Developing the case for trade facilitation in practice

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Abstract

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

A fast growing area of policy

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

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

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

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

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

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

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

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

But, what is trade facilitation?

A good question – and one which can easily be an initial stumbling block when developing the case for trade facilitation! While a range of technical definitions has been drafted by various international organisations (see OECD 2001), it is fair to assert that trade facilitation tends to look at '... how procedures and controls governing the movement of goods across national borders can be improved to reduce associated cost burdens and maximise efficiency while safeguarding legitimate regulatory objectives' (Grainger 2011). In this context, the topic of trade facilitation has four interdependent themes: (1) the simplification and harmonisation of applicable rules and procedures; (2) the modernisation of trade systems, and the sharing and lodging of information between business and government stakeholders in particular; (3) the administration and management of trade and customs procedures; and (4) the institutional mechanisms to safeguard effective implementation of trade facilitation principles and the ongoing commitment to reform (see Figure 1 with relevant examples).

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

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

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

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

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

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

Figure 1: The four interdependent topics that define trade facilitation

1. The simplification and harmonization of applicable rules and procedures

i. Harmonization of Procedures
For example: the adoption of international conventions and instruments; and the harmonization of controls applied by the various different government agencies

ii. Avoidance of Duplication
For example: regional or bilateral agreements to recognize export controls in lieu of import control; shared inspection facilities, for instance for customs officers, veterinarians, plant health inspectors and health inspectors; and the formal recognition of private sector controls (e.g. in the area of security or quality) in lieu of officially checks.

iii. Accommodate business practices
For example: to accept commercial documents (such as the invoice) in lieu of official documents; and to allow goods to be cleared inland, away from the bottlenecks at ports and border-posts.

2. The modernization of trade compliance systems

i. Solutions
For example: use of electronic information systems, the Single Window concepts, electronic customs systems, port community systems, websites, and information portals

ii. Standardization
For example: electronic standards for the exchange of information between computers; paper document standards; barcode standards; document referencing conventions; and standards for the description of locations

iii. Sharing of experiences
For example: training and awareness building; development of toolkits and implementation guides; collaborative and open source systems developments

3. Administration and Standards

i. Service standards
For example: public service level commitments; publish and make available applicable rules and procedures; produce plain language guides; develop online websites; keep the customs tariff up-to-date; provide for efficient appeal mechanisms

ii. Management principles
For example: enforcement of controls in proportion to the risk against which they seek to protect; selective (risk based) controls that reward compliant behavior (e.g. preferential treatment at the border)

4. Intuitional mechanisms and tools

For example: establishing a national trade facilitation body; produce and publish whitepapers setting out reform ambitions and inviting stakeholder comments

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

Figure 2: International trade facilitation recommendations and instruments

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

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

Figure 3: Examples of operational frustrations suffered by businesses

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

Source: Grainger & McLinden forthcoming

Research contributions so far

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

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

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

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

Problem statement

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

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

Practical approaches to making the case for trade facilitation

At present, policymakers rely very heavily on the initial findings of the tools and diagnosis studies outlined above. Implementation of their recommendations is often contracted out to specialist consultants. The approach to trade facilitation is very much 'project-based', that is, it is seen as something that can be delivered, if suitable investments in specific types of technology, advice and training are made.

