Interagency coordination in the implementation of single window: Lessons and good practice from Korea

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Abstract

A single window is an organic mix of the collaborative efforts of all the parties involved in a nation's international trade activities. For most customs administrations, implementing a single window is a pressing project, which may take several years in planning and developing, while involving many stakeholders, including those from the public and private sectors. The biggest issue in securing a single window is interagency collaboration and coordination in the area of public administration. This paper traces the development of the single window system in Korea, using it as a case study to highlight the need for improved and institutionalised interagency coordination to promote its development. The research has developed a preliminary typology of interagency coordination to gain insights into how interagency coordination is established and maintained. It also offers some practical ideas for policy makers and project managers.

1. Introduction

Interagency coordination has traditionally been an important and difficult issue of public administration. Since customs administrations operate in a complex environment of constant change, they are required to respond with efficient regulation to international trade and to comply with regional, national and international obligations. To accommodate changes in these areas, it is important to construct interagency coordination regimes to implement change processes. Lessons and experiences shared among agencies foster organisational flexibility to adapt to changes and deal with complexity. However, in sharp contrast, there is a lack of analysis of interagency coordination, which is required to appropriately promote efficient regulation of international trade and functioning of customs administrations.

In seeking to reduce regulatory inefficiencies, Customs and other border agencies have long deliberated on a concept called single window, which means that economic operators would only have to submit border regulatory information once, rather than on several occasions to several agencies. In essence, single window is about improving coordinated border management. The World Customs Organization (WCO) has long touted the benefits of introducing single window and many WCO members have worked to establish single window in their countries. In the late 1980s, Singapore pioneered a successful single window. Since then, both developed and developing countries have followed Singapore's lead, enhancing border administration processes through a single window system and other automated solutions. According to the World Bank's *Doing Business Report 2014*, 73 countries have reported implementing a single window system (World Bank, 2013; see Figure 1.)

Figure 1: Countries with single window systems

Shaded countries represent those with Single Window implementation
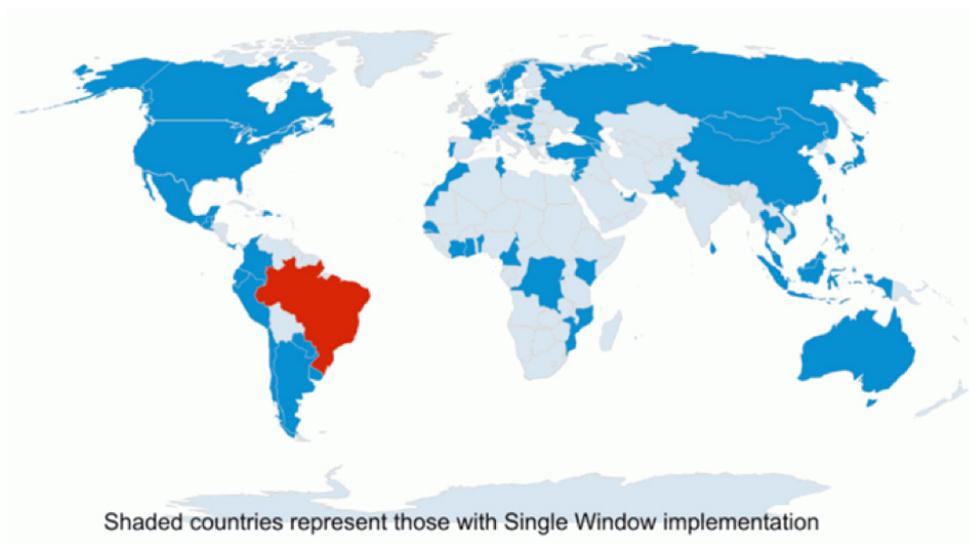
Source: World Bank, Doing Business 2014: Understanding regulations for small and medium-size Enterprises.

The development of single windows involves overcoming overwhelming implementation challenges due to its inter-organisational nature and the involvement of many stakeholders. As single window is a mechanism to integrate the services of regulatory requirements handled by various government agencies, and unless convinced otherwise, some government agencies may perceive it as a possible threat to their authority over relevant regulatory processes in international trade, and subsequent downsizing of human resources. Complicated challenges include ones that are related to organisational, managerial, financial, legal and political aspects (Aichholzer & Schmutzer, 2002; Gil-Garcia & Pardo, 2005). The challenges are normally associated with creating political will; gaining management commitment and full support; establishing an institutional platform for collaboration; managing stakeholders' expectations and perceptions; deriving acceptable business and architectural models; and implementing the necessary business and regulatory reforms (Byungsoo & Min-Jeong, 2006; Phuaphanthon, Bui, & Keretho, 2009).

