and Deborah A Kopsick[1]

Abstract

Lucrative and dangerous, the illegal traffic of hazardous waste through seaports poses grave risks to human health and the environment. Despite the challenges of detection and detention, customs and environmental agencies tasked with protecting global seaports typically work in isolation, missing out on critical opportunities to enhance their effectiveness through collaboration. This research examines the causes of such administrative segregation and, through surveys of successful collaborative programs in Belgium, Japan, Kenya, and the Netherlands and a review of previously published literature on Nigeria, develops a spectrum of inter-agency cooperation. Identifying three distinct cooperative frameworks, ranging from formalistic to *ad hoc*, this research proposes that environmental and customs officials in various political, cultural, and legal environments can pursue vastly differing yet effective paths to cooperation in environmental enforcement at seaports.

1. Background

Many hazardous waste shipments enter countries, both legally and illegally, through seaports. Unless these shipments are properly identified and handled, serious consequences to human health and the environment may occur. It is important that illegal shipments be detected and detained, with the ultimate goal being disruption of the illegal waste trade. Cooperation between environmental and customs agencies can enhance enforcement activities at seaports and this is one of the primary goals of the International Network of Environmental Compliance and Enforcement's Seaport Environmental Security Network (Seaport Network). There are multiple forms of institutional interaction and inter-agency cooperation can take numerous forms. Through surveys of environmental officials participating in the Seaport Network from Belgium, Japan, Kenya, and the Netherlands and a review of previously published literature on Nigeria, three distinct cooperative frameworks are identified. These mechanisms range from less formal approaches, based on personal relationships, to legally mandated processes and include the use of collaborative networks, Memoranda of Understanding and legal requirements. This research does not imply that these are the only possible ways to approach inter-agency relationships but that there are numerous ways to successfully increase the effectiveness of environmental enforcement at seaports through cooperation.

2. Introduction to the issue

In 2006, 10 people were killed, 30,000 injured, and 100,000 sought medical attention in Cote d'Ivoire when an illegal shipment of waste containing hydrogen sulfide was imported through the port of Abidjan

and deposited in several areas throughout the city (Voice of America 2009). In today's global economy, the illegal transit of hazardous waste from developed to lesser developed countries is big business. It costs waste disposal companies less money to illegally export hazardous waste than to properly dispose of such waste within their own national borders. Sadly, as the Cote d'Ivoire episode illustrates, the illegal waste imports can have dire health effects in the recipient country. Many of these shipments enter through seaports where environmental enforcement and customs officials provide the first line of defence against entry of unwanted hazardous substances.

In some countries, environmental and customs officials are cordial strangers operating separately to satisfy their responsibilities. Yet in an age of shrinking enforcement budgets, international observers agree improving inter-agency collaboration between environmental and customs agencies is not merely an aspirational goal but a vital aspect of effective border management. The United Nations Environment Program (UNEP) has warned that neither customs nor environmental agencies can combat illegal trade alone, they need to rely on and coordinate effectively with each other (UNEP 2006). In the European Union (EU), the Network for the Implementation and Enforcement of Environmental Law – Transfrontier Shipments has warned that in many countries cooperation is poor and relies on personal contacts which may be temporal in nature (IMPEL-TFS 2004). Communication, cooperation and coordination were specifically identified as needs during surveys of environmental enforcement officials in West Africa and South Asia (Kopsick 2011).

Border functions – such as customs, immigration, agriculture, and police – and the number of agencies that are responsible for their management vary according to national priorities, geography, and resources (Polner 2011). There is a 'need for public agencies to adopt shared solutions across organisational boundaries [with] successful innovation in problem solving occurring at the intersection of distinct ways of thinking' (Quirk 2011, p. 45).

When multiple agencies need to work together to accomplish a goal, cooperation is in their best interests. Ostrom (1990), who was awarded the Nobel Prize for Economics in 2009 for her research in collective action, determined through field studies of communities that share common resources that self-organised, self-imposed solutions can be more effective than a government imposed regulatory approach. Communication, trust and a sense of a shared common future are key factors to developing a self-organised cooperative relationship (Ostrom 1990).

A number of factors including differing agency cultures, conservation of agency resources, and gaps in regulations can impede inter-agency cooperation. One of the chief impediments to strong coordination between customs and environmental agencies is the difference in agency mission (Heiss 2011). Customs agencies are responsible for the collection of tariffs and fees at ports of entry, the protection of intellectual property through the interdiction of counterfeit goods, the prevention of dangerous goods from entering the country, and the prevention of illegal immigration. Border security and the identification and mitigation of terrorist threats are also major responsibilities of Customs. Environmental agencies, on the other hand, are responsible for protection of human health and the environment, accomplished through the enforcement of environmental laws.

There are two forms of institutional interaction. Vertical relationships occur between levels of an agency whereas horizontal interactions occur between the same levels in various agencies. It is these horizontal interactions, where inter-agency cooperation and communication occur, that are the focus of this paper. Inter-agency cooperation can take many forms, including *ad hoc* personal contacts, coordinated efforts driven by memoranda of understanding[2] or legislation, or regional networks. The value of personal relationships can be critical to the success of cooperative activities. In countries that do not have formal institutionalisation of cooperation processes, it is often personal relationships, built over time and developed on trust, that enable successful interaction between agencies. While periodic personnel turnover makes relationship-based cooperation tenuous, cooperation may evolve, starting out as informal personal relationships and developing into formalised, sustainable agreements. The opposite may also

be true, where the cooperation starts out as the result of a formal requirement and develops into a way of doing business among environmental professionals with the original document no longer a key driver of the process.

Cooperative relationships among environmental enforcement officers in different agencies are explored in a number of contexts to better understand the options that exist for the development and sustainment of these relationships. This paper presents the results of independent research while also examining existing scholarly research. During July-August 2012, we conducted detailed surveys of the government environmental ministry officials in four countries working in different manners to improve cooperation between its environmental and customs agencies. A fifth country, Nigeria was also included because their approach to inter-agency cooperation incorporates a distinct mechanism to facilitate cooperation among numerous government entities and may serve as a useful model for other countries. Information on Nigeria's approach was obtained from published literature.

The surveyed nations were selected to represent a variety of cultures, levels of development, and political organisation. As best practices in cooperation are most easily adopted by countries with similar institutional structure and competencies, readers who are policymakers or agency managers can examine strategies presented to discover techniques applicable to their own unique climate.

From the viewpoint of environmental ministry officials, an analysis of the information presented in this paper indicated a spectrum of ways to approach interagency cooperation, ranging from informal to formal, legally-mandated interactions. Polner (2011) looks at inter-agency cooperation from the viewpoint of customs agencies and identifies a similar approach that may apply to interactions among customs and other border agencies. Using a continuum developed to examine interagency cooperation in New Zealand (Institute of Policy Studies 2008), informal interaction is equated to co-existence, where agencies have little or no communication, followed by communication (shared information), cooperation (shared resources), coordination (shared work) and ultimately, collaboration (shared responsibility). These phases do not progress along a straight path but are implemented on a situational as-needed basis. For example, it may not be necessary to collaborate on all activities; in some situations, the exchange of data may be sufficient. The cooperation models presented in this paper focus on the level of institutionalisation of cooperation, whether it is in documents, agreements or in law. Also, the models presented focus on horizontal-level cooperation among agencies which lies mid-spectrum in the New Zealand model, and imply that lines of communication have been already established. Achieving a collaborative working relationship requires innovation and a change in thinking, and is the most difficult level of engagement to achieve (Institute of Policy Studies 2008).

There is no "one size fits all" approach to controlling transboundary shipments of hazardous waste, nor to any challenging mandate requiring inter-agency cooperation. Thus, while the paper focuses on strategies in hazardous waste management at ports of entry, the cooperative techniques implemented have wide application.

3. Case studies

3.1 Kenya: Informal collaborative networks

Country background and collaborative framework

Strategically situated between Tanzania, Uganda, South Sudan, Ethiopia and Somalia, and along the Indian Ocean, Kenya is East Africa's logistical hub. The nation's principal seaport, Mombasa, is the second largest port in Sub-Saharan Africa as measured by tonnage and containers handled. A republic, the country was a one-party state between 1969 and 1991. Now a multi-party state, the country's stability was severely tested in 2007 when violence spawned by a contested presidential election left over a thousand dead.

Kenya's inter-agency collaboration is linked to the country's role as the host of the East African Network for Environmental Compliance and Enforcement (EANECE), a cooperative network formed in 2010. Consisting of five East African nations, Burundi, Kenya, Rwanda, Tanzania and Uganda, and a product of the capacity building efforts of the International Network for Environmental Compliance and Enforcement (INECE), the primary aims of EANECE are to improve the environmental compliance and enforcement capacities of the member nations' environmental management agencies, establish itself as a strong and vibrant regional network, and raise awareness of the importance of environmental compliance and enforcement. EANECE Coordinator Gerry Opondo reports that, '[d]uring the initial stages of the network, it was very difficult to get participants from government agencies to understand the concept of "informal networking" in the context of environmental compliance and enforcement. That formal government agencies as well as government officials could cooperate, interact, and operate with their peers directly without a formal agreement, treaty, or international institution was a new concept which required greater understanding'.

There are four principal agencies involved in Kenya's coordinated seaport inspection process: the National Environmental Management Authority (NEMA), the Customs Service Department (a branch of the Kenyan Revenue Authority), the Ports Authority, and the Police. The Kenya Customs Service Department is the primary import inspection agency but relies on NEMA's technical expertise regarding environmental violations. In the past, the Customs Service Department called in environmental experts from NEMA only when violations were suspected. Today, as a product of the enhanced cooperation encouraged by EANECE, two senior NEMA environmental inspectors have been posted to the Port of Mombasa and work together daily with customs officials, port authority staff and port police. The entire ten-person NEMA Environmental Police unit, however, remains located in Nairobi, several hundred miles from Mombasa, and only becomes involved when a violation is detected.

Ground-level officers directly contact their counterparts at other agencies. These officials cannot commit resources to the enforcement action without following existing agency procedures and receiving approval from agency management. The type of support provided by each agency depends on the potential violations and can include personnel, expertise, financing and equipment.

Institutional challenges

Local officials cite five principal challenges:

1. A lack of secure means to share intelligence compromises investigations and jeopardises the safety of personnel.
2. With no model for risk analysis, success relies on the subjective judgment of officers.
3. Overlapping and conflicting agency mandates are a significant obstacle. Products of the country's political system, they impede the development of targeting criteria, cause greater competition for government resources, and lead to conflicts over the attribution of successes.
4. Seized goods are often stockpiled as they frequently require special disposal facilities not found in Kenya.
5. Budget concerns limit the program from reaching its full potential.

Lessons for those seeking to implement this model

Collaboration does not necessarily need to start at the managerial level. Allowing ground-level personnel to communicate among themselves across agencies, Kenya has gone from *ad hoc* inter-agency cooperation to daily collaboration among environmental inspectors, customs agents, police, and port authority personnel at Mombasa in just two years.

Improved regional networks can "pull up" a member's national efforts. Prior to the development of EANECE, there were few, if any, regular channels of communication between environmental, police, port, and customs officials among the various East African nations. As EANECE developed, environmental, customs, police, and other relevant national agency leaders began working together with peer agencies in other countries. This regional cooperation then led to collaboration between agencies within the country. In Kenya, the added pressure of hosting the EANECE Secretariat has perhaps aided intra-country collaborative efforts. With the eyes of its neighbours upon it, there may have been greater pressure to improve collaboration within its borders to better coax its neighbours into following suit.

Improved collaboration does not have to cost agency sovereignty. Some managers may be hesitant to cede authority to a formal cooperative agreement as they perceive such commitments to compromise their ability to satisfy higher priority missions. For example, if a customs agency believes that greater collaboration with environmental counterparts will siphon resources away from the primary mission of tariff collection, it may resist a collaborative agreement completely. In the informal Kenyan model, however, communication occurs at ground level, between customs agents and environmental inspectors. Upon receiving a request for cooperation, either side reports the mission and resources requested to agency managers. Agency managers therefore retain ultimate control over whether to accept the request for collaboration and have no obligation to order subordinates to direct resources to missions deemed less essential. Of similar importance, managers are able to assess the need for their agency's resources through direct reports from their own personnel agency rather than rely on the assessments of outside agencies. These elements may lead to greater management support – a key component to the longevity of the collaboration.

Figure 1: Summary of Kenya's cooperation model for environmental agencies

Kenya

- National agencies involved: Customs Service Department (Lead agency), National Environmental Management Authority, Ports Authority, and Police.
- Ground-level officers directly contact their counterparts at other agencies.
- Officers must receive approval from agency management to commit resources to a joint enforcement action.
- Increase in inter-agency collaboration spurred on by role as host of the East African Network for Environmental Compliance and Enforcement, a five-nation cooperative network formed in 2010.

3.2 Nigeria: Dump watch network

Country background and institutional framework

Nigeria has a federal republic system of government, headed by a president, and includes a Federal Capital Territory and 36 states. The most populated country in Africa, with over 250 ethnic groups, Nigeria is diverse in culture and rich in natural resources (Benebo 2011). The country's southwestern city of Lagos is among the most important ports in West and Central Africa in terms of size and level of activity. Over 30 million tons of merchandise pass through the Port of Lagos each year. West and Central Africa is a region that a 2007 World Bank report highlighted as needing security and environmental protection in maritime transport (Palsson, Harding & Raballand 2007). Nigeria is strengthening its environmental enforcement capabilities through the development of regulatory and legal frameworks and an inter-agency communications platform (Toxic Waste Dump Watch Program).

Concern for environmental pollution issues became a national priority in 1987 as the result of an increase in public awareness caused by the illegal import of a transboundary shipment of hazardous waste (Desai 1998) and prompted the creation of the Nigerian Federal Environmental Protection Agency (FEPA), the first national institution in Africa whose primary mission was to manage and protect the environment. In a 1999 agency consolidation, FEPA became the Federal Ministry of the Environment, responsible for developing environmental policy and the laws, regulations and guidelines to implement it. In 2007 the National Environmental Standards and Regulations Enforcement Agency (NESREA) was formed to maintain environmental standards, enforce laws and regulations, create an awareness of environmental issues and develop partnerships to meet these goals (Benebo 2011).

Nigeria employs a National Toxic Dump Watch Program which promotes cooperation among agencies with environmental responsibilities. Coordinated by NESREA, this program is a partnership of nine federal Nigerian agencies with responsibilities relating to illegal importation and dumping of hazardous waste, particularly e-waste (Benebo 2011). Participating agencies include NESREA, Nigeria Customs Service, Nigeria Ports Authority, Nigeria Police, Nigeria Maritime Administration and Safety Agency, Nigerian Navy, State Security Service, National Intelligence Agency, and the Defence Intelligence Agency.

In a federal system of government, enforcement of environmental laws is more effective if there is cooperation between the state and the federal governments. A continuing Federal-State Regulatory Dialogue provides a platform in Nigeria for agencies from each respective level to exchange experiences, discuss enforcement challenges and formulate best practices for the implementation of environmental laws. This platform also allows for multi-agency discussions on current and proposed regulations, strengthening federal-state cooperation (Benebo 2011).

