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**Transit Facilitation for Regional Economic  
Integration and Competitiveness**

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## **Abstract**

The recent proliferation of Regional Trade Agreements, particularly Customs Unions, potentially drives governments to harmonize their border measures with a view to regional economic integration and competitiveness. In this regard, a regional transit system has increasingly attracted political and public attention because it essentially requires positive engagement of the governments regionally; it meets the substantive needs by both landlocked and transit countries; and its successful implementation is a stepping stone to harmonization of other Customs measures to facilitate the intra-regional trade, amongst others.

There are a number of initiatives to facilitate transit goods while minimizing risks of transit fraud and smuggling, for example, as part of transport corridor and border management projects. Customs plays a crucial role in functional transit systems. There are a variety of Customs measures to facilitate trade, and they are generally applicable to transit goods and traffic as well. As trade facilitation measures evolve, new trends on transit facilitation have emerged, and case studies in this area show useful lessons on their practical implementation. Thus, this paper reviews recent trends and practical implementation of transit facilitation related to Customs measures through case studies of several landlocked and transit countries. It also considers how a transit system can be relevant and responsive to regional economic integration and competitiveness.

## **Key words**

Transit facilitation, landlocked countries, regional economic integration

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## 1. INTRODUCTION

The recent proliferation of Regional Trade Agreements (RTAs), particularly Customs Unions, potentially drives governments to harmonize their border measures with a view to regional economic integration and competitiveness.<sup>1</sup> In this regard, a regional transit system has increasingly attracted political and public attention because it essentially requires positive engagement of the governments regionally.

Transit systems consist of infrastructure, legal framework, institutions, procedures, and any other elements governing the movements of transit goods and traffic (Arvis, 2011). A functional transit system is essential for trade connectivity in the region. Particularly for landlocked countries, most of their trade with countries outside the region moves in transit passing through their neighboring countries. Without positive engagement of the transit countries, the landlocked countries could not effectively expand trade, nor be integrated into trade supply chain (World Bank, 2007). On the other hand, the transit countries generally consider it a priority to avoid transit fraud and smuggling in the territory as well as reduce its financial, infrastructural, environmental and social burdens deriving of the transit traffic (World Bank, 2008). Any transit system should be designed to meet the substantive needs of both landlocked and transit countries.

There are a number of national initiatives, international transit agreements, transport and trade corridor projects, and border management projects to facilitate transit goods while minimizing risks of transit fraud and smuggling. In any event, Customs plays a crucial role in functional transit systems, together with other factors such as physical infrastructure and the transport service sector. There are a variety of Customs measures to facilitate trade (Moïsé, et al., 2011), and they are generally applicable to transit goods and traffic as well. As trade facilitation measures evolve, new trends of transit facilitation have emerged, and case studies in this area show useful lessons on their practical implementation.

To take the above in mind, this paper reviews recent trends and practical implementation of transit facilitation related to Customs measures through the case studies in several landlocked and transit countries. It focuses on transit systems by road, and leaves other modes of transport as well as transshipment and temporary admission systems outside its scope. It also considers how a transit system can be relevant and responsive to regional economic integration and competitiveness.

## 2. KEY PRINCIPLES

Key principles of transit systems may be found in several international conventions. For instance, Article 5 of the General Agreement on Tariff and Trade (GATT) outlines core principles related to transit in traffic, such as non-discrimination and freedom of transit that a transit country shall follow. The Revised Kyoto Convention

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<sup>1</sup> The WTO received 511 RTA notifications, 319 of which were in force as of January 2012, available at: [www.wto.org/english/tratop\\_e/region\\_e/region\\_e.htm](http://www.wto.org/english/tratop_e/region_e/region_e.htm)

(RKC)<sup>2</sup>, adopted by the World Customs Organization (WCO), provides technical details on how to implement Customs transit procedures, supplemented by a large portfolio of supporting tools including RKC Guidelines and Customs Transit Compendium (WCO, 2008). The Geneva Convention<sup>3</sup> emphasizes transit facilitation such as simple and speedy treatment and harmonization of control and procedures. Taking into account other legal instruments, Arvis (2011) summarized general provisions applicable to Customs transit (Box 1).

**Box 1: General provisions applicable to Customs transit codified by the international conventions**

1. General

- Freedom of transit.
- Normally no technical standards control.
- No distinction based on flag or owner origin.
- No unnecessary delays or restriction.

2. Customs diligences in transit

- Limitation of inspection.
- Exemption from customs duties.
- Normally no escort of goods or itinerary.
- No duty on accidentally lost merchandise.
- No unnecessary delays or restriction.

3. Health and safety

- No sanitary, veterinary, or phytosanitary inspections for goods in transit if no contamination risk.

4. Guarantees offered by the carrier

- Declarant to choose the form of guarantees, within the framework afforded by legislation.
- Customs should accept a general guarantees from declarants who regularly declare goods in transit in their territory.
- On completion of the transit operation, the guarantees should be discharged without delay.

Source: Arvis (2011, Box 17.3, p.284)

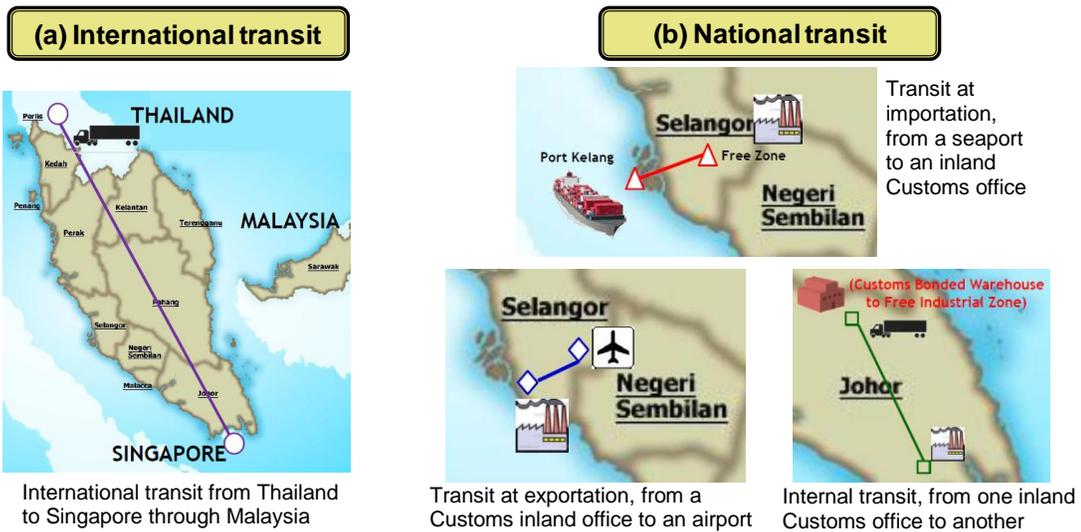
The RKC covers two types of transit: international and national transit, while the GATT Article 5 deals with only the former (Figure 1a). The RKC defines that an international transit applies to transit movements from an office of entry to an office of exit (through transit), which occurs when the movements are part of a single transit operation crossing through the multiple territories governed by regional or international transit systems (WCO, 2004).