The single window concept is a well-documented topic in the area of Customs, with many scholars undertaking research from different viewpoints. Most of the previous studies have been from the perspective of information and communication technology (ICT), with emphasis on the role of ICT in responding to the demands of increased volumes of international trade and related documents, as well as developing single window systems (Ahn & Han, 2007; Hesketh, 2009; Pugliatti, 2011; Ndonga, 2013). In spite of the rising popularity of the single window concept, there is little research in this area by scholars of public administration, and researchers have neglected to illuminate what possible related variables lead to effective implementation of a single window. Research and evaluation of interagency coordination will be discussed in detail later. However, it is important to note that research on the coordination aspects of single window in Korea have not been addressed in the literature.

Research on the development of a single window needs an integrated approach because it requires the combined effort and efficiency of a number of government agencies as well as the private sector. On the one hand, the regulatory inefficiencies on international trade are a motivating factor behind the need

for better coordination. Finding mechanisms that can facilitate and enhance coordinated action among agencies will allow for a more rational and effective approach to the implementation of single windows. On the other hand, interagency coordination among various agencies is difficult but necessary as the failure to coordinate brings with it significant consequences.

The main purpose of this paper is to offer a framework of interagency coordination for implementation of a single window in its practical and operational dimensions. The organisation of the paper is as follows: section 2 introduces single window in a global context, with special focus on the case of Korea; section 3 illuminates issues in developing interagency coordination, touching upon definitions and patterns; and section 4 analyses the interagency coordination practices in the development of the Korean single window. Crucial factors affecting coordination are also summarised to provide insights into how interagency coordination is established and maintained, and conclusions are offered.

2. Single window, globally and in Korea

The WCO recommends the implementation of the single window concept through its revised Kyoto Convention, the UN/CEFACT Recommendation 33 and the WCO SAFE Framework of Standards to Secure and Facilitate Global Trade. The single window, as stated by the UN/CEFACT is 'A facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfill all import, export and transit regulatory requirements. If information is electronic, then individual data elements should only be submitted once.'[1] It aims to simplify border formalities for traders and other economic operators by arranging for a single electronic submission of information to fulfill all cross-border regulatory requirements (Choi, 2011).

A number of international organisations, such as the WCO (WCO, 2007, 2008), World Trade Organization (WTO) and United Nations (UN) (UNCEFACT, 2005; UNECE, 2010), have promoted the benefits of single window. In the 73 countries that have implemented single windows, most have implemented a first-stage single window that connects only customs administrations and a few other government agencies (see Figure 2), while 18 countries have established single windows with interfaces to all relevant government agencies, and the concept of one entry point for documentation (World Bank, 2014). Therefore, there is a need to further study which factors lead to the difference in the developmental stage of the various single windows systems.

Figure 2: Numbers of countries with single windows implemented
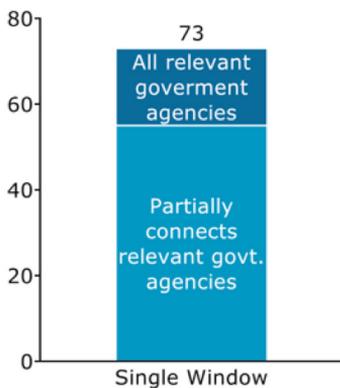
Source: World Bank, Doing Business Report 2014: Understanding Regulations for Small and Medium-Size Enterprises.