Institutional challenges

International observers and local officials cite continuing challenges (NESREA 2012):

1. Contamination of various environmental media (for example, air, water, soil)
2. Inadequate human and institutional capacity
3. Lack of environmental data
4. Lack of interaction between the regulated community and NESREA
5. Lack of public awareness of environmental problems.

Lesson for those seeking to implement this model

State and federal cooperation is necessary for success. One of the initial activities of the Director General of NESREA was to reach out to state governmental agencies to raise awareness of the mission of the agency and to begin the process of building the cooperative relationships that will lead to more effective environmental enforcement. Relationships with other federal agencies also needed to be built.

The reinvigoration of the Dump Watch Committee brought nine of these federal agencies together to discuss issues and challenges to enforcement, leading to familiarity with each other and a growing awareness that cooperation would be necessary to achieve their shared goals.

Figure 2: Summary of Nigeria's cooperation model for environmental agencies

Nigeria

- Agencies involved: National Environmental Standards and Regulations Enforcement Agency, Nigeria Customs Service, Nigeria Ports Authority, Nigeria Police, Nigeria Maritime Administration and Safety Agency, Nigerian Navy, State Security Service, National Intelligence Agency, and the Defence Intelligence Agency.
- Continuing Federal-State Regulatory Dialogue provides a platform for agencies to exchange experiences and enforcement challenges, formulate best practices, and discuss current and proposed regulations.
- National Toxic Dump Watch Program promotes cooperation among agencies with environmental responsibilities.

3.3 The Netherlands: MOU-based collaboration

Country background and institutional framework

Historically tied to shipping and commerce, the Netherlands is a hub of European maritime trade. Home to Rotterdam, the busiest port in Europe, five million ship containers pass through the country's seaports each year. Long perceived to be a leader in innovative environmental policy, the Netherlands' MOU approach uses agency-drafted agreements as the framework for cooperative efforts, finding a middle ground between the formal legislative and informal *ad hoc* collaborative models.

The Ministry of Infrastructure and the Environment is tasked with supervising the rules for hazardous materials, radioactive materials, and waste, while the Customs Administration (a part of the Directorate-General of the Tax Administration of the Ministry of Finance) supervises cross-border goods traffic based on tax regulations. The current MOU between the Ministry of Infrastructure and the Environment and the Tax Administration was signed in March 2009. Under the MOU, the Ministry of Infrastructure and the Environment sets enforcement priorities for the following year which both parties then review together to determine the annual plan objectives. During the implementation year, the Tax Administration periodically reports its progress towards the objectives, while the Ministry of Infrastructure and the Environment is responsible for apprising the Tax Administration of any changes in the relevant governing regulations. Each agency is responsible for its own costs and either can cancel the MOU with one month's written notice, explaining the reason for cancellation.

Under this framework, the Netherlands have sought to reduce the burden on the business community while concentrating supervisory resources on the least compliant companies. Launched in 2010, the

Customs Control Centre (CCC) in Rotterdam is the central collector of information needed by the Netherlands authorities and the joint command centre of cargo inspection. Based out of the CCC, a critical component of the Netherlands collaborative approach is the "Rainbow Team". The Rainbow Team is led by Customs and consists of the six other supervisory agencies in the Port of Rotterdam:

- Ministry of Infrastructure and the Environment, Transport and Water Management Inspectorate which conducts safety and environmental supervision of shipping vessels, crews, shipping companies, and the transport of hazardous waste
- New Food and Consumer Product Safety Authority which supervises the import of food products, consumer products, and animal feed and inspects passenger ship kitchen hygiene
- Seaport Police Rotterdam-Rijnmond which is responsible for border control, port security and crime, nautical issues, environment, and traffic
- National Police Agency Water Police Division which is responsible for port security and criminality, nautical affairs, environment and transport outside of Rotterdam
- Labour Inspectorate which monitors worker health and safety in ports.

The team meets monthly to share information and regularly conduct joint inspections, streamlining the inspection process for transporters. The country is also currently expanding its memorandum of agreement initiative in which select companies with sufficient internal controls and clean compliance histories can enter covenants with the government resulting in fewer inspections. This shift of selected Netherlands-flagged vessels from "object-oriented supervision" to "system supervision" benefits shippers by reducing administrative costs and inspection delays, and proponents contend that it results in a more efficient use of the nation's enforcement resources.

Figure 3: Summary of The Netherlands' cooperation model for environmental agencies

The Netherlands

- Agencies involved: Customs Transport and Water Management Inspectorate, New Food and Consumer Product Safety Authority, Seaport Policy Rotterdam-Rijnmond, National Policy Agency – Water Police Division, Labour Inspectorate, and the Ministry of Housing, Spatial Planning and the Environment.
- Customs Control Centre is the central collector of information needed by Dutch authorities and the joint cargo inspection command centre.
- A team comprised of members from each agency meets monthly to share information and regularly conducts joint inspections.
- The underlying framework for the collaborative arrangement comes from Memoranda of Understanding – written agreements signed by the ministers of the participating agencies, representing the agencies' intentions.

Institutional challenges

1. The need for accurate targeting analysis and information sharing. Ultimately, the evaluative process to determine which shipments are to be inspected is only as good as the information it is based upon.
2. A natural reluctance to share information among agencies.
3. While the MOU framework can produce complex and close collaboration, it is fully retractable by either side with limited notice. The model relies on the time and energy invested by each party to lock both sides into the agreement, yet as an MOU is entered into freely by agency heads and not prescribed by statute, its collapse is always conceivably only a change in leadership away.

Lesson for those seeking to implement this model

Build upon a foundation of trust. The Netherlands model is based on trust among agencies. Each agency must be able to trust its partners to support its mission, continue the collaborative agreement, and share data. Similarly, transporters rely on the guidance provided by coordinated central command to be accurate for all of the agencies involved so that they do not need to independently check with each agency. Such trust does not emerge overnight but must be carefully cultivated. Expectations must be clear and when the agreement brings success, the accolades must be shared to encourage all sides into further cooperation.

3.4 Belgium/Flemish region: Memoranda of Understanding in a federal environment

Country background and institutional framework

A federal state, political power in Belgium is complexly divided among the federal government, multiple language groups (Flemish, French and German) and various regions (Flemish, Walloon and Brussels-Capital). The Flemish Region, site of the country's seaports, is consolidated with the Flemish Community and the resultant Flemish Parliament and Government autonomously controls many governmental functions. Federal Customs, federal Maritime Police, and regional and federal environmental agencies can all stop and inspect suspicious waste transports. Customs remains the domain of the federal government but regional governments are largely responsible for environmental protection. While regional environmental organisations monitor the import and export of waste, the federal government currently maintains control over waste transit. In 2014, however, it is expected that the regional environmental agencies will assume waste transit regulation as well.

There is an MOU between Belgian regional environmental authorities and federal environmental inspection, police, and customs agencies which addresses the inspection of transboundary waste shipments. An active inter-agency committee discusses all problems every three months. Following the 2010 implementation of "paperless" customs, federal environmental officials now work continuously with Customs, collectively reviewing electronically submitted export documents to select shipments for inspection. Customs officials at port terminals serve as eyes, reporting suspicious waste transports to trained environmental inspectors who then follow up on these tips. Regular joint sections are conducted twice monthly when federal officials join with their regional counterparts and port police. The benefits of this periodic exercise are twofold: not only does the joint effort provide for enhanced detection on the date of inspection, it also reinforces ties among agencies and helps develop relationships that enable subsequent *ad hoc* cooperation. Supervisors also meet regularly to participate in working groups or international network gatherings. These managerial contacts are valuable means to solve structural problems such as preventing containers without export declarations from being placed on ships, integrating export declarations from neighbouring countries, and determining the schedule at which operators should be notified about their selection for inspection.

Institutional challenge

Accurate targeting. The initial selection determinations and data analyses are performed by customs personnel who may not be trained in the identification and handling of hazardous waste, as are environmental officials. To address this problem, federal and regional environmental inspectorates meet with Customs to review targeting criteria and select the most important waste streams.

Lessons for those seeking to implement this model

The mutual value of collaboration. In an age of global austerity where the mantra is "do more with less", manpower and budgetary shortages are frequently cited as the biggest challenges facing customs and environmental inspectors. Belgium officials herald the collaboration saying that, "together, we're stronger".

Specialisation and mutual investment. In a sense, the Belgian model imitates the country's political system. Forced together by the exigencies of stopping the flood of hazardous waste, the overlapping agency responsibilities and powers result not in the duplication of efforts but in an effective "federation." Waterway Police, Customs, and federal and regional environmental agencies can all stop and detain hazardous waste shipments. Yet each agency primarily focuses on its own expertise – Customs collects data, makes targeting decisions and performs initial inspections; the environmental agencies provide technical expertise and perform focused inspections; the Waterway Police assist in enforcement. The overlaps in mandate therefore serve to invest each agency in the success of the others, as a failure by one can be attributable to all.

Figure 4: Summary of Belgium's cooperation model for environmental agencies

Belgium

- Agencies involved: Federal: Customs, Maritime Police, Department of the Environment; Regional: Flemish Environment Agency.
- Memorandum of Understanding between the federal and regional agencies.
- All agencies can stop and inspect suspicious transports.
- Environmental inspectors use information and alerts from customs scanning and selection teams to make targeting decisions.
- Twice monthly, federal and regional environmental officials and Maritime Police conduct joint inspections.

3.5 Japan: Legally Mandated Formal Cooperation

Country background and institutional framework

The most formal of the institutional frameworks included in this research is that presented by Japan. Home to five of the 50 highest volume container ports in the world, seaport management is critically important on the Japanese archipelago. With firmly entrenched institutional cooperation prescribed by statute, the Japanese model involves four primary government actors: the police, the Ministry of Environment (MOE), the Ministry of Economy, Trade, and Industry (METI), and the Customs and Tariff Bureau (Customs).

METI is responsible for issuing a permit approving the export or import of hazardous waste; however, approval cannot be given until MOE has confirmed the decision. Japanese law states that the consent of the importing country is not sufficient grounds for the issuance of an export permit. Before the permit can be issued, MOE must review the case and verify to METI that the exporter has taken sufficient measures to prevent environmental harm. Similarly, when an importer requests to transport hazardous waste into Japan, MOE issues the Prior Informed Consent document required by the Basel Convention,[3] but METI issues the formal permit. Therefore, no shipment of hazardous waste can be imported into or exported out of Japan without the approval of both agencies.

In addition to collaboration during permitting, METI and MOE work together to improve compliance by educating stakeholders about their obligations and the potential penalties. In accordance with the Japanese business practice of prior consultation (nemawashi), waste importers and exporters can consult with METI or MOE in advance to receive a verbal determination of the requirements for each shipment. METI handles enquiries regarding waste subject to the Basel Convention, while MOE is responsible for enquiries regarding "non-valuable waste" – substances not subject to the Basel Convention but deemed waste by the Japanese Waste Management and Public Cleansing Law and subject to export controls. METI and MOE, in collaboration with the Japanese Coast Guard, also present yearly seminars on the Basel Convention to stakeholders such as customs officials, exporters, importers, citizens, municipal officials, and waste generators.

Information from the prior consultations is provided daily to customs officials to assist with inspections at the port. Customs has the final decision on whether a shipment is legal and is the sole agency with the official right to conduct inspections. When Customs spots undeclared cargo that it believes is potentially subject to Japanese waste regulations, it consults officials at METI and MOE. The agencies provide technical advice regarding the Basel Convention. If there is a need, after review by each agency's headquarters, METI and MOE officials can observe a second inspection by Customs. Therefore, inter-agency cooperation occurs through the entire inspection.

Institutional challenge

Episodic personnel shifts require the need for continual training to increase the ability of inspectors to spot undeclared cargo subject to waste regulations. Like many customs agencies, Japanese Customs regularly rotates agents between ports, typically every two to three years. As the first (and often only) inspection at the port is conducted solely by customs officials MOE and METI must continually educate new agents.

Lesson for those seeking to implement this model

The spillover environmental benefits of a free and democratic society. Pressure created by democratic accountability can prompt innovation and strengthen collaboration. In 1999 the Japanese government faced intense public pressure following an episode involving Nisso Co. Ltd, a Japanese waste disposal company. Customs officials in the Philippines discovered that a shipment from Nisso that was supposed to contain only recyclable waste paper and plastic actually included hazardous medical waste. After Nisso failed to comply with remediation orders issued in the ensuing diplomatic tumult, the Japanese

government spent USD3.8 million to repatriate and incinerate the waste. The Nisso incident captured public attention and prompted the Japanese government to strengthen penalties and implement twenty new measures – including the consultation program and yearly collaborative seminars – to reduce the likelihood of similar incidents.

Figure 5: Summary of Japan's cooperation model for environmental agencies

Japan

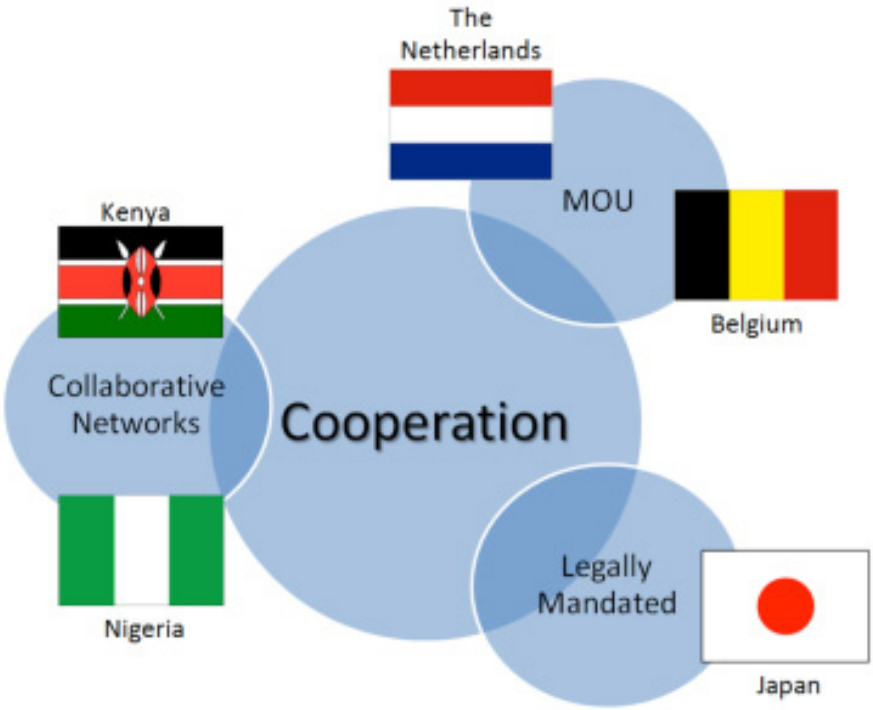
- Agencies involved: Policy, Ministry of Environment (MOE), Ministry of Economy, Trade and Industry (METI), and the Customs and Tariff Bureau.
- Collaboration is prescribed in legislation. METI is responsible for issuing a permit approving the export or import of hazardous waste but before the permit can be issued, MOE must review the case and verify to METI that the exporter has taken sufficient measures to prevent environmental harm.
- In accordance with the Japanese business practice of prior consultation (nemawashi), waste importers and exporters can receive a verbal determination of the requirements for each shipment in advance. METI handles enquiries regarding Basel Convention waste, while MOE is responsible for enquiries regarding substances not covered by the Basel Convention but subject to national export controls.