On the other hand, national transit applies to cases from an entry office to an inland Customs office (transit at importation); an inland Customs office to an office of exit (transit at exportation); and from one inland Customs office to another (internal transit) in the same territory (Figure 1b). Customs transit is a transport operation under Customs control, essentially followed by other Customs procedures such as import procedures for home use as in the cases of transit at importation, or exit procedures to leave the territory as in the cases of transit at exportation or through transit.

<sup>2</sup> The RKC is officially referred to “*International Convention on the simplification and harmonization of Customs procedures, as amended*”, available at: [www.wcoomd.org/Kyoto\\_New/Content/content.html](http://www.wcoomd.org/Kyoto_New/Content/content.html)

<sup>3</sup> The Geneva Convention is formally referred to “*International Convention on the Harmonization of Frontier Control Goods*”, available at: [www.unece.org/fileadmin/DAM/trans/conventn/harmonie.pdf](http://www.unece.org/fileadmin/DAM/trans/conventn/harmonie.pdf)

Figure 1: International and National transit



(Source) Matrang Shuhaili and Ho Lock (2012)

It is the principal who is responsible for all legal requirements during the transit operation. The principal is the owner of goods, or in most cases his representatives such as carriers (Arvis, 2011). In several cases, Customs brokers or clearing agencies as principals are legally required to lodge Customs declarations (Yasui, 2011). The RKC requires each contracting party to specify the principal for the transit operation by the national legislation. Thus, the principal can be different across countries in the region.

Comparing with import cases, Customs transit procedures should be simple to avoid unnecessary delays and costs. Information on transit goods is unchanged throughout the transit operation by road otherwise in exceptional cases. Accurate duty and tax assessment is not needed as they are temporally exempted during transit operations. Customs declarations for transit require fewer data elements than those for imports,<sup>4</sup> and few other regulatory agencies are involved in transit procedures reflected by little concern on technical standards as well as sanitary, veterinary and phytosanitary on transit goods if no contamination risk exists. Thus, transit goods are likely to be less frequently inspected by Customs and other regulatory agencies than in cases of import (Arvis, 2011).

### 3. CHALLENGES

Transit systems and their practical implementation vary across countries despite shared key principles above. The TIR<sup>5</sup> is often cited as one of the most successful international transit systems (Arvis, 2011). It is applicable to transit by road and to

<sup>4</sup> This is confirmed by the WCO Data Model Version 3, and further information on the Data Model is available at: [www.wcoomd.org/home\\_pfoverviewboxes\\_tools\\_and\\_instruments\\_pftoolsdatamodel.htm](http://www.wcoomd.org/home_pfoverviewboxes_tools_and_instruments_pftoolsdatamodel.htm)

<sup>5</sup> TIR stands for "Transports Internationaux Routiers" in French, meaning International Road Transport. Further information on the TIR is available at: [www.iru.org](http://www.iru.org)

multimodal transportation if a road segment is a part of it. It is operational in 57 countries in 2012. The Common Transit System<sup>6</sup> is also applicable to the goods transiting between Member States of the European Union (EU) and the European Free Trade Association (EFTA).<sup>7</sup> It is managed by the New Computerized Transit System (NCTS). Many other efforts have been made to establish regional transit systems through international agreements or in transport and trade corridor programs. However, Arvis (2011, p.289) evaluated that “*fully developed regional systems to date are the TIR and the European common transit system*”, and continued that mainly due to the implementation difficulty “*many attempts to copy the TIR and the common transit system in developing regions have not succeeded*”.

The Asia-Pacific Economic Cooperation (APEC) identified ten impediments that the private sector may face in cross-border Customs transit (APEC, 2011), seven of which are related to Customs. These seven impediments are: varying Customs documentation standards; lack of adequate IT infrastructure and inter-operable data-sharing system; need for multiple financial guarantees; arbitrary administrative fees; insufficient operating hours at Customs offices; uncoordinated national Authorized Economic Operator (AEO) Programmes; and delays in screening.<sup>8</sup>

At this stage, there are a number of global or regional initiatives to address the implementation difficulties in this field. At the World Trade Organization (WTO) negotiations on trade facilitation, for example, the future provisions on transit have been discussed (WTO, 2012). The Almaty Program of Action under the framework of the United Nations (2003) addressed the special needs of landlocked countries, in which transit policy and regulatory frameworks were one of the priority policy areas. Transit facilitation measures constitute important elements in the transport and trade corridor projects supported by the World Bank, the Asian Development Bank (ADB), and other donors (World Bank, 2008; ADB, 2011; United Nations, 2003). As a result of those efforts, some of the regional initiatives have increasingly showed success stories.

Customs measures to facilitate trade such as publication of laws and regulations, standardization of documents, electronic declarations, risk management systems, advance ruling systems, and enquiry desks are generally applicable to transit traffic and goods. Most of the measures are dealt with by the RKC and the WCO’s supporting tools, and have been discussed at the WTO negotiations on trade facilitation (WTO, 2005; 2012). It should be noted that cost and implementation difficulties as well as impact differ across measures and countries.