A single window is made up of an organic mixture of the collaborative efforts of all parties involved in a nation's international trade activities. The complex nature of international trade interactions and regulations developed over the past decades present a number of challenges. Therefore, with the help of many international organisations, numerous countries have adopted new ways to achieve outstanding trade practices through the design and development of automated systems, and the establishment of information and data requirements that are often achieved by way of coordination among regulatory agencies. The single window concept provided opportunities for all stakeholders, whether they are large or small, from the public or private sector, traders, transport entities, vendors, or cross-border regulatory agencies. This wide ambit of interest encompasses policy issues, technical issues, administration and law (WCO, 2008). The major types of organisations that are active in single window applications are:

• importers, exporters (consignors and consignees)

• trade professionals (freight forwarders, customs brokers and shipping agents)

• shipping companies, airlines, road, rail and inland waterways, duty free zones, dry ports and multimodal cargo depot and dry ports

• ports and airports, container terminals, bulk terminals, port gate operations and local port road and rail transport

• Customs and other governments agencies, which typically include all agencies that have a trade compliance responsibility, licensing, permit issuing and/or inspection responsibilities, principally including ministries of trade (and economy), health and transport; food and drug agencies, quarantine agencies and banks.

In January 2001, the Korean Single Electronic Window Master Plan, within the framework of the 'Reinventing Government and Cyber Governance' program was launched by the President of Korea. With the active support of Korea's national government, Korea's single window system (known as uTradeHub), was launched online in 2008, interconnecting the customs administration system and the systems of 56 public agencies (Kim, 2004).The single window is composed of various components and modules that interact and operate as one living organism to provide efficient regulation of international trade (see Figure 3). As an e-business portal for inter-organisational information-sharing and document exchange, it connects trading partners in order to streamline their logistics, financial transactions and customs-clearance processes, making it unnecessary for agents to visit financial institutions and government bodies before products can move from Korea to other countries.

Figure 3: Framework of Korean single window
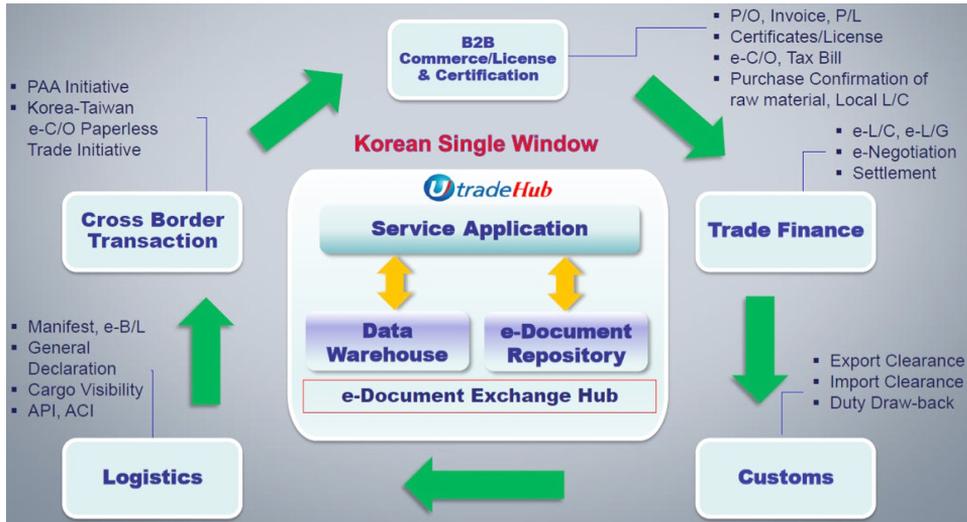
Source: Korea Trade Network (2015). Korean Experience with paperless trade system, In the Occasion of VII Meeting of the Inter-American Network of International Trade Single Windows (Brasilia, Brazil, May 21–22, 2015)

Facilitating a wide range of transactions—from licensing to shipping, to customs clearance and payments—uTradeHub automates otherwise complex processes and makes required information accessible to stakeholders in real time. This simplifies their transactions and also makes them traceable (UNECE, 2011). The major users of uTradeHub are trading companies, but many private intermediaries, such as forwarders, logistics companies, customs brokers and financial institutions, also use it. Consequently, a wide range of international trade-related services, such as logistics, customs-clearance and licensing and certification processes, are available through uTradeHub (Wang & Pettit, 2016, p. 422).

Korea's single window system has been recognised internationally (having been mentioned as Best Practice by the World Bank), and the *Doing Business Report for Trading Across Borders* has evaluated the Korean time for import processing to be two days, and for exports to be three days, which is much lower than the OECD average. Even now, many customs authorities around the world working to improve trade facilitation by introducing a single window are visiting Korea to benchmark the successful single window implementation case study. Among them is Ecuador, which with the help of Korea Customs UNI-PASS Information Association (CUPIA)[2] successfully completed the development of an electronic single window for foreign trade, based on the Korean single window model. In addition, in December 2014 the State Customs Committee of the Republic of Uzbekistan signed a contract with CUPIA to develop a single window system.