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

Measuring trade compliance costs

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

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

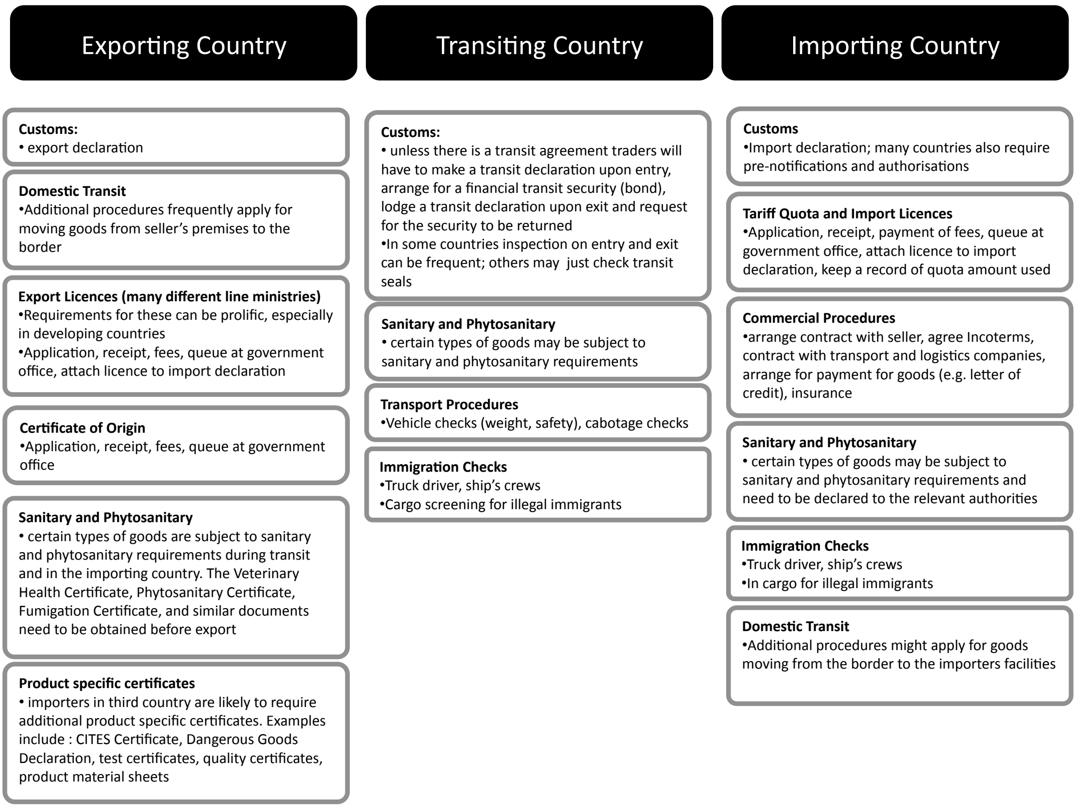
It is noteworthy that responsibility for arranging physical operations and regulatory compliance for any of the above rarely lies with one party alone. In most cases, responsibilities will be split at some stage within the operation, depending on the Incoterms agreed (ICC 2010), and subcontracted to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

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

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

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

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

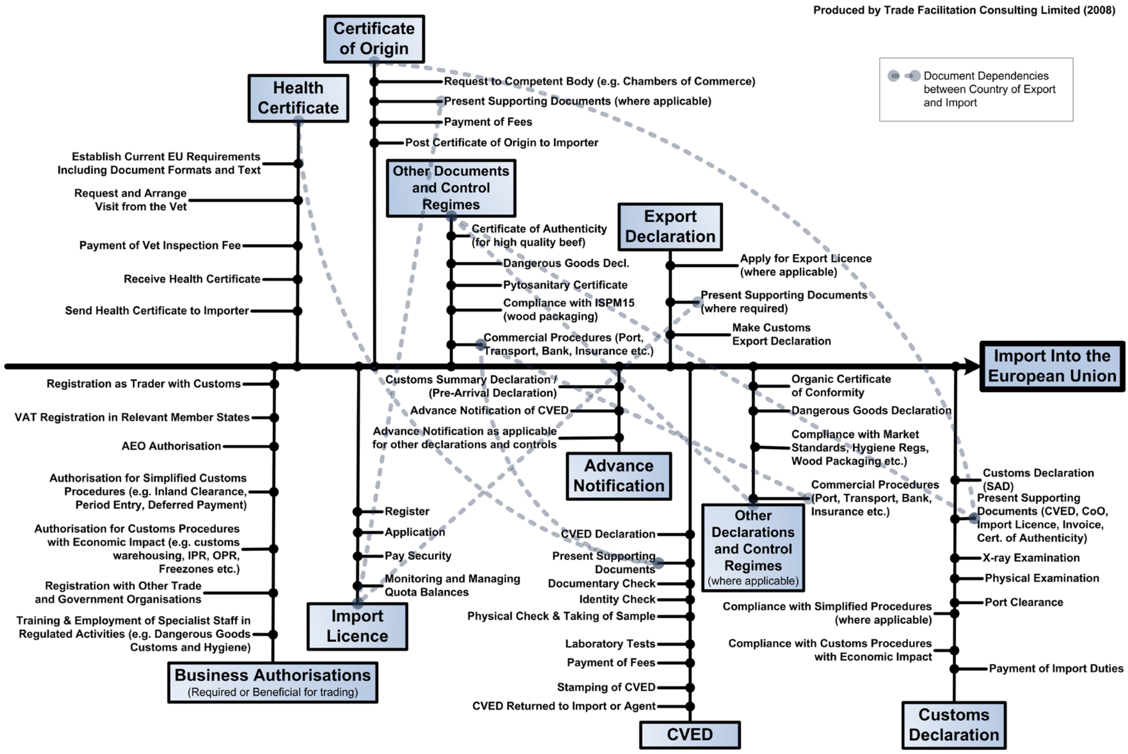


Source: Grainger forthcoming 2012

Proposal

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

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



Source: Grainger 2009

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

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

It would be ambitious to develop such a reference model without any pilot studies, for example, by focusing on specific industry sectors first (food, automotive, aerospace, arts and crafts, etc.). Once suitable pilot studies have been tested, the project could be expanded in scope, aiming for a non-sector specific national model – possibly even a regional or international reference model. This, in turn, could be used to help establish suitable trade compliance benchmarks – with direct utility for industry as well as for policymakers – such as in the context of funding trade facilitation initiatives or within the context of bilateral, regional and multilateral trade agreements. Certainly this author is keen to help develop such a research agenda, and welcomes the ideas and thoughts of potential collaborators.