A World Bank study (2006) categorized several transit measures into three groups: those in Group 1 are considered simpler and less costly to implement, while those in Group 3 are more difficult to implement (Table 1).

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<sup>6</sup> Croatia and Turkey respectively joined the Common Transit System in July and December 2012. Further information on the Common Transit System is available at:

[http://ec.europa.eu/taxation\\_customs/customs/procedural\\_aspects/transit/common\\_community/index\\_en.htm](http://ec.europa.eu/taxation_customs/customs/procedural_aspects/transit/common_community/index_en.htm)

<sup>7</sup> The EFTA Member States are Iceland, Liechtenstein, Norway and Switzerland.

<sup>8</sup> The remaining three impediments are: restrictions on registration of trucks and drivers; non-tariff barriers including language communication problems, cultural differences and protectionist stances; and modernization of transport.

**Table 1: Categorization of transit measures by cost & implementation difficulties**

<p>Group 1: Those measures considered simple and inexpensive to implement</p>	<ul style="list-style-type: none"> <li>• Periodic review and rationalization of fees and charges for transit operations;</li> <li>• Publication of transit related information and fees preferably on the Internet;</li> <li>• Limitation of inspection on transit goods; and</li> <li>• Coordination of harmonization of documentary requirements</li> </ul>
<p>Group 2: Those measures considered more complex or difficult to implement</p>	<ul style="list-style-type: none"> <li>• Elimination of prescribed transit routes.</li> </ul>
<p>Group 3: Those measures considered significantly more difficult to implement</p>	<ul style="list-style-type: none"> <li>• Juxtaposed/One stop border stations; and</li> <li>• Implementation of regional transit guarantee schemes.</li> </ul>

(Source) Information extracted from World Bank (2006), Table 3, p.27

#### 4. EMERGING TRENDS

This section reviews emerging trends of transit facilitation related to Customs measures and their practical implementation through case studies in several landlocked countries (e.g. Switzerland and Uganda) and transit countries (e.g. Jordan and Malaysia) in the following seven areas: information sharing; guarantee systems; operators with high compliance; pre-arrival information; border infrastructure; application of information technology (IT); and performance measurement.

In each area, actual rules and implementation practices for Customs transit have evolved particularly aiming to improve the efficiency and control of international transit operations. Several trade facilitation measures have been tailor-made for transit goods and traffic in order to meet the specific needs of stakeholders in the transit system. Several recent trends of Customs procedures for trade security may impact on transit procedures as well. It should be noted that the findings below should be considered as indicative due to a limited number of cases studied.

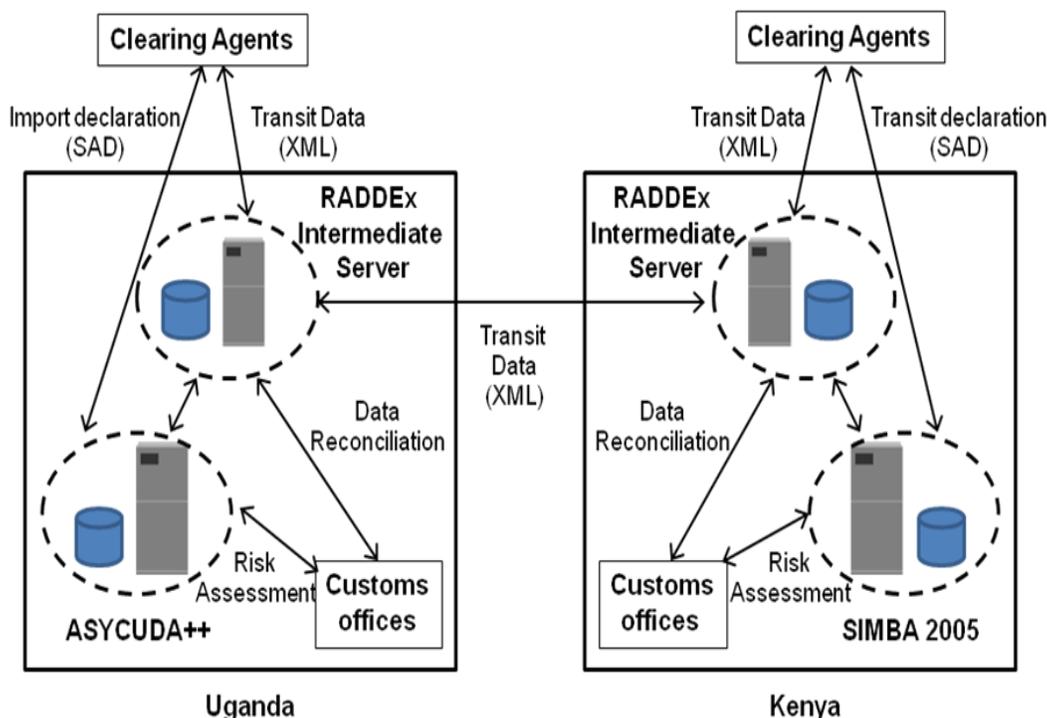
##### 4.1 Information sharing

Information sharing between Customs is significantly effective in transit procedures. It improves the efficiency of Customs transit procedures in terms of facilitation and control. As information on transit goods at departure likely remains unchanged throughout the transit operation by road, Customs are able to use it for risk assessment of goods and data reconciliation. It is necessary to have international cooperation and legal frameworks to support the stability and predictability of the system, as well as to ensure data protection of the information shared. In most cases, it has been implemented by regional transit agreements or under the framework of RTAs, particularly Customs Unions (Yasui, 2011).

Under the NCTS, for example, the Customs office of departure automatically sends data of transit declarations, results of inspections if any, and other relevant information to the Customs offices of transit and destination as indicated in its itinerary, i.e. a “push” system (European Commission, 2004; Yasui, 2011). With reviewing the



**Figure 3: Operational flows of RADDEx between Kenya and Uganda**



(Source) Yasui (2011, Fig.4.2, p.26)

#### **4.2 Guarantee systems**

Managing guarantees is an essential part of transit systems. A transit guarantee system ensures that Customs duties and taxes suspended during transit operations are covered in cases where they have to be paid. It is furnished to initiate a transit operation by the principal in a form of a bond by a bank or insurance/voucher by a guarantor, etc., and released when the transit operation ends. For a regional transit system, a regional guarantee system is more efficient than a chain of national guarantee systems (Arvis, 2011). It was pointed out that one of the successful factors of the TIR transit system rests on its multinational guarantee system. The regional guarantee system is also used by the Common Transit System in the European region (European Commission, 2004).