There is no doubt that interagency coordination is critical for project success. The Korea Customs Service (KCS) opted for a phased implementation because otherwise it would have taken too long for numerous government agencies to consult among themselves and to develop a system currently. It is important to note, however, that spontaneous interagency coordination, under Korea's administrative culture, has been very difficult to realise among public agencies. As policy making is often a top-down process, spontaneous interagency coordination faced an uncertain environment due to its lack of commitment from above.

3. Interagency coordination in the implementation of single window: An analytical framework

3.1 Conception of interagency coordination

While there is some variation in how coordination is defined, there is general agreement in the literature that coordination involves:

> the instruments and mechanisms that aim to enhance the voluntary or forced alignment of tasks and efforts of organizations within public actors. These mechanisms are used in order to create a greater coherence, and to reduce redundancy, lacunae and contradictions within and between policies, implementation and management. (Bouckaert, Peters, & Verhoest, 2010, p. 16)

There is a consistent understanding of coordination as an interaction between two agencies, and general agreement about agencies working together to accomplish common goals, either implicitly or explicitly (Alter & Hage, 1993; Bardach, 1998; Sullivan & Skelcher, 2002; Ervin, 2004; Foster-Fishman, Salem, Allen, & Fahrbach, 2001). The literature on interagency coordination utilises a range of similar terminologies that are used to describe this general definition: interagency cooperation (Thomas, 2003); interagency or inter-organisational collaboration (Harley, Donnell, & Rainey, 2003; Ervin, 2004; Foster-Fishman et al., 2001; Nylen, 2007); inter-organisational relationships (Levine & White, 1961; Aldrich, 1976; Hall, Clark, Giordano, Johnson, & Van Roekel, 1977; Van de Ven & Walker, 1984; Mulford, 1984; Ring & Van de Ven, 1994; Isett & Provan, 2005); multi-agency coordination (Curnin & Owen, 2013). These terms are generally used synonymously and interchangeably, and, at a high level, seemingly describe the same general concepts.

There are abundant typologies of coordination that distinguish among mechanisms of coordination (Bouckaert et al., 2010), levels of coordination (Metcalfe, 1994) or moments of policy process in which coordination takes place (Craswell, & Davis, 1994; Peters, 2015).

Interagency coordination raises the question of what roles and authorities should be assigned to participating agencies individually and cooperatively. Some scholars (Van de Ven & Walker, 1984; Mulford, 1984; Harley, Donnell, & Rainey, 2003; Isett & Provan, 2005) argue that multi-organisational arrangements are solutions for inter-organisational problems that cannot be achieved by a single organisation working alone. The implementation of a single window system needs to take into account the adaptive capacity of single units and effective coordination of multilevel governmental agencies. Interagency coordination sometimes happens spontaneously, but it is often the product of purposeful effort by policy makers (Ansell & Gash 2008; Koontz et al., 2004).

Inclusion of interagency coordination into the research of single window is evidence that public policies employed during a time of globalisation require better coordination across all elements of governmental agencies. The creation of interagency coordination can therefore be viewed as a policy tool for altering the structure and function of single window systems. Currently, sharing roles and responsibilities among different levels of government and agencies is increasingly being favoured (Craswell & Davis, 1994; Pollitt, 2003). This blending of roles and responsibilities is reshaping leadership, management, and service delivery challenges in the implementation of single window systems. Interagency coordination which plays an important role in the establishment of single window will consequently contribute to the effectiveness, efficiency and coordination of customs activities in the long run.

Three questions are often posed in relation to interagency coordination: why interagency coordination is needed; what operational areas are in need of interagency coordination; and how interagency coordination can be carried out in the establishment and implementation of single window systems. The first question

refs to the motivation of promoting interagency coordination; the last two questions are directly related to interagency coordination mechanisms, which need to be intensively analysed on the base of typology of interagency coordination.

3.2 Typology of interagency coordination strategies

Single window is a solution that is essential, rational and intuitive to achieve trade facilitation. It is also the most rational solution that provides for connectivity and interoperability to cross-border regulatory agencies and trade – related stakeholders. The establishment of effective mechanisms for interagency coordination is critical to the implementation of a single window. From the organisational literature, five types of interagency coordination strategies have been identified (see Table 1).