4. Conclusions

The five case studies presented illustrate a variety of mechanisms that countries can use to achieve inter-agency cooperation. In 2006, UNEP articulated the need for coordination among various enforcement authorities to successfully implement multilateral environmental agreements (MEAs), such as the Basel, Stockholm and Rotterdam Conventions (UNEP 2006a). IMPEL noted that 'there are huge differences in the way relevant enforcement authorities cooperate with other authorities (like police and customs services) within the participating countries' (IMPEL-TFS 2004, p. 15) and suggested a more formal cooperation agreement be considered.

Each of the five countries examined approached inter-agency cooperation in a different manner. The various mechanisms reported range from a less formal approach based on personal relationships to a more formal, legally mandated process. The less formal approaches may evolve into a more formal arrangement, or a country may start the process at any point along the continuum. That is why it is necessary to explore various approaches and to understand the range of what can be accomplished. The authors do not imply that all possible approaches have been identified, as future research may show that there are many other possibilities to be considered.

Figure 6: Options for inter-agency cooperation at seaports



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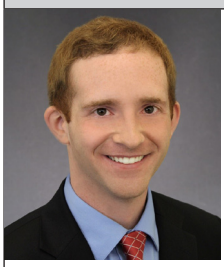
Notes

1 The views and opinions expressed in this article are those of the authors and do not reflect the official policy or position of the U.S. Environmental Protection Agency, Nelson Mullins Riley & Scarborough or any government agency.

2 Memoranda of Understanding (MOU), also known as Inter-ministerial Agreements (IMA), are aspirational written agreements representing the intentions of the ministers of the participating agencies, which may be informal or formal and are generally not legally enforceable. As these documents specify the requirements of each agency, MOUs can be used for the development of organisational cooperative frameworks and the assessment of performance. Typically, the framework for an MOU states the core principles of cooperation, with specific incidents being addressed in annexes. For example, to increase the effectiveness of environmental security at seaports, an MOU might lay out the responsibilities of each participating organisation, how communication, information sharing, and joint inspections will be conducted, and how cases of non-compliance will be handled. Identifying a mechanism for conflict resolution is important so, when disagreements arise, a process for resolution is already in place.

3 UNEP 1989.

David C Dill



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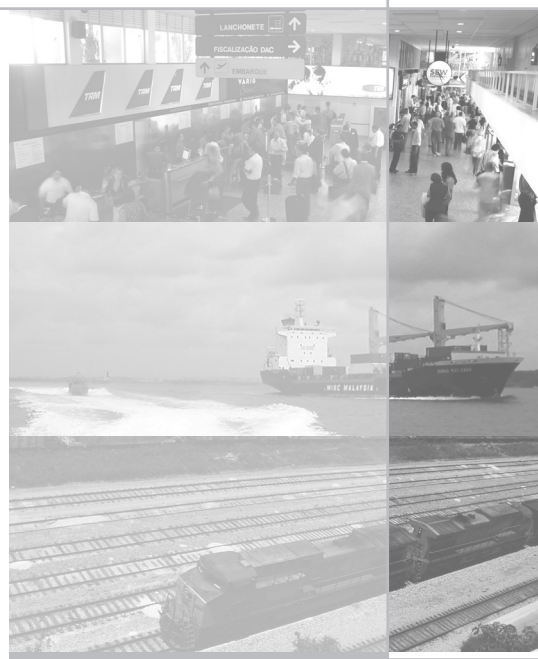


Section 2

Practitioner Contributions

Geospatial intelligence: Can Customs learn from the policing perspective?

John de Belle[1]

Abstract

Every day, customs administrations around the world collect enormous amounts of data regarding the movement of passengers, vehicles, vessels, aircraft, cargo and currency and this stream of data is growing. With this expanding supply of data – and shrinking customs resources – a smarter way of making sense of this data is required, including mining the data to identify patterns of activity. Customs administrations could consider how policing agencies are mining their data holdings to derive meaningful intelligence and become intelligence-led organisations. It is postulated that customs administrations could learn from policing agencies (the scientific discoveries, the computing advances) and adapt developments by those agencies to the customs environment. This paper provides an overview of how policing agencies use geospatial intelligence and identifies ways that customs administrations would benefit from considering its use in collaborative border management.

Introduction

This paper on geospatial intelligence looks at the factors that have influenced decisions by police administrations to make use of Geographic Information Systems (GIS). The results of scientific enquiry in the field of criminology that are used to explore some of the similarities between customs administrations and policing environments are discussed as are the systems that have been developed to address problems of crime and disorder. Finally, this paper offers a possible solution as to how those systems can be applied to solve similar issues facing customs administrations.

A GIS can generally be described as a database management system used for the visualisation and statistical analysis of geographically referenced data. As Longley, Goodchild, Maguire and Rhind explain:

> Identifying *where* something exists or happens … is central to GIS … the ability to compare different properties of the same place … to discover relationships and correlations and perhaps even explanations, is often presented as GIS's greatest advantage (Longley et al. 2011, p. 355).

Geospatial intelligence, in this context, represents the ability to derive additional knowledge from the location data to predict and solve problems (Longley et al. 2011, pp. 11-12).

Policing agencies map crime for a number of reasons. They record crimes and calls for service which 'provides a wealth of information about local crime activity that is readily retrievable from modern computer systems[2] [and] has been regarded … as one of the best methods of maximising the generation of crime intelligence at minimum cost' (Ratcliffe 2000, p. 313).

Drawing on policing research and development it may be possible to identify patterns of high-risk activity and look for these patterns in cross-border interactions. This would allow customs administrations to more effectively mine their data holdings to derive additional meaningful intelligence. As indicated by Chainey and Ratcliffe (2005, p. 2) 'this material can be used for crime and intelligence analysis, and in turn used to better recognise patterns of crime that can be targeted for action, patterns that evidence suggests … officers are not necessarily aware of'. This additional intelligence would enable customs administrations to move from traditional linear lines of enquiry to being better able to identify high-risk patterns of cross-border offending sooner rather than later.

The science

Geospatial intelligence is not a new field of study. Chainey and Ratcliffe (2005, p. 3) note that 'the geographical analysis of crime has also shown strong parallels with the field of spatial epidemiology and continues today to learn from this related field'. One of the earliest uses of mapping in the modern era can be attributed to physician Dr John Snow in 1854. Snow, widely regarded as the father of modern epidemiology, traced the source of a cholera outbreak in central London by mapping the locations of deaths and local water sources. Snow correctly identified the cholera source to a contaminated water pump (Longley et al. 2011, p. 354).

The idea of place in relation to crime has long been recognised for its importance in policing. Criminal activity can be better understood by exploring the geographical components, including identification of patterns and concentrations of crime (Chainey & Ratcliffe 2005, p. 1). To understand why such emphasis has been placed on location requires examination of crime statistics, unreported crime, factors influencing the reporting of crime, 'victimless' crimes and the influence of recidivism by location or offender.

According to Chainey and Ratcliffe (2005, p. 65) 'the Australian Institute of Criminology has estimated that for every 100 crimes that are committed in Australia, only 40 are reported to the police and only 32 are actually recorded'. The New South Wales Bureau of Crime Statistics and Research (2004, p. 3) identifies a number of issues surrounding reported crime including differing crime types having different reporting rates, suggesting a number of factors influence reporting. Walker (1992, p. 151) notes a similar level of reporting in North America 'since only 37% of all crimes are reported'.

Carcach (1997, pp. 1-6) found that the seriousness of the offence was one of the most notable factors influencing the reporting of crime. Non-reporting, on the other hand, was primarily influenced by the perception that many matters are perceived as minor and thus do not necessitate reporting or police involvement. Makta (1990, pp. 1-8) concurs: 'the recorded rate of some offences is so poorly related to the actual number ... we should not even attempt to infer trends ... [for example,] drug offences are rarely reported'. Walker (1992, p. 162) supports this view noting that prostitution, gambling and narcotics are regarded as 'victimless crimes'.

Interestingly, Walker (1992, p. 158) identifies one strategy for targeting crime as 'the career criminal approach ... which estimates that a very small number of people ... commit an extremely high percentage of all the serious crime committed by the total group'. Petersilia (1989, p. 245) reaches a similar conclusion noting 'the small number of chronic recidivists who account for a large amount of serious crime'. This view is echoed by Ratcliffe (2003, p. 2).

Drawing further on the prolific nature of these recidivist offenders, Canter (1994, pp. 96-7) observes that criminals are 'more vulnerable in their history than in [their] future'. Canter's research examines the relationship between recidivist burglars and their confirmed burglary locations which reveals an interesting 'circle hypothesis', namely that in many instances, 'the crimes were surprisingly local to where the offender lived'. The suggestion of recidivist offenders tied to particular locations appears to be consistent across different crime types (burglaries, rapes, homicides) and, according to Chainey and

Ratcliffe (2005, p. 303) 'geographical profiling was developed to help police locate serial killers, rapists and arsonists ... also being applied to many other crime types such as robbery and burglary where an unidentified person is known to have carried out crimes at a series of geographic points'.

Branca (1998, p. 17) considers the spatial nature of recidivist offenders and, in an Australian context, identifies that Canter's research and theories could be applied to Australian conditions for rape, burglary and arson. Chainey and Ratcliffe (2005, p. 126) identify three principal types of spatial patterns: uniform, random and clustered, with clustered patterns most often associated with crime data. Expanding on the clustering phenomena, Chainey and Ratcliffe (2005, pp. 146-7) recognise that 'good cartographic design is important in hotspot mapping as it clearly identifies areas that persistently suffer from crime ... hotspot maps are therefore a blend of good cartographic design and robust methodology, and are a first step towards exploring crime patterns in more detail'. Chainey and Ratcliffe (2005, p. 312) extrapolate the idea of criminal hotspots into a subtle means of targeting through 'self-selection … based on the hypothesis that "people who are the most committed criminals are also the most versatile, and will not willingly be bound by law or convention of any kind"'.

The system from the policing perspective

Esri Australia define GIS as:

> Technology [that] maps the geography of an organisation's data to expose patterns and relationships otherwise hidden in the information labyrinths of numeric tables and databases. By visually representing data on a map, complex scenarios are translated into a universal language – one that enables employees at all levels to make informed decisions confidently and in a timely manner (Esri Australia 2013a).

Expanding on this definition, Esri Australia suggests that 'GIS unlocks location intelligence – the knowledge that comes from taking a geographic view of information … reveal[ing] well-kept secrets and mak[ing] new discoveries. In the 21st century, this equates to business breakthroughs … innovation and [other] benefits' (Esri Australia 2013b).

Following on from the science of geospatial intelligence, Longley et al. (2011, p. 16) offer a definition of a GIS as 'a tool for revealing what is otherwise invisible in geographic information'. This is especially important when considering that:

> Location is inherent in all organisational data: people have residences, assets have proximities, employees have worksites and parcels have both origins and destinations. Over 80% of all data contains a location component. By visualising and exploring the relationships within this data; and using the resulting discoveries to guide decision-making – you are effectively leveraging 'location intelligence' (Esri Australia 2013c)

Figure 1 is an example of a map within a GIS, showing the different layers of information that contribute to the overall image.

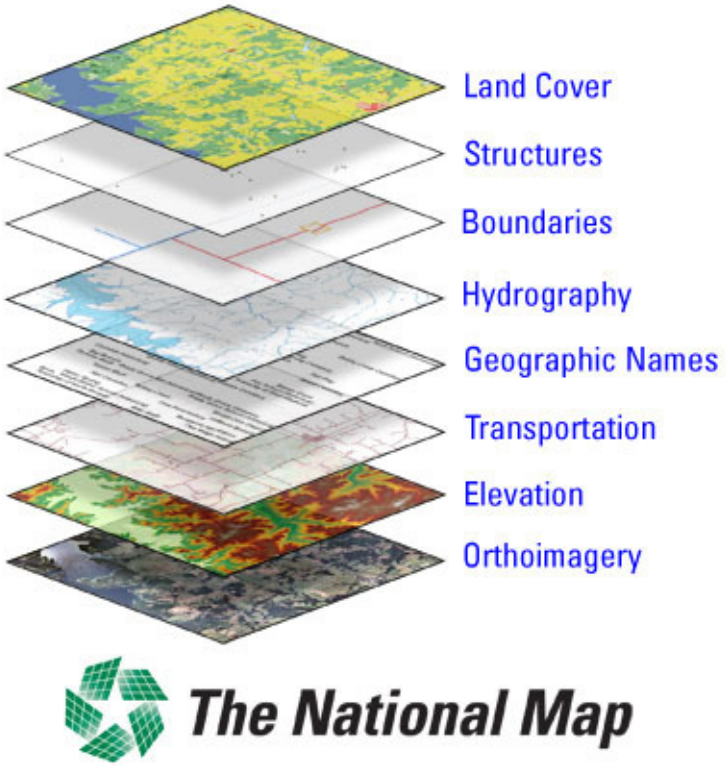
Chainey and Ratcliffe, citing Professor P Jeffrey Brantingham, note that there are four dimensions to every crime:

1. a legal dimension (a law must be broken)
2. a victim dimension (someone or something has to be targeted)
3. an offender dimension (someone has to do the crime)
4. a spatial dimension (it has to happen somewhere) (Chainey & Ratcliffe 2005, p. 79).

These same factors apply to cross-border interactions, for example, movement of goods/persons across international borders where the:

1. movement is prohibited, restricted or regulated
2. community will be adversely affected
3. offenders planned the movement
4. location of the offence or intended destination of goods/persons is known.

Figure 1: The National Map in a GIS



Source: http://upload.wikimedia.org/wikipedia/commons/3/3b/USGS_The_National_Map.jpg.

To effectively map crime in a GIS requires accurate geographical coordinates as they relate to addresses. This is achieved through use of an address reference system, or gazette. As Chainey and Ratcliffe (2005, pp. 48-9) note: 'what is standard in all geocoding processes is that data which describe the geographical position of the event need to be matched to corresponding details in the file that contains these geographic coordinates … often referred to as the reference file … or a gazetteer'. Use of a reference file or gazetteer helps to solve a number of problems encountered with address data including abbreviations, local aliases, multiple listings of a particular street address, incorrect spelling, incomplete address details, address not recorded or not up to date, and identification of fraudulent or incorrect addresses (Chainey & Ratcliffe 2005, pp. 52-6). With accurate address data provided through such a reference file or gazetteer, crime analysis can be defined as 'a set of systematic processes designed to provide the descriptive and statistical information necessary to facilitate strategic and tactical planning, resource allocation, and the investigative process' (Palmiotto 1988, p. 60). Palmiotto sees the process of crime analysis as being directed towards the 'criminal offences … which have a high probability of recurrence' (Palmiotto 1988, p. 60) and through the identification of similar patterns within the offending behavioural traits.