Although regional or multinational guarantee systems are recommended, several Customs measures related to guarantees may be nationally implemented to make the transit operation efficient. With a comprehensive guarantee covering multiple transit operations for a certain period, for example, a regular transit operator is able to save the administrative cost of furnishing and retrieving the guarantee for each transit operation. An automatic release of guarantees is another measure to reduce the cost for the business. In Uganda, a transit guarantee is automatically released through the RADDEx system immediately when the corresponding transit operation ends (Yasui, 2011). A transit guarantee may be fully or partly exempted depending on the risk of goods. Malaysia Customs requires the principal to furnish guarantee only for high risk transit goods (Matrang Suhaili and Ho Lock, 2012).

### **4.3 Pre-arrival information**

One of the recent trends of Customs procedures for trade facilitation and security is to assess the risk of goods as early as possible along trade supply chains. Customs are able to facilitate low-risk goods, while focusing on high-risk goods. To this end, a number of Customs have introduced a legal requirement on the electronic admissibility information prior to arrival of goods particularly for security purposes. The rule applies to all goods brought into or out of the territory regardless of final destination, including transit goods.

The EU has implemented the electronic prior notification rule since January 2011. As for the transit goods brought into the EU territory by road, an entry summary declaration or a transit declaration containing safety and security data has to be lodged at least one hour before arrival.<sup>10</sup> Although Switzerland is a third country, the transit goods between the EU and Switzerland have been waived from the rule, due to the bilateral agreement that mutually recognizes the equivalence of the respective security standards after Switzerland introduced the same rule as the EU's against the goods brought into and out of its territory.<sup>11</sup> As a result, the new rule has little impact on the movements and procedures on transit goods between the two parties.

### **4.4 Operators with high compliance**

Another trend in trade facilitation and security is to assess the compliance and security management risk of economic operators (e.g. as importers, exporters, customs brokers, and carriers). Customs are able to facilitate the goods treated by low-risk operators, while concentrating on the goods treated by others. A number of Customs have been operating AEO programs. The AEO concept was developed in the WCO SAFE Framework of Standards<sup>12</sup>, based on the RKC's provision on authorized persons. Polner (2012) summarized the scope, benefits and other relevant information of 24 AEO operational programs.

A concept of authorized operators is not new in transit systems. Based on the concept on the authorized persons, the RKC stipulates provisions of authorized consignor and consignee for those with having high compliance and satisfying conditions specified in the national legislation for the transit purposes in its Specific Annex. The RKC Guideline provides the examples of benefits for the operator accrued to the authorized status. The possible benefits for the business include: a full or partial waving of transit guarantees; fewer data elements in transit declarations; Customs clearance at the operator's domicile; and less frequency of inspections by Customs and other regulatory bodies. Under the NCTS, for example, an authorized consignor can initiate a transit operation at his premise, and an authorized consignee can terminate the transit operation at his premise, amongst others (European Commission, 2003).

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<sup>10</sup> Further information on EU's Security Amendment to the Customs Code and Procedures is available at: [http://ec.europa.eu/ecip/security\\_amendment/procedures/index\\_en.htm](http://ec.europa.eu/ecip/security_amendment/procedures/index_en.htm)

<sup>11</sup> Further information on the Agreement on goods controls and customs security between Switzerland and the EU is available at: [www.ezv.admin.ch/zollinfo\\_firmen/verzollung/02302/index.html?lang=en](http://www.ezv.admin.ch/zollinfo_firmen/verzollung/02302/index.html?lang=en)

<sup>12</sup> Further information on the SAFE Framework of Standards is available at: [www.wcoomd.org/home\\_pfoverviewboxes\\_safepackage.htm](http://www.wcoomd.org/home_pfoverviewboxes_safepackage.htm)

One of the challenges in the authorized status for transit is how to coordinate benefits as well as accreditation process between the authorized consignor/consignee program and the AEO program. Since transit traffic is subject to security requirements as observed above and possibly other regulatory controls, the two programs for transit goods and traffic should be coordinated. However, it was identified that only a few programs cover transit goods (Polner, 2012). In addition, there is no evidence of such coordination in the countries surveyed in this paper.

Another challenge is how to mutually recognize AEO status or develop a regional AEO program to provide seamless transit operations in the region. In a transit operation under a chain of national systems, the principal for transit may be different across countries. Scope, accreditation process and benefits of the AEO status may also vary across the programs. The EAC members have been developing a regional AEO program (WCO, 2011a), which is expected to provide regional harmonization of the authorized status in the transit system.

#### **4.5 Border infrastructure**

Border infrastructure is an important element to reduce border congestion. For example, at the land-border facility with a first-in-first-out arrangement, trucks have to wait in a queue at the border. It was reported that waiting time in queues is the most common and time consuming delay in transport trade corridors (CAREC, 2011). As such, the WTO negotiations on trade facilitation (WTO, 2012) are considering a specific proposal that “*Members are encouraged to make available, where practicable, physically separate infrastructure (such as lanes, berths and similar) for traffic in transit.*”

It is reasonable to consider specific infrastructure for transit at the border point where a large volume of transit traffic is crossing. Separate transit lanes, independent Customs transit offices, and special zones dedicated to transit could serve as possible solutions. With such infrastructure, trucks are able to bypass the clearance queue at borders so as to save time when crossing the border. In addition, the efficiency of transit procedures is enhanced because the staff and the facility specialize in transit. Moreover, it appears easier to design a coordinated border management system dedicated to transit in a form of the juxtaposed office or one-stop-border post (OSBP), considering the unique characteristics of transit road transportation.