Table 1: Typology of interagency coordination

Typology	Patterns
Structural coordination	Vertical coordination
	Horizontal coordination
Public-private coordination	Coordination between public and private sectors
Procedural coordination	Procedural arrangements and standardised work-procedures
Technical coordination	Technical arrangements and tools
International coordination	Application of international standards or rules

Source: Compiled by the author

First, **structural coordination**, that is, the various organisations' structures of roles that enable work differentiation and interactions among agencies. More specifically, the design of the organisational structure in terms of hierarchy, and lateral relationships between organisational sub-units, can be seen as the basis for structural coordination. The essential idea is that, with changes to the structure of units and sub-units and the more permanent relationships between them, the pattern of adjustments and unifications is also changed. In this way, the classical organisational forms, such as functional hierarchy, product hierarchy or matrix organisation, are considered alternative ways to achieve structural coordination. Innovations such as cross-functional teams, taskforces, and project managers work within the vertical structure but provide a means to increase horizontal communication and cooperation.

Second, **public-private coordination** is the coordination between public and private sectors in the implementation of single window systems, often known as public-private partnerships (PPPs). As argued by John Mein (2014), there is a growing awareness of the importance for government authorities—specifically Customs—to work with the private sector through regular and systematic consultation at both the strategic and technical levels. Single window is a useful attempt to achieve coordination at the technical levels.

As the implementation of single window is rather complex, requiring substantial investments, specific technologies, knowledge and skills, governments often seek partnerships with the private sector. One typical case is Singapore, one of the first countries to establish a single window system. CrimsonLogic, a private IT company, was selected through an open competitive tender to develop, operate and maintain TradeNet (Singapore's single window). The PPP model enables Singapore Customs to leverage its IT partner's expertise to build and operate the system, and consequently Singapore involved the

private sector in the implementation process. It created three subcommittees during implementation, covering sea shipping, air shipping and government agencies. Their mandate was to specify functional requirements and propose data standards to improve export and import processes. Each subcommittee developed profiles of essential trade documentation activities and succeeded in whittling down the more than 20 forms used in international trade to a single online form. This form served as the core of the new computerised system. Moreover, several working groups were formed, with representatives from relevant government agencies and private sector stakeholders, such as exporters, importers, terminal operators, shipping agents and freight forwarders.

Third, **procedural coordination**, which includes mechanisms for managing work by specification and resolution, like standardised work procedures, outcome and process standards, project plans and schedules designed to coordinate work. Procedural coordination accepts the organisational structure as a given fact and deals with purposeful adjustment between the sub-units of the organisation. Mintzberg (1979, p. 3) mentions five coordination mechanisms: mutual adjustment, direct supervision, standardisation of work processes, standardisation of work outputs and standardisation of worker skills (Harris, Bennett, & Preedy, 1997, p. 8). In Thailand, interagency coordination for National Single Window (Thailand's single window) implementation was arranged through various resolutions. These resolutions served as mechanisms to coordinate the efforts of stakeholders from both the public and private sectors. They not only legitimised the establishment of necessary interagency coordination mechanisms, but also provided mandates to designated organisations and gave them the authority to put a National Single Window in place.

Fourth, projects are increasingly supported by sophisticated **technical coordination** mechanisms, such as planning and control software, packaged project management tools, workflow systems, computer-supported collaborative tools and electronic media (Lundin & Hartman, 2000, p. 48). IT infrastructure, including network, hardware and software, is indispensable for single window systems.

Fifth, **international coordination** means every country that has established or wishes to implement a single window cannot neglect international standards or trends from international organisations such as WTO, WCO and the United Nations Economic Commission for Europe (UNECE).

It is important to note that these mechanisms of interagency coordination are connected, complementary and interchangeable. For example, plans and standards (procedural coordination) are developed and institutionalised through structural mechanisms such as steering committees (structural coordination). They are also communicated through a combination of structural and information technology arrangements, known as technical coordination. On the other hand, problems in developing standards, as in the case of uncertain or complex work, may be ameliorated by either the use of close managerial supervision (structural coordination) or adoption of international standards (international coordination).