Goldstein (1990, p. 37) takes the views of Palmiotto a step further, indicating that 'crime analysis has been *used to identify offenders and interrupt crime patterns* [emphasis added] rather than to gain the kind of knowledge and insights that might be used to affect the conditions that accounted for the criminal conduct'. Goldstein (1990, p. 44) also suggests that the development of alternative methods to 'respond to commonly recurring problems represents unique opportunities for novel solutions'.

Establishing Canter's (1994, p. 104) 'circle hypothesis' referred to above, appears to have relevance across a number of different crime types including burglaries, serial rapists and serial murders. Taylor suggests a slight shift of focus from offender to place, resulting in reductions in both crime and disorder, and proposes adopting techniques related to spatial epidemiology to 'describe and understand how crime and disorder cluster in both space and time' (Taylor 1998, p. 1). These techniques reveal that 'crime data and police service calls that are "geocoded" reveal concentrations of crime in a few hot places … if we know exactly where and when crimes are taking place, we should be able to control crime more effectively' (Taylor 1998, p. 2). Taylor suggests that repeat victimisation was also identified as playing an important role in the identification of 'hot' spots (Taylor 1998, p. 4). Chainey and Ratcliffe (2005, p. 164) concur, noting that identification of hotspots 'identif[ies] where the local averages … are significantly different to the global averages'. In addition to identifying hotspots, Chainey and Ratcliffe (2005, p. 255) suggest that time can also play an important role in defining hotspots, noting 'aoristic analysis[3] is … a flexible way for analysts to better understand the spatial and temporal patterns of their crime data'.

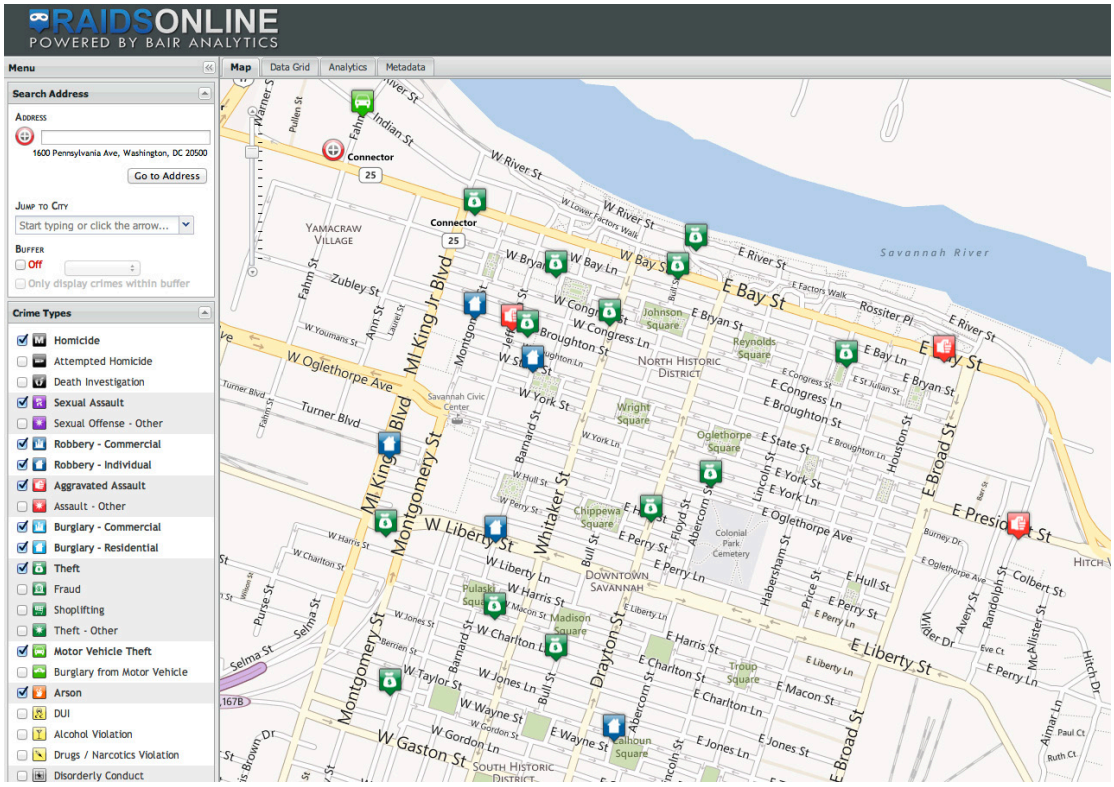
The evidence

Interactions between customs administrations and the public, including industry, bear notable similarities with traditional reactive-based models of policing. Most notably, the critical issue here falls into being able to recognise a pattern of activity. The current linear nature of customs enquiries limits identifying patterns of activity and does not account for changes over time. Moreover, current techniques are problematic in identifying irregularities. For example, in 2007, the Australian Customs and Border Protection Service conducted an interception of cocaine in car parts from North America, consigned to a beachside address in Cronulla, New South Wales. The interception was not itself overly significant, however, it was not until after the interception that post-seizure research identified almost 100 *previous successful importations* to the same address in the preceding months. As Chainey and Ratcliffe (2005, p. 274) point out, 'Mapping crime events … may identify a hotspot of which decision-makers were unaware … having mapping tools that can identify high repeat victimisation sites can be a quick first step to the identification of a problem'.

Identification of patterns as they are occurring/emerging is one of the strengths of mapping in a GIS environment, and is not limited to any particular cross-border transaction or commodity type. Could the above cocaine importations have been identified earlier if the address had been identified as a recidivist high-volume location leveraging the spatial and temporal attributes of a GIS? The answer is most likely 'yes'.

The adoption and uses of GIS are increasing, including by logistics and freight forwarding companies. This is something of which customs administrations should be aware and consider the potential for data exploitation. At the 2010 Esri International User Conference, Haas, McLeod, Dezemplen and Conger identified the application of spatial data to support the FEDEX mission, applications and processes worldwide, including: … decision making for the routing and scheduling of thousands of vehicles … minimising costs such as mileage, overtime of workforce, efficient routing … effective delivery methods, leading to higher productivity and greater customer satisfaction (Haas et al. 2010, p. 1). Figure 2 is an example of an open-access law enforcement GIS.

Figure 2: Identifying the crime hotspot, central business district, Savannah, Georgia USA



Source: RAIDS Online 2013 (reproduced with permission).

In 2006, Australia implemented tighter controls on the retail purchase of medications containing pseudoephedrine. This was an attempt to halt the illicit diversion of pseudoephedrine for use in the manufacture of amphetamine-type substances. As a result of these tighter controls, data from the International Narcotics Control Board (2002–2012) has shown a steady increase in the weight of intercepted ephedrine, ephedrine preparations, pseudoephedrine and their preparations from a combined total of 152 kg in 2002 to 1,713 kg in 2011, with a record seizure weight of 2,696 kg in 2008.

A number of factors have influenced these seizures including tighter domestic controls which have forced criminal groups to source the precursors from countries with lower levels of regulation and enforcement, and a number of Asian countries have been identified as sources of these precursors with resulting detections clustering in similar ethnic communities within Australia.

The solution

According to Longley et al. (2011, p. 43) there is a 'wider realisation that geography provides the most effective way of organising enterprise-wide information systems'. Chainey and Ratcliffe (2005, p. 262) concur, noting that 'a geographic focus is one of the most effective ways to utilise limited resources and people'. Longley et al. (2011, pp. 48-9) cite examples that range from economic development, infrastructure, law enforcement, environmental monitoring and geodemographics, and point out that GIS can be used at tactical, operational and strategic levels (Longley et al. 2011, pp. 65-6).

Customs administrations, with limited resources and increasing demands on those resources, must move from the traditional linear lines of enforcement to one that can far better account for temporal and

disparate data variables. This view is not dissimilar to the observations of Ratcliffe (2003, p. 2) that there is 'an inability of the traditional, reactive model of policing to cope with the rapid changes in globalisation which have increased opportunities for transnational organised crime'.

There are a number of opportunities within the global logistics and supply chain network that can clearly be exploited through industry adoption of geospatial technology. Customs administrations would be well placed to co-opt industry developments, as identified earlier in the example of FEDEX's use of geospatial data, to enable greater returns on investment for all parties. To illustrate, the overwhelming majority of customs administrations are signatories to the *Harmonized Commodity Description and Coding System* (the Harmonised System) which is designed to achieve uniform classification of commodities. As an extension to the widespread use of the Harmonised System, customs administrations could adopt a requirement to use ISO 19131[4] geographic information-compliant datasets, for industry reporting requirements; for example, in relation to cargo reporting and import declarations. Use of these datasets would have several notable benefits for both industry and customs administrations.

In Australia, the authoritative equivalent of an ISO 19131 dataset is known as G-NAF, or Geocoded National Address File which is 'the authoritative index of Geocoded Australian addresses. This … dataset contains more than 13 million physical addresses that are sourced from address custodians from each state and territory, the Australian Electoral Commission and Australia Post. G-NAF makes it possible to verify a physical address in Australia and locate its position (PSMA 2013). Similar datasets exist for the United Kingdom (AddressBase 2013), Canada (GeoBase 2013) and New Zealand (LINZ 2013).

This author's opinion is that the methodology used by policing agencies to map crime data can be similarly replicated in the customs environment. This could be achieved through:

- the increasing availability of national address datasets
- positive results from the use of geospatial intelligence by different policing agencies in different countries
- similar results obtained by mapping crime data across different crime types (homicides, rapes, burglaries, arson, and so on).

Widespread adoption of address standard ISO 19131 in the customs environment would enhance the community protection role that customs administrations perform in concert with their revenue roles. The standard provides the ability to effectively use trade and statistical data for multiple purposes, resulting in a greater return on investment and enhancing a customs administration's ability to maximise its returns from its data holdings. Spatial analysis can reveal things that might otherwise be invisible – it can make what is implicit explicit … turning data into useful information (Longley et al. 2011, p. 352).

Adoption of ISO 19131 for customs reporting requirements would have several benefits:

> Through the investment in detailed base mapping data for their GIS and a gazetteer that is comprehensive, up to date, centrally administered and well maintained, the capture of address data or location data of where crimes happen is now significantly more efficient and accurate … The application of an automated … geocoding process … helps [to build] … confidence that consistent processes have been applied to the data … knowing their data are accurate, and that the output is reliable (Chainey & Ratcliffe 2005, pp. 58; 65).

Adoption of ISO 19131 for use by national customs administrations for internal seizure data, intelligence information and other diverse data types, such as air waybills, bills of lading, advanced passenger data and international currency movement reports would represent the foundation of an integrated geospatial intelligence tool. Such a tool would also provide a significant timesaver, reducing the number of separate database enquiries that may need to be performed.

An integrated geospatial tool encompassing multiple modes of cross-border interactions (post, sea and air cargo, passengers, currency, intelligence) provides the opportunity to have a more holistic overview

of the environment. Such a view would enable significant enhancement to threat assessments of cross-border activity (pattern analysis, hotspots, recidivist address use) and would be more agile and adaptive to changes in the operating environment.

Conclusions

It is important to note that until further study is conducted and supporting evidence emerges, geospatial intelligence should be best viewed as an aid not a replacement to traditional profiling techniques in the customs environment. Without bearing in mind the significant policing emphasis on data quality, any attempt to introduce a geospatial intelligence capability without appropriate data quality controls would be fraught with difficulty. Data quality = data integrity = meaningful analysis. Geospatial intelligence, from the policing perspective, appears to be commodity-agnostic and is scientifically based. Again, until further study is conducted and supporting evidence emerges, its value in a customs environment is largely theoretical, as opposed to empirical.

Geospatial intelligence represents an opportunity to reduce the incidence of fraud in the customs, global logistics and supply chain sectors whilst providing a significant return on investment through the multiple use of data. Moreover, a geospatial intelligence environment would not appear to be adversely affected by increases in information volume associated with increasing trade and travel. Now is the opportune time for customs administrations to embrace the opportunities identified by policing agencies and become geospatially intelligence-aware.

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Notes

1 This paper represents the author's views and stems from personal, independent research. It does not necessarily reflect the views of the Australian Customs and Border Protection Service on the issue. The author acknowledges and thanks Charles Sturt University, Australia, for opening his eyes to a whole new world of possibilities. The author maintains a website (www.customscollector.com/) dedicated to the cataloguing and collection of customs insignia from around the world.

2 The identification of specific software, systems or companies does not necessarily represent an endorsement; it is used to illustrate a particular point.

3 Aoristic analysis: 'A spatio-temporal tool that calculates the probability that a crime event occurred within a given time period within the time span … designed to assist with the analysis of offences where it is not possible to determine the actual time of offence' (Chainey & Ratcliffe 2005, p. 251).

4 ISO/TC211 19131 Fact Sheet.

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John de Belle joined the Australian Customs Service in 1990, and is now a Senior Customs Officer, Enforcement Operations, Sydney, with the Australian Customs and Border Protection Service. In 2004, he completed a Bachelor of Policing and was awarded a Graduate Diploma in Criminal Intelligence by Charles Sturt University in 2008. John received Chief Executive Officer awards in 2009 (Operation Interstice) and in 2012 (Operation Quadrel) as an operational member of those teams.

Import value *de minimis* level in selected economies as cause of undervaluation of imported goods

Steven Pope, Cezary Sowiński and Ives Taelman

Abstract

Undervaluation of goods imported by any country is a phenomenon observed daily by those involved in international trade. However, the reasons that goods exported from certain countries are accompanied by invoices showing deliberately lowered values that do not reflect the true value of the goods are not yet fully understood. It has been suggested that a willingness to avoid duties and taxes by those involved in foreign trade may be the sole reason for this behaviour. Undervaluation practices may also be caused by a misfit of existing regulations of some national economies, especially levels of import value *de minimis* levels and other types of trade facilitation measures. Using three hypotheses, this paper investigates whether a link exists between the European Union (EU) import duty and VAT *de minimis* levels and deliberate undervaluation below that threshold. Although the research was unable to prove a direct correlation between certain taxes and undervaluation, it indicates the need for greater understanding and cooperation between business and Customs to better ensure compliance with changing international trade regulations.

Background

Undervaluation of goods imported by any country is a phenomenon observed daily by those involved in international trade. However, the reasons that goods exported from certain countries are accompanied by invoices showing deliberately lowered values that do not reflect the true value of the goods are not yet fully understood. Obviously, there might exist various explanations of that behaviour, one of them being a sole willingness to avoid duties and taxes by those involved in foreign trade. Nonetheless, the undervaluation practices might also be caused by a misfit of existing regulations of given national economies (especially levels of import value *de minimis* levels and other types of trade facilitating measures) with the developing global economy. Therefore, this paper investigates whether there exists a link between the European Union (EU) import duty and VAT *de minimis* level and deliberate undervaluation below the *de minimis* threshold. Using samples derived from DHL Express operating systems, the paper focuses on known undervalued shipments coming into the EU from the Asia Pacific region with the aim of assessing whether EU import value *de minimis* level influences decisions of foreign traders to undervalue goods shipped to the EU.