For example, at the Basel border crossing point between Germany and Switzerland, the Customs offices of both countries for transit procedures are located in a same building on the German territory (Yasui, 2011). It is a juxtaposed office designed in accordance with the bilateral agreement. Customs is the only agency physically stationed at the office, and delegated from other regulatory agencies to conduct the first regulatory check of transit goods crossing the border. Another juxtaposed office for transit is found at Chiasso between Italy and Switzerland. Swiss Customs has encouraged the carriers to take transit procedures at the border, while taking clearance procedures at inland Customs terminals. As a result, most trucks crossing the border are in transit. Similarly, most goods passing through the OSBP at the Rwandan border with Uganda are in transit. According to Rwandan laws and regulations, transit entry procedures must be taken for all goods inbound to Rwanda otherwise in exceptional cases (Yasui, 2011). For clearance for home use, the transit goods must be transported to Kigali, the capital of Rwanda, about 100 km away from the border.

#### **4.6 Application of Information Technology**

Currently, Customs transit declarations in many countries can be made electronically for example under the transit module of ASYCUDA.<sup>13</sup> Furthermore, modern IT tools such as Global Positioning System (GPS)-based monitoring systems and radio frequency identification (RFID)-based automated cargo identification systems made it possible to track and trace the movements of transit goods en route. Such systems improve the visibility and connectivity of the trade supply chain (APEC, 2012). From the Customs perspective, the tracking and tracing system is an effective tool to improve Customs control during transit operations, instead of current practices such as frequent inspections en route, mechanical Customs seals, Customs convoys, and high guarantees.

Malaysia has initiated the Security and Trade Facilitation system as a part of the comprehensive Economic Transformation Program in 2011 (Matrang Suhaili and Ho Lock, 2012; Lee Cheng Suan, 2010). With the RFID seals affixed to containers at departure, all transit information including tempering the seals is automatically retrieved each time when the transit truck with the containers passes through the Customs checkpoints. It leads to totally paperless checkpoints with automatic release at destination if all requirements are met. It was reported that the RFID infrastructure costs US\$15 million, and in return it was estimated that the system would generate US\$202 million in gross national income and create about 400 jobs (Morden, 2011). Its trial in 2011 showed that the system saved 47 minutes per container on average with the auto-clearance. A company participating in the trial considered that the system demonstrated a potential to reduce Customs clearance time by 50%.

Jordan Customs has implemented the electronic transit tracking system since 2008 (Aref Alfitiani, 2010; 2012). At departure, a GSP tracking unit is installed on the transit truck, and connected wirelessly with two or more e-seals which are affixed to the truck and the container. The system monitors the movements of the truck en route in real time through GSP satellite signals. An alarm is activated if an anomaly is detected, for example, the truck diverting from the pre-assigned route, or any tempering or illegal opening of the container. In this case, the mobile team is expected to catch the truck in less than 30 minutes for investigation. The driver returns the set of device when the transit operation ends. At departure, drivers can choose whether using the trucking system with paying a fee US\$30 per truck, or the Customs convoys with waiting hours or sometimes staying overnight. Nearly 100% transit trucks chose using the system in 2011. As a result, the average waiting time at borders reduced from 8 hours to few minutes; transit time reduced along a transit route by more than 60%; truck congestion at borders disappeared; transit traffic across Jordan grew by more than 80%; and the number of smuggling cases during the transit operation reduced.

#### **4.7 Performance measurement**

Performance measurement is a useful tool to demonstrate the effectiveness of trade systems and identify its bottlenecks. Corridor performance measurement mostly

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<sup>13</sup> ASYCUDA (Automated System for Customs Data) is a computerized customs management system, developed by the UNCTAD, and introduced in more than 80 economies. Further information on ASYCUDA is available at: <http://www.asycuda.org>

includes indicators on cost and time of the goods traveling along the corridors. Some of the corridor performance indicators are regarded to measure the effectiveness of the transit system concerned if transit traffic accounts for substantial part of the corridor transportation. The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) developed a model to measure the corridor performance in terms of cost and time, while the United States Agency for International Development (USAID) developed software to identify the inefficiencies in port and logistics chains (Arvis, 2011).

The Central Asia Regional Economic Cooperation (CAREC) annually measures and monitors performance of each of the six corridors in the Central Asian region (CAREC, 2011). Transit traffic constituted a majority of road transport used for the 2011 report. The report indicated time, cost and speed when a truck moved along each corridor (Table 2). For example, the time to clear/release at a border point was between 4.9 and 8.6 hours for the six CAREC corridors in 2011. It also indicated that stop activities en route (such as customs release and clearance, inspections, loading/unloading, and police checkpoints) accounted for 43% of trucks' total travel times along the corridors.

**Table 2: Performance indicators of the CAREC six corridors in 2011**

Performance indicators	Lowest *	Highest *	Overall*
Time to clear/release a border crossing point (in hour)**	4.9	8.6	6.2
Cost incurred at border crossing clearance/release (in US\$)	91	201	148
Cost incurred to travel a corridor section (in US\$, per 500km, per 20 ton)	679	1,663	1,055
Speed to travel on CAREC corridors, without delay (in kph)***	19.4	29.9	24.5
Speed to travel on CAREEC corridor, with delay (in kph)****	30.5	52.1	43.0

\* Each represents the lowest, the highest and average figures (in means by road) among the six CAREC corridors.

\*\* "Release" is added to the original description.