4. Interagency coordination in the implementation of the Korean single window

4.1 Interagency coordination of single window: Korea

Until recently, 38 agencies and 55 report forms were involved in the Korea (see Figure 4), and so drawing the various regulatory agencies under the umbrella of a single window required a great deal of time, energy and patience. In particular, agencies with their own well-developed systems were reluctant to participate because they believed that by joining they would lose their identity and their reason for existence.

Figure 4: Organizations linked to the clearance single window in Korea

Source: Single Window Korean Model, www.unipass.or.kr

In Korea, a formal interagency coordination platform through a mandated designation was established at the operational level. The establishment of the Korea Paperless Trade Facilitation Center and the appointment of lead agencies were critical requirements that kept interagency coordination working (see Table 2).

Table 2: Practice of interagency coordination in the implementation of Korean single window

Typology	Patterns	Practices of Korea
Structural coordination	Vertical coordination	Appointing lead agencies
	Horizontal coordination	Task force team
Public–private coordination	Coordination between public and private sectors	Korea Paperless Trade Facilitation Center
Procedural coordination	Procedural arrangements	Plans and standards, working-level meetings, informal meeting and dialogue create mutual trust and understanding
Technical coordination	Technical tools	Korea e-Trade System, ASP, BRP, ISP, verification system, Customs Data Warehouse
International coordination	Application of international standards	International standards such as the WCO DM 3.0, UN codes, etc. and open technology standards

Source: Compiled by the author

First, Korea promoted structural coordination by appointing lead agencies and establishing a taskforce. To overcome the initial barriers, the Korean Customs Service (KCS) and the Presidential Committee on Government Innovation and Decentralization took the initiative and exercised strong leadership. The lead agency continued to persuade related agencies to take part in the single window project and actively coordinated their interests. This afforded the crucial basis for the success of single window implementation.

Table 3: Lead agencies of single window projects

Country	Lead agency	Institutional mechanisms
Singapore	Trade Development Board	TradeNet Steering Committee
Korea	Ministry of Knowledge Economy	Korea Paperless Trade Facilitation Center
Japan	Ministry of Finance	Shoikawa Initiatives
Thailand	Thailand Customs Department	National Committee on Logistics Development[3]
Vietnam	General Department of Vietnam Customs	National Steering Committee
Indonesia	Indonesia Customs	INSW Preparation Team
Malaysia	Ministry of International Trade and Industry	National Single Window Committee
Kenya	Kenya Trade Agency	NSWS Steering Committee

Source: Compiled by the author.

The KCS Management Planning Division created a taskforce that consisted of customs officers, business consultants, and software engineers to develop a single window. Taskforce members represented their departments and shared information that enabled coordination. It is generally recognised that customs administrations, being one of the cross-border regulatory agencies, have a pivotal role in single window development (WCO, 2008), and this was the case in Korea. Most of the development work was finished in 2008, and since then KCS has focused on increasing the number of participating agencies.

Enlistment of agencies in the single window project, however, did not mean automatic completion; a challenging process still remained, which involved coordinating the related agencies. Many agencies had their own computerised systems and used different data formats for their own purposes. And even though

the implementation of a single window did not require border and licensing agencies to demolish or merge their computerised systems, participating agencies had concerns about the survival of their systems. Such concerns arose because coordinating the business processes of the agencies and harmonising their data formats was necessary. Thus, to address agencies' concerns about the single window, KCS and eight major border and licensing agencies formed a taskforce to coordinate each agency's business processes and data format. The taskforce held more than 16 rounds of working meetings. As a result, the taskforce ensured the participating agencies considered the implications of a single window, which led to the revision of seven relevant laws and the modification of 10 application and declaration forms related to eight agencies (Cantens, Ireland, & Raballand, 2012).

Second, the public-private coordination was led by the Public-Private e-Trade Center, which had experience in interagency coordination in the area of single windows to promote active collaboration with the private sector. The Korea Paperless Trade Office of Korea International Trade Association (KITA) was devoted to consolidating opinions for setting up and implementing policies, and configuring practical cooperating mechanisms among trading firms, banks and shipping lines, so that paperless trade could be widely implemented in B2B sectors. Public-private coordination in the areas of legislative review and adjustments among stakeholders, budgetary allocation, systems development, and user training for realising single window was essential.