The results of the research do not confirm the link's existence. They show that there exists a general trend to undervalue every commodity shipped to the EU, no matter what its country of destination, recipient or transaction value. The extent of undervaluation (degree of undervaluation) shows no correlation with the value to be declared to Customs. The analysis of the data gathered for this paper leads to the observation that no link exists between the duty and import tax *de minimis* level for the EU and the undervaluation

practices executed by foreign traders. Another conclusion from this research is that there is evidence of insufficient awareness by selling and buying parties in relation to international trade regulations. Consequently, this paper demonstrates the need for greater understanding of the motivation behind traders supplying undervalued invoices as well as the reasoning behind their methodology.

Introduction

The DP DHL group is the largest logistics company in the world, and we often observe certain manifestations of the informal economy in long-distance international trade. In our business these manifestations often take the form of lowering the declared value of goods on import with the potential consequence of avoiding duties and taxes – typical behaviour exhibited by those operating in the informal economy aimed at tax evasion.

Documentation (whether commercial, customs or pro forma invoices) accompanying or applicable to a consignment and being officially presented to Customs in the country of import for the purpose of customs clearance often show lowered values that do not reflect the true value of the goods. Although the practice of forging documents is illegal, it is often done in common agreement between the seller and the buyer with a shared benefit: the seller gains a sale of their goods and the buyer benefits by avoiding additional customs duties and taxes due on import.

We believe that, from an economic perspective, the above is one of the traits of the informal economy as a consequence of access being afforded to local entrepreneurs by the development of international transport.[1] Such entrepreneurs have adapted their behaviour to exploit the opportunities of access to the global market offered by international transport and operating informally to capture a greater share of the market place. At the same time, such informal economic activity might be indirectly pointing towards revealing a correlation between certain important regulatory traits of the formal economy such as levels of import value for the *de minimis*. The aim of this paper is to contribute to the knowledge of the informal economy by dispelling some of the existing assumptions and to better define its concept. We investigate whether the above-mentioned practice (undervaluation of goods exported from certain countries to the EU) is the sole demonstration of a willingness to avoid duties and taxes (or to limit their amount) or whether there are other factors which drive such behaviour that is not yet fully understood.

It is not in our intention to discuss all possible facets of the informal economy, rather to point out some of its characteristics. As the paper focuses on the undervaluation of imported goods and a possible link to import value *de minimis* levels, it is important to place this subject in a broader context to show that undervaluation of imported goods is one of the manifestations of the informal economy and as such is a global problem existing in every country in the world to a greater or lesser extent.

The informal economy in an international trade context

The informal economy can be analysed from a legal perspective to establish where a borderline of formally designated legality runs. However, the needs of public administrations should also be taken into consideration as there exists a need for an accurate record of economic performance in the country or region. Without such data, governments cannot forecast and budget for revenue collection and subsequent expenditure. The informal economy[2] is not only difficult to analyse but even more difficult to evaluate as it is bringing both negative and positive effects to society and the economy.[3] Furthermore, by its very nature, the activity is either completely hidden or heavily disguised. Looking at it only from an economic perspective and assessing its constraining influence on growth, the informal economy:[4]

- absorbs resources needed for production
- lowers efficiency of economic entities

- gives an untrue picture of the size of the national or regional economy
- lowers prestige of the state
- makes international benchmarking unreliable
- flaws the governing of social security systems in countries and regions
- lowers budget revenue
- makes it difficult if not impossible to quantify actual levels of employment
- is closely linked to general illegal and criminal activity dragging otherwise law abiding citizens into a situation from which it is difficult to escape
- can lower tax morality if not tackled.

The list does not cover all the characteristics of the informal economy; however that economy can in certain circumstances offer some benefits.[5] It:

- contributes to actual economic progress
- provides high return on investment that can be further used within formal economy boundaries
- can contribute to capital accumulation forcing actors from the informal into the formal economy
- assists globalisation by weakening the impact of radical transformation processes
- eases the effects of crises
- opens possibilities for creation of employment
- weakens isolation and alienation of people faced with officially structured and conventional organisations, especially of state administrations.

Although it is impossible to put a common scale on evaluating the pros and cons of the informal economy, one aspect can be clearly pointed out: the informal economy cannot exist on its own: it is always connected with its opposite – the formal economy. In this perspective, it is a persistent phenomenon with various situational manifestations. This is how we consider the informal economy in international trade:

- as a manifestation of institutional adaptation of society to challenges following development of the formal economy
- as an indirect but firmly and practically applied exploitation of the formal economy.

From an economic perspective, the informal economy is a significant area of economic activity which is not taxed. As such it is an area of potential revenue for the state and local budgets, so there exists the aspiration to tax illicit revenues gained by economic actors; the theoretical 'tax take'.

In this light, one can assume that developments in the formal economy, leading to an increase in duties and taxes placed on an individual's actions could cause them to adapt their behaviour to limit their exposure to taxes. The informal economy, being an expression of criticism of the formal economy, leads also to an exposure of such features of the official economy which points towards its maladjustment. In this way, the informal economy is induced by a misfit of aims of the economic system of a given country/area and its instruments (observed as an extension of the regulated market as well as an extension of the presence of the state), extracting it from the economy *tout court*.[6]

When translated into the sphere of international trade, the first aspect can be connected to local markets opening for world influence, with diffusion of consumptionist patterns of living, generally – with globalisation.[7] These manifestations of globalisation lead to much easier access to information and larger (and faster) availability of various goods from countries worldwide. As the possibility in sourcing goods wherever in the world becomes easier and usually cheaper, the duties and taxes imposed by the country of import (as well as any possible limitations in exports in the country of production) on these goods start to be perceived as way too high, especially by private individuals sourcing consumption goods. Thus the informal economy in international trade can be observed as the result of a misfit of such trade facilitation measures as *de minimis* levels with the needs and expectations of the world community.

De minimis level, according to the United Nations Economic Commission for Europe's (UNECE) Trade Facilitation Implementation Guide is 'a valuation ceiling of goods, including documents and trade samples, below which no duty or tax is charged and clearance procedures, including data requirements, are minimal'.[8] This is based on the Latin expression '*de minimis non curat lex*' meaning '*the law does not bother (concern) itself with trifles*'.[9] In the European Union (EU), where – apart from obligatory customs duty to be paid on imports on most of the goods – the tax on importation is VAT, the *de minimis* threshold:

- for customs duty was established at ECU10[10] by regulation 918/83 (OJ L 305); increased to ECU22 by regulation 3357/91 (OJ L 318); increased to EUR150 by regulation 274/2008 (OJ L 85)
- for VAT was implemented by Directive 83/181/EEC (OJ L 105) which allowed Member States to individually exempt imports of goods of negligible value not exceeding ECU22; EU-wide obligatory exemption at EUR10 was imposed by Directive 2009/132/EC (OJ L 292), which also made it possible to increase this threshold up to EUR22 by individual Member States.

From the above it results that, in fact, in the EU an obligatory exemption from VAT applies only for goods of value not exceeding EUR10. Having in mind that most of the EU Member States however used the right to increase this threshold to EUR22, as of November 1991 we can speak (for the purpose of this paper) of exemption from duties and import VAT of goods which value does not exceed EUR22 (that is, only then are both the customs regime and the VAT regime allowed to set *de minimis* at EUR22).

Both aspects that have been discussed in this paper: globalisation with easy access to information, and large (and fast) availability of various goods from countries worldwide and the established duty and import tax *de minimis* levels, might thus be causing the appearance of specific behaviour of traders – they aim to lower the duty and tax burden imposed on their goods in the country of destination by undervaluing their declared value at import. Such practices are observed worldwide, causing problems for both customs authorities as well as for business and individuals in that they hamper legitimate trade by focusing customs authorities' attention on – sometimes – trivial cases while larger crimes may go undetected.

In this light it is also problematic for a company like DHL Express, operating a worldwide network in more than 220 countries and territories with more than 500 airports globally, providing courier and express services to business and private customers, where our overall top priority is to act in full compliance with customs and other international legislation. The task of being absolutely and completely compliant with customs regulations (correct valuation for customs purposes being one of its crucial features) means that there is a strong focus on potential cases of undervaluation.

For DHL Express, as for any other express operator, acting usually as a customs representative on behalf of both sides of an international commercial transaction, declaring undervalued goods to Customs can lead to potentially negative consequences (we assume there is no need here to discuss them in any detail). Therefore, preventing such cases from occurring is one of the challenges for not only DHL but for all types of freight forwarders and customs brokers worldwide.

For that reason, both reporting tools and preventative measures are being consistently applied and constantly updated to meet the demand of a fast-moving environment and respond to changing trends.

Research questions

The application of various sophisticated tools allows us to identify some cases of undervaluation before the goods are declared to Customs. Usually, this is done by establishing contact with the consignee (receiver of the goods, who in most cases is also the purchaser) to check whether the price of goods listed on the invoice accompanying the shipment of a given commodity is in fact in line with the payment

for this commodity effected by the consignee (or their representative) to the consignor (in most cases the seller from abroad). By doing this we can build up a record of consignors executing undervaluation practices as well as – sometimes – gather evidence of the actual process of establishing the declared (by parties of the transaction) and invoiced price of the goods, that is, the price which is then supposed to be the declared value for these goods at import into the destination country/region.

Consistent work in this field, applied worldwide, allows us to analyse this data in view of the following research questions:

> *Why is the declared value of goods (invoiced value) different from the actual value (payable), and in particular, is there a link between de minimis level and deliberate undervaluing below the de minimis threshold of EUR22?*

This analysis would allow us to assume that trade facilitation, such as the *de minimis* threshold, being one of the traits of the formal economy, is causing the emergence of informal practices manifesting themselves through deliberate undervaluation of goods by traders from third countries (with or without active cooperation with the receivers of goods in the country/region of import). In this way it should allow us to say whether the import value *de minimis* level directly influences the decision to undervalue imported goods.

To assess the existence of such a link, the following hypotheses are put forward:

- (H1) If the transaction value of any commodity differs from its declared value at any level of the transaction value (even if sometimes arriving below the *de minimis* threshold), the link does not exist.
- (H2) If the transaction value of any commodity differs from the declared value in such a way that – different to the actual transaction value – the declared value is always below the *de minimis* level, the link exists.
- (H3) If the transaction value of commodities sent by a single supplier to various recipients in the EU, where this value is identical (leading to the assumption that the commodities the subject of transaction are also identical), differs from the declared value to the same extent and, especially, is always below the *de minimis* level, the link exists.

These hypotheses are further extended by evaluating existing documentary evidence gathered during the process of establishing the correct value of imported goods from parties involved in transactions. This source of knowledge, apart from supporting or negating the outcome of previous hypotheses, could also shed some light on the question of why the practice of undervaluation is taking place from the perspective of transaction parties. This becomes even more important if the verification of the hypotheses proves to be inconclusive.

Data description

Data on which this paper is based (DHL Express record of cases where the declared value was confirmed to be different to the price actually paid/payable for the goods [true transaction value]), covers the period from the beginning of August 2012 until mid-April 2013 (week 31 to week 15, that is, eight and a half months).

This data shows 22,328 cases of shipments destined for EU Member States with confirmed undervaluation, however this number is negligible taking into consideration the high volume of shipments that were transferred by DHL Express during this period. This record shows the following spread:

- 22,100 cases of confirmed undervaluation with average degree of undervaluation at 74.67%;[11]
- 72 cases of confirmed overvaluation with average degree of overvaluation at 1,089.19% (the highest difference amounting to 6,618.82%, where declared value was EUR12,270.58 and transaction value EUR185.39);

- 156 cases of confirmed under- or overvaluation with the difference between paid/payable value and declared value being below EUR1 (and thus insignificant for the purposes of this paper).

As the aim of this paper is to evaluate the existence of a possible link between the *de minimis* value (established at EUR22 for the purposes of the research) and the actual value of transactions, the cases of overvaluation are not analysed further. However, their existence should be taken into consideration as they are also believed to provide some important insight into the whole subject.

The cases where the difference between declared value and paid/payable value is lower than EUR1 were analysed to the extent of checking whether any of them follow the scenario whereby the paid/payable value is above EUR22 while the declared value is below EUR22. No such cases were discovered, therefore it is justified to treat these occurrences as potentially minor errors and exclude them from further analysis.

H1 verification

The first hypothesis (H1) assumes that *if the transaction value of any commodity differs from its transaction value at any level of the transaction value (even if sometimes arriving below the de minimis threshold), the link between the de minimis level and deliberate undervaluation does not exist*.

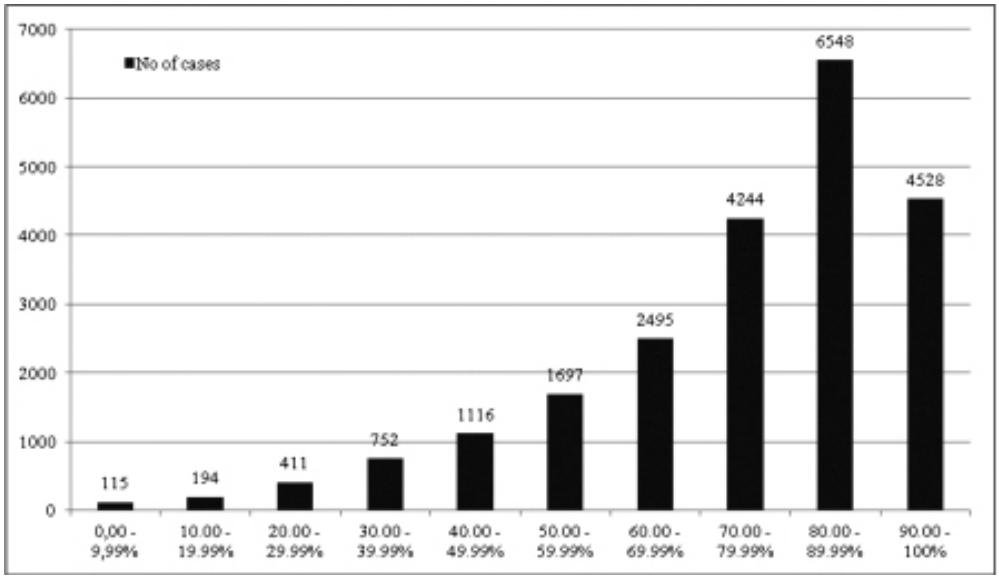
Focusing on 22,100 cases of confirmed undervaluation shows that undervaluation cases span from as little as EUR1.02 (0.05% of the paid/payable value) to as much as EUR1,191,616.19, that is, 99.96% of the paid/payable value). Table 1 and Graph 1 provide visual representation of these findings.

Table 1: Undervaluation cases grouped by degree of undervaluation

0.00 - 9.99%	10.00 - 19.99%	20.00 - 29.99%	30.00 - 39.99%	40.00 - 49.99%	50.00 - 59.99%	60.00 - 69.99%	70.00 - 79.99%	80.00 - 89.99%	90.00 - 100%
115	**194**	**411**	**752**	**1,116**	**1,697**	**2,495**	**4,244**	**6,548**	**4,528**

Source: Authors' calculations.