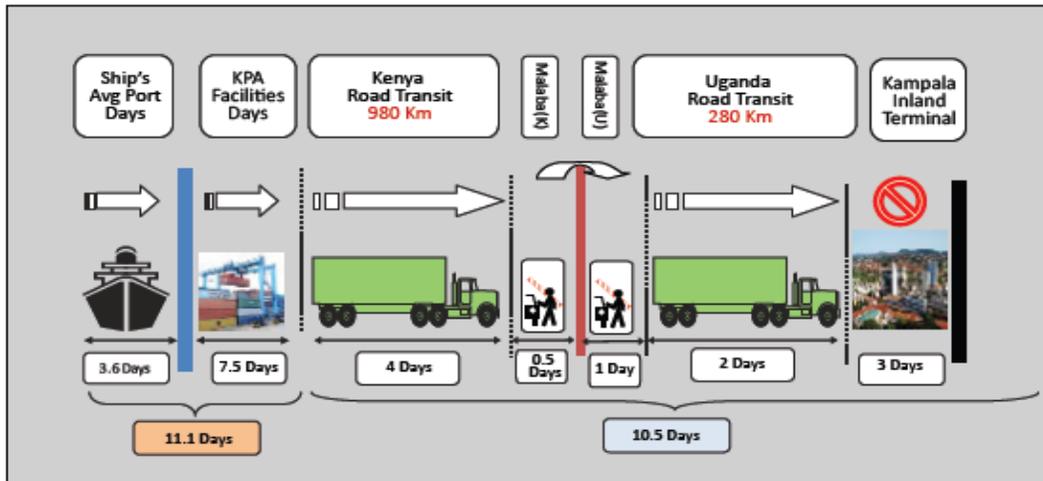
\*\*\* "Speed without delay" is the ratio of distance travelled to the time spent by a vehicle in motion between origin and destination (actual travelling time)

\*\*\*\* "Speed with delay" is the ratio of distance travelled to the total time taken to traverse the entire journey including transit time as well as spend on stop activities

(Source) Information extracted from CAREC (2012, p.5)

In the eastern African region, a study in 2009 showed that it took 21.6 days on average from goods entering into the Mombasa seaport, Kenya by sea and internationally transiting to the inland Customs terminal in Kampala, Uganda, and finally cleared at the terminal (World Bank, 2010; USITC, 2012). At the port facility in Mombasa, it took 7.5 days to release the goods for the international transit operation. It took 1.5 days for transit procedures at the border between Kenya and Uganda, and 3 days to clear the goods at the Kampala terminal. Thus, the border procedures in total accounted for 55% of the time taken for the entire journey along the corridor.

**Figure 4: A container transported from the Mombasa seaport to Kampala Inland Terminal**



(Source) World Bank (2010, Figure 19, p.21)

The Time Release Study (TRS) Guide Version 2 developed by the WCO can be used to measure the time of each step and intervention of international transport and trade corridors (WCO, 2011b). In accordance with the Version 2, the EAC conducted a pilot TRS in 2012 for part of the northern corridor in both directions between the Mombasa seaport and the inland Customs terminal in Kampala (Matsuda, 2012). It measured the time required for each step and intervention in the entire road transport, including that for Customs procedures, immigration procedures, and interventions at weight bridges. Considering that it was successfully completed, the EAC plans to conduct TRS for other corridors in the region.

## 5. IMPACT ON REGIONAL ECONOMIC INTEGRATION AND COMPETITIVENESS

First of all, transit facilitation may enhance regional competitiveness through the economic development and competitiveness of individual countries in the region. A functional transit system reduces the cost and time for a landlocked country to trade with the countries outside the region (World Bank, 2006). A transit country also gains from transit facilitation (World Bank, 2008). The cost of providing transit service rendered in the territory may be recovered by transit fees and charges as the volume of transit traffic increases. Investments to improve the Customs transit service, infrastructure, and the transport service for transit may contribute to the development of supply chain security and facilitation. Transit facilitation helps to elevate the transit country as a logistic and trading hub. In order to show the effectiveness of the system, it is effective to use performance indicators such as actual time required for release measured by TRS.

In addition, transit facilitation may support regional economic integration and competitiveness through the increased intra-regional trade. It enhances smooth movements of transit goods between neighbouring countries (e.g. Kenya and Uganda) as well as non-neighbouring countries (e.g. Kenya and Rwanda) in the region. Under the framework of a functional transit system, transit goods cross a number of borders more rapidly and cost-efficiently, and the principal for transit has an option that the goods are

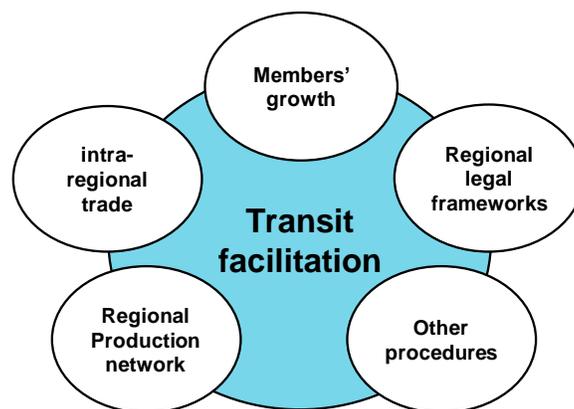
cleared for import and export at the inland Customs terminals. The increased intra-regional trade may lead to the development of a regional trade supply chain.

Moreover, transit facilitation may play an important role in a regional production network, leading to further regional economic integration and competitiveness. With the transit system, export processing zones (EPZs) are not necessarily located at borders.<sup>14</sup> Manufacturers in the EPZs may obtain parts, materials, etc without paying duties and taxes in transit from the countries inside and outside the region. Finished or semi-finished goods produced using the parts and materials in the EPZs may be transported in transit to the destination country. The more trade and production activities take place in the EPZs, the more foreign direct investment and job creation are expected (Engman, et al., 2005). As such, combined with the EPZ, a regional transit system may effectively contribute to the development of a regional production network, and further the integration into the global supply chain.

Furthermore, transit facilitation may be a driver of regional economic integration. Most transit facilitation measures essentially require international legal frameworks to ensure administrative cooperation and coordination among Customs. Case studies showed that several measures could be implemented nationally; however they may generate greater impact when implemented internationally. RTAs, particularly Customs Unions, may appropriately provide such a legal framework that all countries in the region follow in a harmonized way.

Last but not least, the successful implementation of transit facilitation may be a stepping stone to harmonization of other trade facilitation measures in the region, leading to further regional economic integration and competitiveness. Several measures for transit facilitation are simple and inexpensive to implement comparing with those for general trade facilitation, considering unique characteristics of transit systems. Case studies indicated that it is a good option to start simple transit facilitation measures before implementing complicated trade facilitation measures at the regional level.