Table 4: Practices of public-private coordination in Korea

| Category	Public sector	Private sector
Revision of law and legislation	MOTIE, Korea Customs Service, Bank of Korea, etc.	KITA, chamber of commerce, Korea Federation of Bank, etc.
Adjustment of stakeholders	National e-Trade Committee	Private e-trade committee
Budgetary allocation	Government Fund	Trade promotion fund
Standardisation	Korea Agency for Technology and Standards	National IT promotion agency
System development	UNI-PASS (Korea Customs Service)	uTradeHub (KTNET)
User training	Governments and other government agencies	Trading communities
Global cooperation	MOTIE, KCS etc.	KITA, KTNET etc.

Source: Compiled by the author

Third, formal or informal procedural arrangements are required to be put in place to facilitate the participation of all stakeholders in the development of a single window, including relevant government agencies and private sector representatives. KCS designed the single window as an independent system that respected each agency's legacy system. KCS did not rush to increase the number of participating agencies. Rather, KCS encouraged customers who experienced advantages with the single window (for example, traders, freight forwarders and customs brokers) to persuade non-participating agencies to join.

Fourth, KCS made full use of technical instruments to increase the usage rate and the number of participating agencies of single window, such as an application service provider (ASP) system, business process reengineering (BPR), information strategic planning (ISP), customs data warehouse (CDW) and verification system. In this regard, information technology has been identified as one of the most encouraging factors in successfully linking related agencies of international trade. As a first step, KCS conducted BPR and ISP from November 2003 to June 2004. Since the single window was able to cover all kinds of clearance-related processes, KCS needed to understand other trade-related agencies' business processes. KCS officers and business consultants undertook BPR and ISP because it was thought that streamlining redundant processes would lead to stakeholder conflict (Cantens et al., 2012, p. 144).

Connecting all these agencies was not a straightforward process, given that each was following its own stage of automation and electronic procedure adoption. For example, some participating agencies lacked a computerised verification system. To encompass these agencies in single window, KCS developed a verification system so that agencies without their own structure could electronically manage verifications through the single window. This meant that the number of connected agencies could be extended more easily, without the need to develop new individual systems. Korea was able to streamline license approval time to mere hours, contributing to a 25–33 per cent reduction in total export time (Korea Customs Service, 2010). The overall changes from single window implementation have also allowed Korea to save $2.1 billion per year in costs of freight, inventory, labor and other aspects, according to a 2010 World Bank study.

Figure 5: Annual savings from single window in Korea
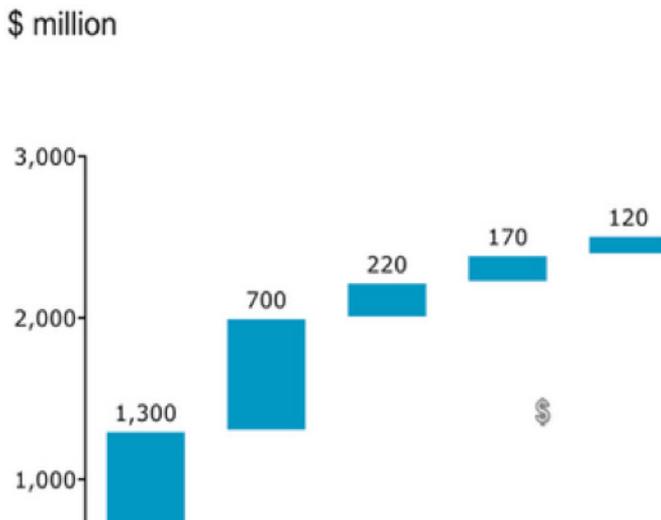
Source: World Bank, Doing Business data, 2014

Last, considering the rising need of interconnectivity with neighbouring countries and foreign customs in achieving a global single window, the UNI-PASS system applies international standards (such as the WCO DM 3.0 and UN codes), and open technology standards. The application of international standards is especially important for the future development of Korea's single window.

4.2 Factors affecting interagency coordination

Several factors have made it possible for Korea's single window to rapidly grow in the past years. One of the factors is that key players and drivers for the system have helped to strengthen effective interagency coordination. Those factors that affect interagency coordination are outlined below.

First, having a legal mandate and high-level political commitment improved interagency coordination from the central government. At the beginning, the Korean government had already discovered the importance of central steering for the establishment and implementation of a single window, which finally played a key role in interagency coordination affairs and activities. As in many other countries, the initial stage of single window implementation experienced significant strain due to insufficient attention and difficulty in coordinating the interests of different organisations. As set out in Table 5, there are three levels of steering for single window implementation, which Korea appropriately addressed.