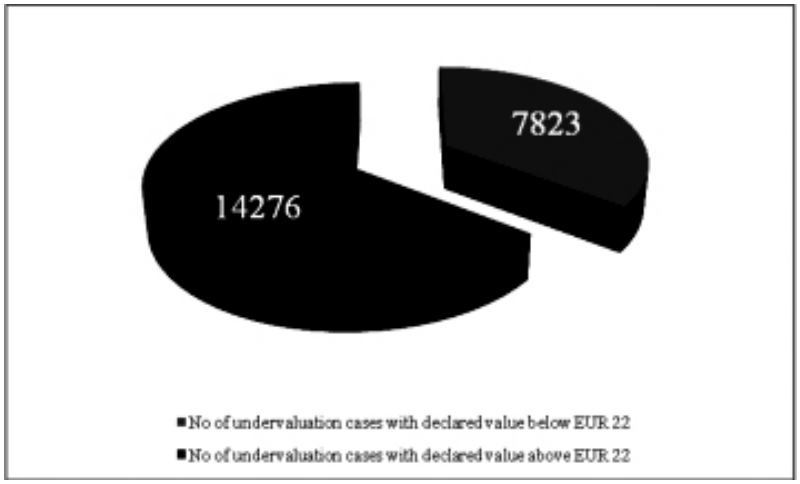
Graph 1: Undervaluation cases grouped by degree of undervaluation



Source: Authors' calculations.

Taking into consideration that this paper focuses on a possible link between the *de minimis* value (assumed to be at EUR22) and the undervaluation practices, the threshold of EUR22 of declared value was used to spread the data sample of the 22,100 cases into two sub-samples, covering (a) cases where the declared value was below EUR22 and (b) where the declared value was equal to or above EUR22. It resulted in 7,823 cases where the declared value was below EUR22 and 14,276 cases where the declared value was above EUR22. Graph 2 presents these cases in general (to visualise significant differences in the number of cases where the declared value was below EUR22 and above EUR22), while the spread of undervaluation cases in each of the sub-samples is shown in Table 2 and on Graph 3.

Graph 2: Undervaluation cases (declared value below and above EUR22 shown separately)



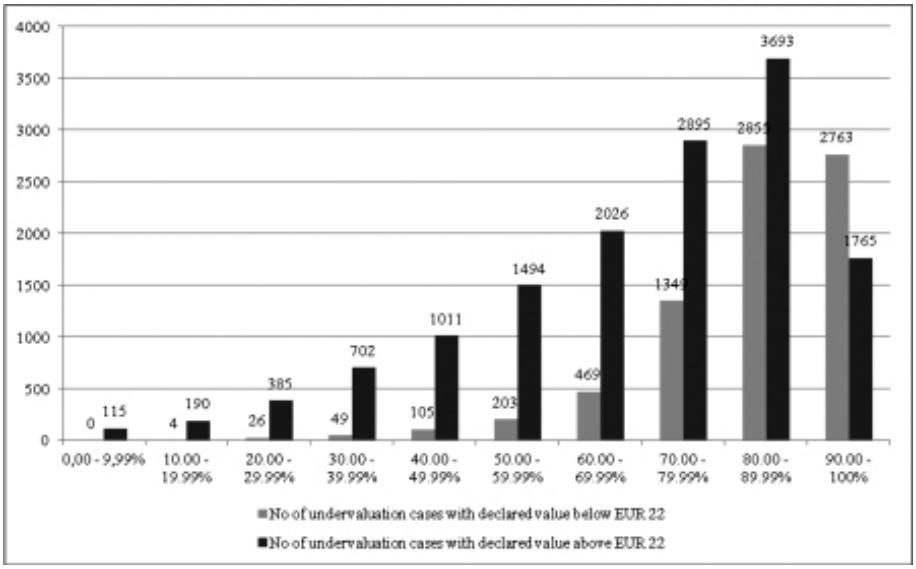
Source: Authors' calculations.

Table 2: Undervaluation cases (declared value below and above EUR22 shown separately) grouped by degree of undervaluation

	Declared value	
	< EUR22	> EUR22
0.00 - 9.99%	**0**	**115**
10.00 - 19.99%	**4**	**190**
20.00 - 29.99%	**26**	**385**
30.00 - 39.99%	**49**	**702**
40.00 - 49.99%	**105**	**1,011**
50.00 - 59.99%	**203**	**1,494**
60.00 - 69.99%	**469**	**2,026**
70.00 - 79.99%	**1,349**	**2,895**
80.00 - 89.99%	**2,855**	**3,693**
90.00 - 100.00%	**2,763**	**1,765**

Source: Authors' calculations.

Graph 3: Undervaluation cases (declared value below and above EUR22 shown separately) grouped by degree of undervaluation



Source: Authors' calculations.

One can observe from the graphs that cases where the declared value was indicated by the traders to be below EUR22 are in the minority, representing only 35.40% of all undervaluation cases recorded between August 2012 and mid-April 2013 in the DHL Express network EU-wide.

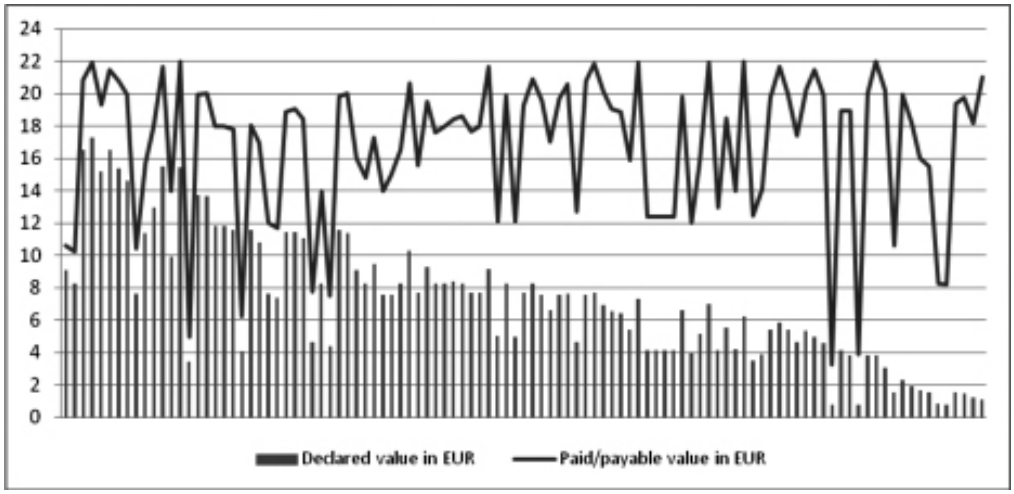
An interesting outcome shows the analysis of the cases of declared value set by the traders below the *de minimis* threshold (below EUR22). Out of 7,823 recorded cases, 105 represent shipments where the paid/payable value was already below EUR22. Such shipments would in any case be admitted to the territory of the EU without duties and taxes on import. Nevertheless, they are still undervalued, with the degree of undervaluation spanning from 14.17% to 94.68%, being much lower on average (56.88%) than the degree applied to other shipments in the scope of the whole analysis (74.67%), which can be attributed to generally lower value of these shipments (making it hard to undervalue them more). Table 3 and Graph 4 provide some visualisation of that situation.

Table 3: Degree of undervaluation of shipments with declared value below EUR22 (paid/payable value below and above EUR22 shown separately)

	Paid/payable value	
	< EUR22	> EUR22
0.00 - 9.99%	**0**	**0**
10.00 - 19.99%	**2**	**2**
20.00 - 29.99%	**12**	**14**
30.00 - 39.99%	**13**	**36**
40.00 - 49.99%	**11**	**94**
50.00 - 59.99%	**14**	**189**
60.00 - 69.99%	**23**	**446**
70.00 - 79.99%	**14**	**1,335**
80.00 - 89.99%	**9**	**2,846**
90.00 - 100.00%	**7**	**2,756**

Source: Authors' calculations.

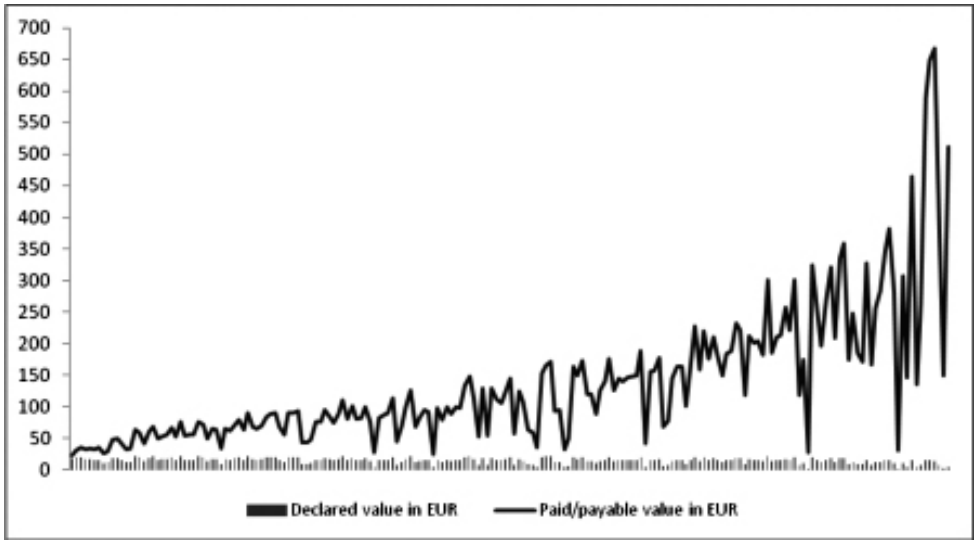
Graph 4: Degree of undervaluation of shipments with declared value below EUR22 and paid/payable value below EUR22



Source: Authors' calculations.

Similarly interesting is the outcome of analysis of the cases where the declared value was set by the traders to be below the *de minimis* threshold of EUR22, while the paid/payable value for the goods was above EUR22. For the bulk of them (7,572 cases out of 7,718, that is, 98%) the paid/payable value was decreased more than 50%. For the sake of visibility, Graph 5 shows every 40th case (approximately 2.5%) of the recorded cases as a comparison of values declared (columns) and paid/payable (line); only values below EUR1,000 are depicted.

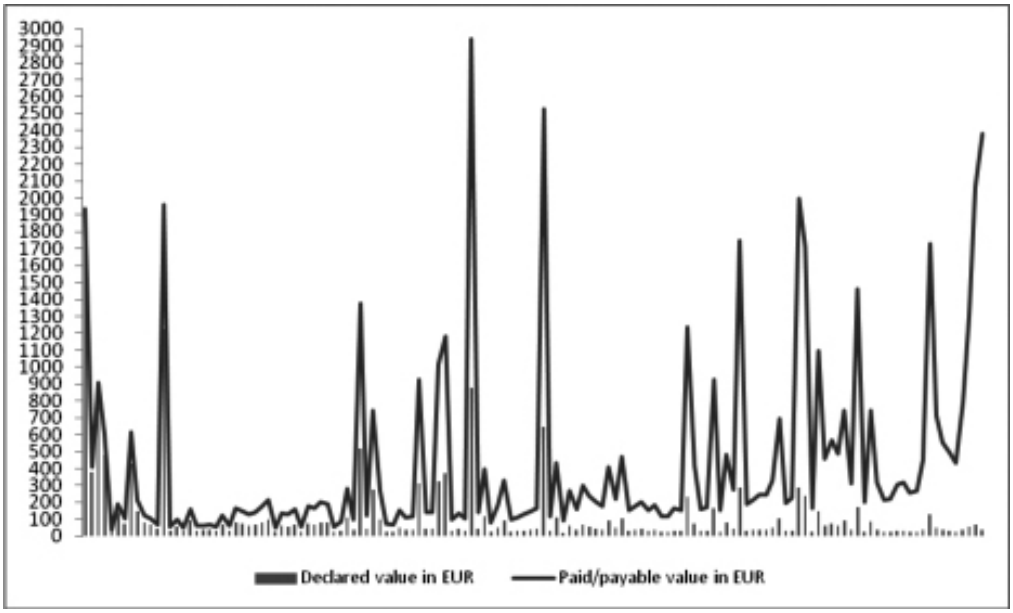
Graph 5: Degree of undervaluation of shipments with declared value below EUR22 and paid/payable value above EUR22



Source: Authors' calculations.

Graph 6 shows the same approach applied to shipments with declared value above EUR22 and a paid/payable value also above EUR22. As the number of such occurrences is 14,277 in the available sample, only 0.9% of cases (every 100th case) was taken into consideration in drafting this graph; for the sake of clarity and visibility, only values below EUR3,000 are depicted.

Graph 6: Degree of undervaluation of shipments with declared value above EUR22 and paid/payable value below EUR22



Source: Authors' calculations.

A simple comparison of Graphs 4, 5 and 6 shows a very similar approach taken by the traders in respect of the degree of undervaluation. In all recorded cases the same pattern seems to be followed, that is, the general trend is to undervalue every shipment, no matter what its paid/payable value. The extent of that undervaluation (degree of undervaluation) shows no correlation with the value actually declared.

This would lead one to the conclusion that the first hypothesis (H1) was verified positively, that is, it has been confirmed that the transaction value of any commodity differs from its declared value at any level of the transaction value (sometimes arriving below the *de minimis* threshold). Consequently, it was not possible to confirm existence of a clear link between the *de minimis* level and deliberate undervaluation.

Although the data analysis provided within the scope of verification of the first hypothesis is, in the opinion of the authors, already conclusive and supports the analysis that there is no link existing between the duty and import tax *de minimis* level for the EU and the undervaluation practices executed by foreign traders, further testing and analysis of the data was carried out to verify the remaining two hypotheses.

H2 verification

The second hypothesis (H2) is that *if the transaction value of any commodity differs from the declared value in such a way that – indifferent to the actual transaction value – the declared value is always below the de minimis level, the link between the de minimis level and deliberate undervaluation exists*. The aim is to check empirically whether the *de minimis* threshold, set at EUR22, is triggering a specific behaviour in traders to deliberately decrease the transaction value to benefit from duty and import tax relief. It has not been proved.

The available data show occurrences of the cases where the paid/payable value was in fact decreased below the EUR22 level (7,823 out of 22,100 cases covered by the analysis) but it also shows that the lowering of the transaction value takes place (to some extent) within the whole sample, no matter what the paid/payable value or the resulting declared value. Insight into that statement is provided in Table 4, showing samples of recorded cases with proven undervaluation for each of the categories of undervaluation degree (exemplary cases for each of the undervaluation degree levels were chosen randomly). As can be observed there is no link between the transaction value and declared value which would demonstrate a clear intention to lower the transaction value to any specific level, especially below the *de minimis* threshold.