References

Flynn, SE 2002, 'America the vulnerable', *Foreign Affairs*, vol. 81, no. 1, pp. 60-74.

Grainger, A 2008, 'Customs and trade facilitation: from concepts to implementation', *World Customs Journal*, vol. 2, no. 1, pp. 17-30.

Grainger, A 2009, 'A case study focusing on trade procedures as applicable to the EU import of beef and poultry products (products of animal origin)', in C George, C Kirkpatrick, ML Dardaine, et al. (eds) *Trade sustainability impact assessment (SIA) of the association agreement under negotiation between the European Community and Mercosur: sector study for trade facilitation*, European Commission, Brussels.

Grainger, A 2010, 'The role of the private sector in border management reform', in G McLinden, E Fanta, D Widdowson & T Doyle (eds), *Border Management Modernization*, World Bank, Washington, DC, pp. 157-74.

Grainger, A 2011, 'Trade facilitation: a conceptual review', *Journal of World Trade*, vol. 45, no. 1, pp. 39-62.

Grainger, A forthcoming 2012, 'Trade facilitation', in K Heydon & S Woolcock (eds), *Ashgate trade policy handbook*, Ashgate, Aldershot, UK.

Grainger, A & McLinden, G (forthcoming), 'Trade facilitation and development', in A Lukauskas, RM Stern & G Zanini (eds), *Handbook of trade policy for development*, Oxford University Press, Oxford, UK.

International Chamber of Commerce (ICC) 2010, *Incoterms 2010*, ICC, Paris.

Organisation for Economic Co-operation and Development (OECD) 2001, 'Business benefits of trade facilitation', TD/TC/WP(2001)21, Working Party of the Trade Committee, OECD, Paris.

Organisation for Economic Co-operation and Development (OECD) 2003, 'Quantitative Assessment of the Benefits of Trade Facilitation, TD/TC/WP(2003)31/Final', Working Party of the Trade Committee, OECD, Paris, www.oecd.org/trade.

Organisation for Economic Co-operation and Development (OECD) 2006, OECD/DAC 'Project on Trade Facilitation; Phase 1: A review of technical assistance and capacity building initiatives for trade facilitation', OECD, Paris.

United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) 2001, 'Recommendation no. 4: National Trade Facilitation Bodies', October, ECE/TRADE/242, UN/CEFACT, Geneva.

United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) 2004, 'Recommendation no. 33: Single Window Recommendation', ECE/TRADE/352: 37, UN/CEFACT, Geneva.

United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and United Nations Conference on Trade and Development (UNCTAD) 2002, 'Compendium of trade facilitation recommendations', ECE/TRADE/279, UN/CEFACT, Geneva.

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) 2004, *ESCAP Trade facilitation framework: a guiding tool*, UNESCAP, Bangkok, Thailand.

Wilson, JS, Mann, CL & Otsuki, T 2003, 'Trade facilitation and economic development: a new approach to quantifying the impact, *World Bank Economic Review*, vol. 17, no. 3, pp. 367-89.

Wilson, JS, Mann, CL & Otsuki, T 2004, 'Assessing the potential benefit of trade facilitation: a global perspective', Policy Research Working Papers, WPS 3224, World Bank, Washington, DC.

World Bank 2010, *Trade and transport facilitation assessment: a practical toolkit for country implementation*, A World Bank Study, No. 55838, World Bank, Washington, DC.

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

World Trade Organization (WTO) 1947, *General Agreement on Tariffs and Trade* (GATT), WTO, Geneva.

World Trade Organization (WTO) 2007, *WTO negotiations on trade facilitation: self assessment guide*, WTO publication TN/TF/W/143, World Bank and World Trade Organization, Geneva.

World Trade Organization (WTO) 2011, 'Negotiating Group on trade facilitation: draft consolidated negotiating text: revision', TN/TF/W/165/Rev.8, WTO, Geneva.

World Trade Organization/Organisation for Economic Co-operation and Development (WTO/OECD) 2010, Doha Development Agenda Trade Capacity Building Database (TCBDB), WTO/OECD, Geneva.

Endnotes

1 UN/CEFACT 2004.

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

3 www.integratedframework.org/

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

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