**Figure 5: Five paths of transit facilitation for regional economic integration**



<sup>14</sup> See IDE-JETRO (Institute of Developing Economies- Japan External Trade Organization) and WTO (World Trade Organization), 2011 for further information on EPZs.

## 6. CONCLUSION

A transit system has increasingly attracted political and public attention as a means of strengthening regional economic integration and competitiveness. Customs plays an important role in functional transit systems. Customs measures to facilitate trade are generally applicable to transit goods and traffic. As the trade facilitation measures evolve, new trends of transit facilitation have emerged. Through case studies of several landlocked and transit countries, emerging trends and their practical implementation of transit facilitation related to Customs measures were reviewed in seven areas: information sharing; guarantee systems; operators with high compliance; pre-arrival information; border infrastructure; IT application; and performance measurement.

A transit system is relevant and responsive to regional economic integration and competitiveness. Its impact may be enhanced if it is intentionally implemented in a harmonized way in the region. While benefiting both landlocked and transit countries, it may contribute to intra-regional trade growth, leading to the development of regional supply chains and regional production networks. It may also strengthen ties between countries in the region as a driver to develop a legal framework under the RTAs, particularly Customs Unions. In addition, its successful implementation may be a stepping stone to harmonization of other Customs measures to facilitate intra-regional trade.

Finally, in order to make transit systems functional, all stakeholders in public and private sectors are required to respect the system, understand its effectiveness, and more importantly cooperate and make every effort to implement it. To this end, case studies provide useful lessons of their practical implementation, and thus more case studies on transit facilitation should be analyzed in the future.

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## REFERENCES

- ADB (2011), *Greater Mekong Subregion Cross-Border Transport Facilitation Agreement: Instruments and Drafting History*, Manila, November 2011, available at: [www.adb.org/publications/gms-cbta-instruments-and-drafting-history](http://www.adb.org/publications/gms-cbta-instruments-and-drafting-history)
- APEC (2011), *Addressing Impediments in Cross-border Customs Transit (In support of APEC Supply-Chain Connectivity Initiative (SCI): Chokepoint 8)*, 2011/SOM2/CTI/012, Second Committee on Trade and Investment Meeting, May 2011, United States, available at: <http://aimp.apec.org/MDDB/default.aspx>
- \_\_\_\_ (2012), *Towards Reliable Supply Chains*, Annex B of 2012 APEC Ministerial Meeting Joint Statement, September 2012, Vladivostok, Russia, available at: [www.apec.org/Meeting-Papers/Ministerial-Statements/Annual/2012/2012\\_amm/annex-b.aspx](http://www.apec.org/Meeting-Papers/Ministerial-Statements/Annual/2012/2012_amm/annex-b.aspx)
- Aref Alfitiani (2010), "Jordan's electronic transit monitoring and facilitation system", *World Customs Journal*, Volume 4, Number 2, p.79-88, September 2010, Canberra, available at: [www.worldcustomsjournal.org/index.php?resource=24](http://www.worldcustomsjournal.org/index.php?resource=24)
- \_\_\_\_ (2012), *Electronic Transit Tracking and Facilitation System (Jordan model)*, presented at WCO Technology and Innovation Forum, Kuala Lumpur, 5-9 March 2012, available at: [www.wcoomd.org/event\\_cal2012\\_overview\\_presentations.htm](http://www.wcoomd.org/event_cal2012_overview_presentations.htm)
- Arvis, Jean-Francois (2011), "Transit regimes", Chapter 17, p.279-296, *Border Management Modernization*, edited by Gerard McLinden; Enrique Fanta; David Widdowson; and Tom Doyle, January 2011 Washington D.C. available at: [http://publications.worldbank.org/index.php?main\\_page=product\\_info&products\\_id=23919](http://publications.worldbank.org/index.php?main_page=product_info&products_id=23919)
- CAREC (2011), *Annual Report 2011 on Corridor Performance Measurement & Monitoring (CPMM)*, June 2012, Baku, Azerbaijan, available at: <http://cfcfa.net/cpmm/cpmm-annual-and-quarterly-reports/2011-annual-report/>
- Engman, Michael; Onodera, Osamu; and Pinali, Enrico (2007), *Export Processing Zones: Past and Future Role in Trade and Development*, OECD Trade Policy Paper No.53, May 2007, Paris, available at: [www.oecd-ilibrary.org/trade/export-processing-zones\\_035168776831](http://www.oecd-ilibrary.org/trade/export-processing-zones_035168776831)
- European Commission (2004), *Transit Manual*, TAXUD/801/2004, May 2004, available at: [http://ec.europa.eu/taxation\\_customs/customs/procedural\\_aspects/transit/common\\_community/index\\_en.htm](http://ec.europa.eu/taxation_customs/customs/procedural_aspects/transit/common_community/index_en.htm)
- IDE-JETRO (Institute of Developing Economies- Japan External Trade Organization) and WTO (World Trade Organization) (2011), *Trade Patterns and Global Value Chains in East Asia: from trade in goods to trade in tasks*, Geneva, June 2011, available at: [www.wto.org/english/res\\_e/publications\\_e/stat\\_trade\\_pat\\_globvalchains\\_e.htm](http://www.wto.org/english/res_e/publications_e/stat_trade_pat_globvalchains_e.htm)