Table 4: Exemplary data on undervaluation in each of the categories of undervaluation degree

	Declared value in EUR	Transaction value in EUR	Difference between declared and transaction value (in EUR)	Degree of undervaluation (in %)
Cases where declared value and transaction value are both lower than EUR22	17.29	21.90	4.61	21.07%
	9.91	14.00	4.09	29.22%
	11.43	18.87	7.43	39.39%
	10.32	20.67	10.35	50.09%
	7.58	19.70	12.12	61.52%
	5.55	18.49	12.94	70.01%
	3.03	20.19	17.16	84.98%
	1.48	19.77	18.30	92.54%
Cases where declared value is below EUR22 and transaction value is above EUR22	21.93	26.48	4.55	17.18%
	19.22	69.20	49.99	72.23%
	14.88	69.42	54.55	78.57%
	11.55	69.63	58.08	83.42%
	7.62	57.93	50.31	86.84%
	20.36	198.12	177.76	89.72%
	15.48	198.60	183.12	92.21%
	13.47	279.90	266.43	95.19%
Cases where declared value and transaction value are both above EUR22	8,819.98	8,835.90	15.92	0.18%
	16,147.64	25,378.70	9,231.06	36.37%
	96.10	184.98	88.88	48.05%
	75.81	169.47	93.66	55.27%
	41.70	109.92	68.22	62.07%
	23.86	72.99	49.13	67.30%
	22.87	74.89	52.02	69.47%
	46.19	168.59	122.40	72.60%
	31.25	128.74	97.48	75.72%
	26.45	120.89	94.45	78.12%
	22.45	117.04	94.59	80.82%
	516.43	3,220.33	2,703.90	83.96%
	22.13	155.98	133.85	85.81%
	246.06	2,203.00	1,956.94	88.83%
	22.17	300.00	277.83	92.61%
	446.28	31,200.00	30,753.72	98.57%

Source: Authors' calculations.

In this respect, no qualitative difference between lowering the paid/payable value of traded goods below EUR22 as below any other level was established. Therefore the second hypothesis (H2) was verified negatively.

H3 verification

To test the third hypothesis (H3) which reads: *if the transaction value of a commodity sent by a single supplier to various recipients in the EU, where this value is identical (leading to the assumption that the commodity is also identical), differs from the declared value to the same extent and, especially, is always below the de minimis level, the link between the de minimis level and deliberate undervaluation exists.* Of the 22,100 identified undervaluation cases, the condition: '*same supplier, same paid/payable value, same period of year (week +/- 1)*' was met by 571 pairs and in 114 cases in triples or more of shipments (the overall number of shipments fulfilling the criteria was 1,803). The degree of undervaluation was from 15.36% to 99.68% (76.38% on average), that is, not significantly different from within the whole sample as discussed under the first hypothesis verification above with the average degree of undervaluation arriving at:

- 81.49% in the case of 1,161 shipments (64.40%) where the declared value was below EUR22 and the transaction value above EUR22 (undervalued below the *de minimis* threshold),
- 67.05% in the case of 638 shipments (35.39%) where the declared value and transaction value were both above EUR22 and
- 66.67% in the case of only 4 shipments (0.23%) where the declared value and transaction value were both under EUR22. Table 5 shows this spread.

Table 5: Degree of undervaluation among cases fulfilling condition: 'same supplier, same paid/payable value, same period of year'

	Cases with declared value and paid/payable value below EUR22	Cases with declared value below EUR22 and paid/payable value above EUR22	Cases with declared value and paid/payable value above EUR22
No. of shipments	**4**	**1,161**	**638**
Average degree of undervaluation	**66.67%**	**81.49%**	**67.05%**

Source: Authors' calculations.

Of the 1,803 shipments, 1,310 were identified as having (in pairs or triples or more occurrences) exactly the same degree of undervaluation and being supplied by the same suppliers to various recipients in several EU countries. In turn, the rest, that is, 493 shipments, were showing a significantly different degree of undervaluation (usually in pairs or triples) although they were supplied in the same time (week +/- 1), by the same supplier and their transaction value was identical. The random selection of these 493 cases is shown in Table 6.

Table 6: Cases where declared value of shipments differed although their transaction value was identical (same supplier in each case)

Origin Country	Destination Country	WK	Declared value in EUR	Paid/ payable value in EUR
HK	BG	31	16.53	37.19
HK	AT	31	12.40	37.19
CN	DE	46	23.07	39.00
CN	LU	45	15.38	39.00
HK	IE	6	29.51	66.40
HK	DE	6	22.13	66.40
HK	PL	12	34.30	72.41
HK	DE	13	16.77	72.41
HK	IE	42	22.85	75.59
HK	DE	43	17.03	75.59
HK	DE	45	46.14	76.89
HK	HU	45	34.60	76.89
HK	LU	45	23.07	76.89
HK	DE	45	15.38	76.89
HK	DE	49	32.33	89.99
HK	DE	49	31.56	89.99
HK	DE	49	30.02	89.99
HK	DE	50	30.79	89.99
HK	DE	50	29.25	89.99
HK	AT	4	47.00	90.97
HK	DE	5	37.91	90.97
HK	DE	4	22.74	90.97
HK	GB	5	81.12	110.35
HK	GB	5	58.38	110.35
HK	AT	9	25.82	121.72
HK	DE	9	14.76	121.72
HK	IE	50	23.09	124.00
HK	DE	50	15.40	124.00
HK	SI	52	34.64	169.36
HK	DE	52	7.70	169.36
HK	LV	43	116.10	175.70
HK	DE	43	97.52	175.70
HK	DE	44	69.66	181.89
HK	DE	45	12.30	181.89
HK	DE	9	81.14	204.98
HK	AT	9	66.39	204.98
HK	IE	38	66.12	231.40
HK	DE	37	16.53	231.40
HK	DE	47	117.49	232.00
HK	PT	46	99.19	232.00
HK	DE	9	143.86	250.84
HK	SI	9	36.89	250.84
HK	LV	49	46.19	269.44
HK	FR	49	3.46	269.44
HK	HU	11	198.19	472.60
HK	PL	11	76.23	472.60
HK	SI	34	82.64	482.64
HK	PL	34	49.59	482.64
HK	DE	11	228.68	514.52
HK	SI	11	45.74	514.52
HK	SI	42	61.92	542.57
HK	PL	42	38.70	542.57
HK	PL	48	384.47	858.90
HK	SI	48	253.75	858.90

Source: Authors' calculations.

The data and analysis above clearly prove that the third hypothesis (H3) is also verified negatively, especially given the following:

- the transaction value of (assumed) identical commodities supplied in the same time and by the same supplier to various recipients in EU countries has not been decreased by the same degree in all cases; in fact, the declared and paid/payable values were not always different to the same extent even if the equally priced commodity was supplied by the same trader
- only in 64.40% of cases did the undervaluation arrive at declared value being below the *de minimis* threshold of EUR22 with the average degree of undervaluation being not significantly different from the degree of undervaluation applied to any other commodity.

Further documentary evidence

During the process of establishing the correct value of imported goods, a process that involves directly contacting both parties in a transaction, we face numerous examples of why the Chinese and Hong Kong traders undervalue shipments directed to EU recipients. A noteworthy example is quoted from an email between a Hong Kong supplier of clothes (dresses, mostly) and its Finnish customer: '… *As for the custom's invoice issue, as is known to all, it is very common to be charged a customs import duty tax while shopping overseas. Therefore, we usually put a nominal price that is much lower than the real one to help bring down the risk. Hope you can understand …*'.

Such an example brings forward at least the following assumptions:

- the foreign suppliers know that customs duty and tax is being charged in the importing country, however the expression '*it is very common* (that the duty is due)' suggests that they do not really know why the duty is charged and – while being aware that sometimes, in fact, it is not charged – they do not associate it with certain features of EU customs law (exemptions from duty, in particular, like the *de minimis*)
- the foreign suppliers tend to assume that undervaluing their supplies makes the recipient less prone to some kind of risk (we assume that by this they mean 'risk of paying high duty and tax').

In many cases, the practices executed by the foreign traders in the scope of producing customs invoices which show different values of traded goods to the values actually charged, are in fact hampering proper and fast clearance, necessitating the need for post-clearance modification processes, unnecessary administrative burdens and additional costs to all businesses, private individuals and customs administrations.

Conclusions

Contrary to what was, at the time of engaging in this research, assumed by the authors, analysis of the data leads to the conclusion that no link exists between the duty and import tax *de minimis* level for the EU and the undervaluation practices executed by foreign traders. At least, the data available to the authors do not confirm the existence of such a link. Consequently, the results of this research indicate that the informal economy, other than that based on cultural customary behaviour, is embedded in the structural setup of certain international businesses. It is to be seen as a 'commercial reflex' by trading parties to harness the complexity of international trade rules and the disconnect between national and global regulation. In this context, they believe they have a better than average chance of benefiting from consequent inadequate controls of their trade by regulators. As we witness an increasing focus on tax compliance and consequent enforcement of tax legislation, at least in the EU, this should be seen as one of the main contributors to a mitigation of or even a solution to the problem. A recommendation would be to instigate a communication strategy between trading blocs worldwide. This communication could publicise the fact that the issue of undervaluation is well known and is being focused on by regulators, enforcement authorities and carriers.

Although this research is not primarily aimed at the international regulation of commercial transactions but rather focuses on the impact of value declaration, it is considered relevant to refer to the Vienna Convention, better known as the CISG,[12] on the contracts for the international sale of goods. This treaty sets out specific rules for contracting and other parties relevant in the context of an international sale. Because the value of the goods is an integral subject of the treaty, there could exist an opportunity to perform research as to its application by buyers who could theoretically hold that the price of the goods mentioned on the commercial invoice does not match the actual amount that is claimed by the seller.

As is usually the case with international law, the treaty is subject to ratification by signatories and also holds the right for reservations upon ratifying. It is ratified by 79 countries.[13]

One conclusion from this research is that based on the figures and comments analysed, there is evidence of a lack of understanding by selling and buying parties of international trade regulations. Indicators for this are the fact that undervaluation, with an aim to avoid import duties, is often irrelevant as an increasing number of commodities are not subject to import duties when importing into the EU; a trend which has been ongoing for years. Customs duties, although a primary source of revenue for most countries, have been continuously reduced or even abandoned through growing global trade and the efforts of institutions such as the World Trade Organization (WTO). This makes customs duties in general a marginal tax compared to say, VAT in the EU.

It is apparent that where there is a link to avoiding taxes on import, the main reason for the practice of undervaluation is to avoid these higher taxes, such as VAT. In contrast to customs duties, this type of indirect tax sees an increasing trend in rates, and a focus on compliance and enforcement, triggering reflexes by sellers and buyers for tax avoidance.

This paper, while not proving a direct correlation between certain taxes and undervaluation, has demonstrated the need for greater understanding of the motivation behind traders supplying undervalued invoices as well as the reasoning behind their methodology.

If policymakers are to increase their influence on compliance, there needs to be further research in this field to ensure that any regulatory solution is targeted in a way that reflects the change in international trade, particularly in the Business-2-Customs (B2C) arena, thereby maximising its effectiveness in changing behaviour.

Notes

1 K Hart 2013, *Informality, international trade and customs* (Call for papers), International Conference, World Customs Organisation–World Bank, Brussels, 3-4 June.

2 We use this definition although many others are possible and used; see, for example, PM Gutmann 1985, 'The subterranean economy', *Financial Analysts Journal*, vol. 33, November–December, or A Sauvy 1984, *Le travail noir et l'economie de demain,* Calmann-Lévy, Paris, for available terms.

3 Further, as it maintains its presence for such a long time, in so many various circumstances, many forms and so commonly, it must fulfil certain deep and important functions; this makes it all the more interesting.

4 P Kozłowski 2004, *Gospodarka nieformalna w Polsce. Dynamika i funkcje instytucji,* Instytut Nauk Ekonomicznych PAN, Ziggurat, Warsaw, pp. 7-11.

5 See Note 4.

6 K Hart 1973, 'Informal income opportunities and urban employment in Ghana', *Journal of Modern African Studies*, vol. 11, no. 1, pp. 61-89.

7 N Dannhaeuser 1898, 'Marketing in developing urban areas', in S Plattner (ed.), *Economic anthropology,* Stanford, pp. 222-53.

8 See fig.unece.org/contents/*de minimis*.htm.

9 Edward G Hinkelmann 2008, *Dictionary of international trade,* 8th edn, World Trade Press.

10 European Currency Unit. In the period from 13 March 1979 to the end of 1998, the ECU was a basket currency made up of the sum of fixed amounts of 12 out of the then 15 currencies of the EU Member States. The value of the ECU was calculated as a weighted average of the value of its component currencies. The ECU was replaced by the euro on a one-for-one basis on 1 January 1999. See: www.ecb.europa.eu.

11 Degree of undervaluation is calculated as follows: 'undervaluation amount' (that is, 'transaction value' minus 'declared value') divided by 'transaction value' multiplied by 100%.

12 *United Nations Convention on Contracts for the International Sale of Goods*, Vienna, 11 April 1980.

13 Status as per 6 March 2013; note that Hong Kong, along with the United Kingdom is one of the major absentees.

Steven Pope

Steven Pope is European Head of Customs & Regulatory Affairs at DHL Express, focusing on contributing to the regulatory debate in Europe. Steven spent over 25 years working in the UK Civil Service, working for UK Customs, HM Treasury and the Foreign & Commonwealth Office. Steven has worked in roles as diverse as criminal investigation, overseas liaison and policy development. He has extensive knowledge in the field of risk management and trade facilitation both in Customs and VAT where he contributed to a number of articles on compliance in the field of international trade as well as advising bodies such as the Financial Action Task Force, the Wolfsberg Group and the International Organisation of Tax Administrations. During his time in government, Steven also worked for the International Monetary Fund as a consultant specialising in developing risk-based audit structures in the field of VAT and exports.

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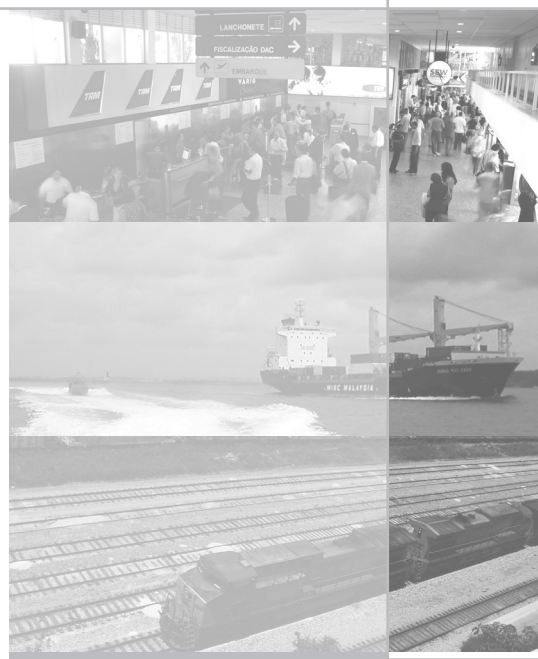

Section 3

Special Reports

Inaugural INCU Global Conference "Trade Facilitation Post-Bali: Putting Policy into Practice" 21-23 May 2014, Baku, Republic of Azerbaijan

Opening Address by H.E. Ambassador Roberto Azevêdo, Director-General, World Trade Organization

21 May 2014

Hello everyone, I am sorry I cannot be with you today, but I am honoured to be asked to send you this message and I want to start by thanking INCU and the State Customs Committee of the Republic of Azerbaijan for organising this important and timely conference.

Through academic research and debate the INCU strives to help the people who make the big decisions in Customs to formulate strategies and policies. This is important work and it has never been more relevant.

With trade growth still sluggish after the financial crisis you can make a real contribution by helping trade to flow more smoothly and efficiently. The Trade Facilitation Agreement which was agreed in Bali last December will help you in this task and I believe this agreement is a real breakthrough and represents a transformative moment for the WTO and a boost for the global economy. And I think it demonstrates perfectly the significance of your work. It shows the centrality of Customs to the state of the economy and therefore to the health, wealth and happiness of us all. By streamlining and standardising customs processes, economists think that the Trade Facilitation Agreement will have a major impact. Estimates of the gains range up to $1 trillion accruing to both developing and developed countries, but with the lion's share going to the poorest.

Therefore your work to support the effective implementation is both helpful and welcome and in my view essential. And I know that members of the INCU have been actively involved for many years in research that supports the facilitation of trade. As early as 2007, INCU President Professor David Widdowson was working closely with the WTO to develop the first version of WTO Trade Facilitation Self-Assessment Guide. This guide was used by approximately 100 developing and least developed countries to assess their trade facilitation needs and priorities which enable them to participate more effectively in the WTO Trade Facilitation negotiations. In fact, as never before, they were central to the whole process. This is just one example of your excellent work and I think this conference is another.

I wish the INCU and the State Customs Committee of the Republic of Azerbaijan every success for this event. I am very interested in seeing the outcomes which I am confident will be useful to our members as we move into the critical phase of putting the new WTO Trade Facilitation agreement into practice.

Thank you very much and I wish you a productive and enjoyable few days.

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BAKU RESOLUTION

Resolution of the International Network of Customs Universities on the future direction of the organisation

(Baku, 23 May 2014)

Welcoming the successful outcome of the Inaugural INCU Global Conference held in Baku, Republic of Azerbaijan from 21 to 23 May 2014, with the theme "Trade Facilitation Post Bali: Putting Policy into Practice"

Noting that the conference brought together delegates from over 70 countries including representatives of customs administrations, 20 international organisations, the private sector and academia

Acknowledging the significant support and contribution made by the State Customs Committee of the Republic of Azerbaijan in ensuring the success of the conference

Acknowledging also the personal support of the Chairman of the State Customs Committee of the Republic of Azerbaijan, who was admitted as an Honorary Fellow of the INCU on 23 May 2014 in recognition of his contribution to the objectives of the organisation

Noting the high level Government representation at the conference, including that of the Deputy Prime Minister of the Republic of Azerbaijan, and other senior members of Government

Recognising the significant contribution to the conference agenda by the Director General of the WTO, three eminent Nobel Laureates, the Assistant Secretary of International Affairs of the US Department of Homeland Security and a number of other highly respected representatives of customs administrations, international organisations, the private sector and academia

Noting that the conference served to form or further cement the relationship between the INCU and organisations that support the INCU objectives

Recognising the significant achievement of the WTO in reaching its Agreement on Trade Facilitation (the Bali Agreement)

Acknowledging the importance that many international organisations play in developing international trade and the associated customs and border management policies

Recognising also the need to increase INCU's engagement with a broad cross-section of the international community

Noting the need to develop education and training programs that meet the requirements of both the public and private sectors.

Resolves to:

1. Formally engage with a broader cross-section of the international community
2. Identify further ways of providing opportunities for academics, students and less experienced researchers to present and publish their research
3. Develop a definition of the term "customs profession" which includes both public and private sector members of the international trading community
4. Identify the requisite knowledge, skills and competencies of those engaged in the customs profession
5. Develop guidelines for accrediting education and training programs that meet the identified knowledge, skill and competency requirements
6. Encourage mutual recognition of INCU Member education and training programs through credit allocation, cross-institution arrangements and other means
7. Develop regional INCU offices, commencing with the establishment of an office in the Republic of Azerbaijan
8. Support the work of the WTO Committee on Trade Facilitation through empirical studies which address the following key propositions presented at the conference:
    a. There is a need for a paradigm shift that views the role of "border management" agencies as one of Trade Flow Management
    b. Trade facilitation and supply chain security are not mutually exclusive variables but involve the same processes
    c. Meta data and targeting are necessary to risk management and traffic segmentation
    d. Fragmented border management is an artifact of history that globalisation requires revisiting
    e. There is a need to move from bilateral border relations to binational relationships transnationally.

Lines and Flows: The Beginning and End of Borders: Addendum I

Information sharing and personal data protection

Alan D Bersin[1]

The article, *Lines and Flows: The Beginning and End of Borders*,[2] posits in the contemporary security/trade context, that the logic of information sharing is irrefutable. It is now conceivable, indeed eminently executable, for a nation to check the identity of each passenger flying on every airplane, for example, toward its physical borders against "watch" lists of persons believed to pose a disproportionate security risk. Even though the receiving authority by definition would retain unfettered discretion to act on the information *vel non*, the record here, with a handful of exceptions, is that nations ostrich-like refuse regularly to avail themselves of access to this information. They do so in deliberate deference to other values which are deemed to be competing and of greater importance. Accordingly, these values are assigned a higher priority as matters of policy and practice. The Right to Privacy,[3] construed in one form or another, is the principal counter value interposed to the operational logic of information sharing for security purposes.

Traditionally both policymakers and the public have viewed individual privacy and national security as fundamentally at odds with one another, with policy questions preoccupied by the so-called trade-off of "so much security" for "so much abuse of civil liberties." This dichotomization has distracted the debate. Nations argue over the degree of primacy they give to privacy; they contend continuously over different definitions and types of privacy, as well as about alternative theories and models for implementing them. The debate, well worth the effort in its own terms, may turn out well beside the point in the contemporary context of information sharing.[4] There are two principal reasons supporting this conclusion.

First, the intersection between privacy protection and information sharing to enhance security in the global supply chain and global travel zones is crisp and sharp. One need not reconcile different visions, or points of departure concerning how to think about privacy,[5] in order to arrive at a common proposition regarding what steps are required to protect personal data in a specific case. At end, some application of *informed consent* can account for a satisfactory outcome. In other words, entry and engagement in global travel or supply chain activity embodies a bargain between public authorities and private actors. The contours of the bargain regarding use and dissemination have long been settled[6] once the threshold of *entitlement to collection* has been crossed.

In fact, upon closer observation, it appears that disagreements over data sharing – while argued as differences over privacy – usually reflect more a different assessment of the threat presented. Politically it is more convenient to decline information sharing based on asserted privacy concerns than it is to minimize risks of harm inherent in global trade and travel.

In short, there is no intrinsic conflict between security and privacy. The crucial policy challenge should be how both values can be advanced in tandem rather than balanced one against the other.

The second ground suggesting the compatibility between information sharing for security purposes and a robust respect for privacy relates to methods now available for sharing that avoid an actual *exchange* of data in favor of carefully tailored techniques of *access*.

Information-sharing is no longer a two-way exchange of data in which new information is incorporated or "dumped" in bulk form into a large-scale data base that is ever expanding with total availability and recall. Instead, modern information sharing compacts are predicated on the concepts of *federated search*. These are defined collectively (from *Wikipedia*) as… "an information retrieval technology that allows

the simultaneous search of multiple searchable sources: a user makes a single query request which is distributed to the search engines participating in the federation [and] the results received from the search engines [are aggregated in useful form] for presentation to the user."[7] The implications for the privacy/security discussion are dramatic.

First, there is no actual exchange of data at all as in the past. This obviates traditional concerns over subsequent use and disclosure. The scanning of data in place is conducted in a thoroughly masked fashion.

Second, the crucial agreement between authorities is embodied in the algorithms which implement the joint rule sets they stipulate. Access to the data is governed strictly by the nature of the query which may center on specific pre-identified risks or unknown threats identified by one or more agreed upon indicators. As Aaron Bady explains: "Pattern-based data mining… works in reverse from a subject-based search: instead of starting from known or strongly suspected criminal associations, the data miner attempts to divine individuals who match a data profile, drawing them out of a sea of data like the pattern in a color-blindness test."[8]

Third, the only information that actually is "shared" are the matches or "hits" that are returned from the federated search. These in turn are subject to negotiated protocols that treat the matches further to eliminate false positives and otherwise enhance security and privacy.

The federated search by its very nature is less intrusive than the old model of bulk data sharing: "It becomes more practical – and legally less complicated – to fish in an ocean of easily available information about everybody than to target specific suspicious individuals."[9] The argument, however, reaches further to the conclusion that the security regime itself is enhanced by building traditional considerations of privacy data protection into both the front and back ends of any information sharing arrangement. The twin dividends yielded from doing so are accuracy and efficiency resulting in an overall enhanced quality of result.

This approach incorporates key privacy concerns into the equation from the outset as measures of quality information assurance and control. Specifying what data are collected, who gets to use them and how, and the terms and conditions of dissemination and retention have significant potential to improve the end product from both security and privacy perspectives. These values become mutually reinforcing in theory as well as in practice within what Bady has characterized as a "very private pool of publicly circulating information."[10]

The privacy principles agreed upon by Canada and the United States in *Beyond the Border* [11]provide an important illustration of the kind of protections that should be built into a process to increase the *reliability* and *utility* of the process itself when data are accessed: purpose specification; relevance, necessity and proportion in light of clear purpose; accuracy and completeness; protection against risk such as loss, corruption, misuse, unauthorized access, alteration, disclosure, or destruction of data; accountability of governments involved overseen by a public supervisory authority; mechanisms to seek rectification and/or expungement of inaccurate personal information; transparency and notice on receipt and use of personal information; redress against infringement; parameters for transfer to third countries, and limits on data retention.[12]

Rejecting the scale of justice model as Homeland Security Secretary Janet Napolitano has advocated, creates the opportunity to make privacy and personal data protection concerns a central tenet in a security regime: "They are not a secondary part of the conversation [but rather] a fundamental part of [a single] conversation."[13] Exploring carefully the implications of this proposition can be expected to deliver operational insights beneficial to both values promoted over time in a sustained synthesis between security and civil liberty.

Notes

1 Reprinted with the permission of Alan D. Bersin, Assistant Secretary of International Affairs and Chief Diplomatic Officer, US Department of Homeland Security, Washington, DC.

2 Alan D. Bersin, *Lines and Flows: The Beginning and End of Borders*, Brooklyn Journal of International Law 2012, May, Vol. 37, No. 2, pp. 389-406; and World Customs Journal, Vol. 6, No. 1, pp. 115-126, March 2012.

3 Universal Declaration of Human Rights, Article 12; European Convention on Human Rights, Article 8; The (USA) Privacy Act of 1974, 5 U.S.C. s. 552ff.

4 See e.g. Mary Ellen Callahan and Wesley Wark, *Privacy and Information Sharing: The Search for an Intelligent Border, One Issue, Two Voices,* Woodrow Wilson International Center for Scholars, No. 13, October 2010.

5 Samuel D. Warren and Louis D. Brandeis, *The Right to Privacy*, Harvard Law Review, Vol. IV, No. 5, December 1890.

6 *Report of the Secretary's Advisory Committee on Automated Data System*, Commissioned by the U.S. Department of Health, Education, and Welfare: http://aspe.hhs.gov/DATACNCL/1973privacy/toprefacemembers.htm

7 See Peter Jacso, http://www2.hawaii.edu/~jacso, http://en.wikipedia.org/wiki/Federated_search

8 Aaron Bady, *World Without Walls*, online MIT Technology Review, November/December 2011. http://www.technologyreview.com/article/425905/world-without-walls/

9 Ibid.

10 Ibid.

11 Beyond the Border Action Plan: Statement of Privacy Principles by the United States and Canada, May 2012.

12 The Federal Trade Commission's Fair Information Practice Principles offer a comparable set of provisions: notice/awareness of disclosure; choice/consent for information to be used; access/participation to ensure the accuracy of personal data; integrity/security to prevent breaches; enforcement/redress in the event of a violation; self-regulation to create mechanisms for compliance; private remedies for consumers harmed by unfair information practices; government enforcement, and parental notice/awareness and parental choice/consent for disclosure of children's personal information.

13 Remarks by Secretary of Homeland Security Janet Napolitano: *Achieving Security and Privacy*, Australian National University, Canberra, Australia, May 3, 2011.

Alan D Bersin

Alan Bersin serves as Assistant Secretary for International Affairs and Chief Diplomatic Officer for the Department of Homeland Security where he oversees the Department's international engagement. Previously, he served as Commissioner of U.S. Customs and Border Protection. From April 2009 to March 2010 Mr Bersin served as Assistant Secretary for International Affairs and Special Representative for Border Affairs in the Department of Homeland Security.

Alan Bersin's other public service included Chairman of the San Diego County Regional Airport Authority (December 2006 to March 2009), California's Secretary of Education (July 2005 to December 2006) and Superintendent of Public Education in San Diego from 1998 to 2005. Mr Bersin also served as a member and then Chairman of the California Commission on Teacher Credentialing. From 1993 to 1998, he served as the United States Attorney for the Southern District of California and as the Attorney General's Southwest Border Representative responsible for coordinating federal law enforcement on the border from South Texas to Southern California. Mr Bersin previously was a senior partner in the Los Angeles law firm of Munger, Tolles & Olson.

In 1968, Mr Bersin received his A.B. in Government from Harvard University (magna cum laude). From 1969 to 1971, he attended Balliol College at Oxford University as a Rhodes Scholar. In 1974, he received his J.D. degree from the Yale Law School.

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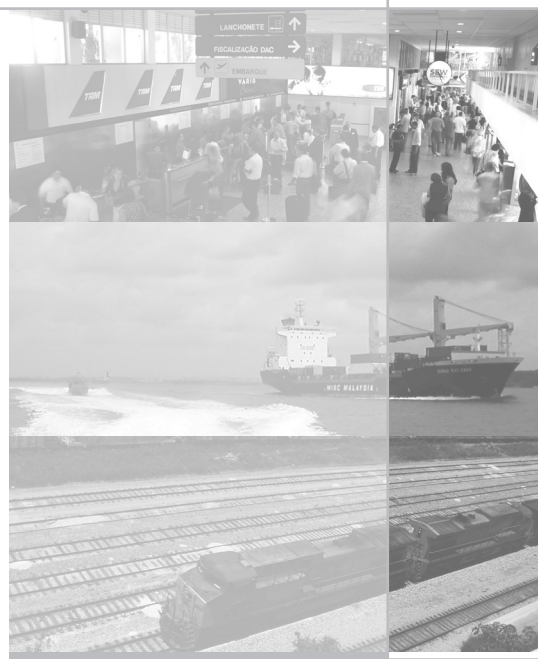

Section 4

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 100 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 100 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 the 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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