- Lee Cheng Suan (2010), *Malaysian Customs Security & Trade Facilitation System using RFID/EPCIS*, available at:  
[www.ancc.org.cn/2011/GS1Apf/material/apf/10%20GS1%20Malaysia%20-%20Customs%20RFID.pdf](http://www.ancc.org.cn/2011/GS1Apf/material/apf/10%20GS1%20Malaysia%20-%20Customs%20RFID.pdf)
- Matsuda, Shingo (2012), “*The time release study as a performance measurement tool for a supply chain and an international corridor*”, *World Customs Journal*, Volume 6, Number 1, pp.79-91, March 2012, Canberra, available at:  
[www.worldcustomsjournal.org/index.php?resource=27](http://www.worldcustomsjournal.org/index.php?resource=27)
- Matrang Shuhaili and Ho Lock (2012), *Security and Trade Facilitation System Using RFID Initiative*, presented at WCO Technology and Innovation Forum, Kuala Lumpur, 5-9 March 2012, available at:  
[www.wcoomd.org/event\\_cal2012\\_overview\\_presentations.htm](http://www.wcoomd.org/event_cal2012_overview_presentations.htm)
- Moïsé, Evdokia; Orliac, Thomas; and Minor, Peter (2011), *Trade Facilitation Indicators, the Impact on Trade Costs*, OECD Trade Policy Papers No.118, November 2011, Paris, available at: [www.oecd-ilibrary.org/trade/trade-facilitation-indicators\\_5kg6nk654hmr-en](http://www.oecd-ilibrary.org/trade/trade-facilitation-indicators_5kg6nk654hmr-en)
- Morden, Johanna (2011), *Malaysian Customs launches RFID*, 27 April 2011, available at: [www.futuregov.asia/articles/2011/apr/27/malaysian-customs-launches-rfid](http://www.futuregov.asia/articles/2011/apr/27/malaysian-customs-launches-rfid)
- Polner, Mariya (2012), *Compendium of AEO Programmes – 2012 Edition*, WCO Research Paper No.25, July 2012, Brussels, available at:  
[www.wcoomd.org/home\\_research\\_researchseries.htm](http://www.wcoomd.org/home_research_researchseries.htm)
- \_\_\_\_ (2011), “*Coordinated border management: from theory to practice*”, *World Customs Journal*, Volume 5, Number 2, September 2011, p.49-64, Canberra, available at:  
[www.worldcustomsjournal.org/index.php?resource=26](http://www.worldcustomsjournal.org/index.php?resource=26)
- United Nations (2003), *Almaty Programme of Action*, August 2003, Almaty, Kazakhstan, available at: [www.un.org/special-rep/ohrls/lldc/Almaty\\_PoA.pdf](http://www.un.org/special-rep/ohrls/lldc/Almaty_PoA.pdf)
- USITC (2012), *Trade Facilitation in the East African Community: Recent Developments and Potential Benefits*, Investigation No. 332-530, Publication No. 4335, July 2012, Washington D.C., available at: [www.usitc.gov/publications/332/pub4335.pdf](http://www.usitc.gov/publications/332/pub4335.pdf)
- WCO (2004), *WCO Customs Compendium - Volume 3 - A secure and efficient transit system*, August 2004, Brussels, available at: <http://wcoomdpublishings.org/a-secure-and-efficient-transit-system.html>
- \_\_\_\_ (2011a), *WCO-EAC AEO project pilot phase successfully launched*, 5 October 2011, Brussels, available at:  
[www.wcoomd.org/home\\_coverviewboxes\\_arwcoeacaeo2011.htm](http://www.wcoomd.org/home_coverviewboxes_arwcoeacaeo2011.htm)
- \_\_\_\_ (2011b), *WCO TRS Guide Version 2*, Brussels, available at:  
[www.wcoomd.org/en/topics/facilitation/~/\\_media/WCO/Public/Global/PDF/Topics/Facilitation/Instruments%20and%20Tools/Tools/Time%20Release%20Study/Time\\_Release%20Study\\_ENG.ashx](http://www.wcoomd.org/en/topics/facilitation/~/_media/WCO/Public/Global/PDF/Topics/Facilitation/Instruments%20and%20Tools/Tools/Time%20Release%20Study/Time_Release%20Study_ENG.ashx)

- World Bank (2006), *Needs, Priorities and Costs Associated with Technical Assistance and Capacity Building for Implementation of a WTO Trade Facilitation Agreement: A Comparative Study Based on Six Developing Countries*, International Trade Department Working Paper, November 2006, Washington D.C. available at: [http://siteresources.worldbank.org/INTTLF/Resources/Needs\\_and\\_Priorities.pdf](http://siteresources.worldbank.org/INTTLF/Resources/Needs_and_Priorities.pdf)
- \_\_\_\_\_ (2007), *The Cost of Being Landlocked: Logistics Costs and Supply Chain Reliability*, June 2007, Washington D.C. available at: <http://elibrary.worldbank.org/content/workingpaper/10.1596/1813-9450-4258>
- \_\_\_\_\_ (2008), *Improving Trade and Transport for Landlocked Developing Countries, October 2008*, Washington D.C. available at: [http://siteresources.worldbank.org/INTRANETTRADE/Resources/Improving\\_Trade\\_Transport\\_for\\_Landlocked\\_Countries.pdf](http://siteresources.worldbank.org/INTRANETTRADE/Resources/Improving_Trade_Transport_for_Landlocked_Countries.pdf)
- \_\_\_\_\_ (2010), *Running on One Engine: Kenya's Uneven Economic Performance. Poverty Reduction and Economic Management Unit Africa Region, Kenya Economic Update, 2nd ed.*, June 2010, Washington D.C., available at: [http://siteresources.worldbank.org/INTAFRICA/Resources/2579\\_94-1335471959878/Kenya-Economic-Update-June-2010.pdf](http://siteresources.worldbank.org/INTAFRICA/Resources/2579_94-1335471959878/Kenya-Economic-Update-June-2010.pdf)
- WTO (2005), *WCO Self-Assessment Checklists for GATT Articles V, VIII and X, Communication from the World Customs Organization*, TN/TF/W/16, 9 February 2005, Geneva, available at: [www.wto.org/english/tratop\\_e/tradfa\\_e/tradfa\\_e.htm](http://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm)
- \_\_\_\_\_ (2012), *Draft Consolidated Negotiating Text, TN/TF/W/165/Rev.14, December 2012*, Geneva, available at: [www.wto.org/english/tratop\\_e/tradfa\\_e/tradfa\\_e.htm](http://www.wto.org/english/tratop_e/tradfa_e/tradfa_e.htm)
- Yasui, Tadashi (2011), *Case Studies on Systematic Exchange of Commercial Information between Customs Administrations in Bilateral and Regional Arrangements*, WCO Research Paper No.11, February 2011, Brussels, available at: [www.wcoomd.org/home\\_research\\_researchseries.htm](http://www.wcoomd.org/home_research_researchseries.htm)
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