Table 5: Steering of single window implementation and practice of Korea

Steering level	Single window leader	Comments	Korean practices
High government level	Office of the Head of State or Prime Minister	When the single window is steered under the leadership of the president of the Republic or the prime minister, adherence of public administrative bodies is almost guaranteed.	Presidential Committee on Government Innovation and Decentralization
Ministerial level	Ministry of Finance	The Ministry of Finance, to which Customs report, is the department most likely to ensure the steering of the single window project.	Ministry of Knowledge Economy
	Ministry of Commerce	The vision of a high-performance trade without constraints is more often built at the ministry in charge of commerce.	
	Ministry of Transport	When the single window is oriented to port logistics, this ministry can be on the forefront in the implementation.	
Public administration or ad hoc entity	Customs, Port, department in charge of trade, other ad hoc bodies	When an administrative body is on the forefront, there is a high risk of low adherence by other administrative entities.	Korea Customs Service

Source: Adapted from African Alliance for e-Commerce (AAEC), Guidelines for Single Window Implementation in Africa, April 2013

The second factor is the strong policy driven by the central government. At the centre of the Nation e-Trade Committee lies the Ministry of Knowledge Economy, which has formed a strong partnership with the e-Trade Facilitation Committee to cooperate in establishing and carrying out trade-related policies. In particular, in order to cope with the ninth-biggest trade transaction volume in the world and enable entirety of the trading process to be operated electronically in a seamless way, collaboration across government agencies was sought in order to interface with other critical systems, such as the integrated national information system of logistics built by the Ministry of Land, Transport and Maritime Affairs and KCS's UNI-PASS electronic customs clearance system.

Third, the KCS single window has been superimposed over legacy systems of the licensing and customs agencies. In other words, it connects and respects the legacy systems of these agencies. Thus, licensing agencies have not been required to dismantle or give up their legacy systems to participate in single window; they have merely needed to adjust their business procedures slightly (Cantens et al., 2012, p. 147). Customs is the largest and most important cross-border regulatory agency in terms of its intrusion into trade transactions, its information gathering and the scope of its business activity. As such, governments usually see Customs as the natural agency to be the focus of single window development. This does not necessarily imply that single window will be owned or maintained by Customs, but even if that is the case, Customs will be the major stakeholders purely owing to its extensive responsibility at international borders (WCO, 2008).

Fourth, public-private coordination is indispensable for the implementation of a single window. The participation of the private sector, as the ultimate user of the services provided by single window, is crucial to gain information from the user perspective. The administrative structure of Paperless Trade in Korea is generally based on a public-private coordination system with the National e-Trade Committee at the centre. The National e-Trade Committee, chaired by the Minister of Knowledge Economy of the Korean government, works to establish policies regarding paperless trade. In parallel, the private sector e-Trade Facilitation Committee consolidates the views and requirements of the private sector, including trading firms, banks and shipping lines.

Fifth, more attention needs to be paid to international coordination in terms of using international standards. A one-stop service can be provided through data harmonisation; reducing the number of data fields required to apply for the regulatory requirements, and customs declaration. Analysis performed on all required documents and through a process of simplification, the data fields are optimised and integrated in e-documents created by using international standards. As a future initiative for the development of the single window, KCS is currently working to lead the establishment of a global single window, that will allow for the exchange of data with other countries.

5. Conclusion: Lessons from Korea

Single window is an attempt to overcome the fragmentation in government activities that has plagued customs administrations and the private sector across the world. It does so by fostering coordination among ministries and levels of government; by promoting information sharing among different agencies; and by creating policy integration to achieve more encompassing objectives.

Research on the implementation of single window needs an integrated approach because it requires the combined effort and efficiency of a number of government agencies as well as the private sector. In theory, the logic of interagency coordination is not only the summary and advancement of innovative practices in the context of a new era, but also a hybrid product of traditional research and wisdom, and represents a combination of different theories. In order to offer a conceptual framework, this paper focuses on interagency coordination of major policy and management issues in the implementation of single windows, using the case study of Korea. The main findings of this paper are as follows:

- Customs administrations appear to be a dominant single window service provider either alone or in collaboration with other government agencies in many countries. Single window implementation in Korea was led by its customs service, backed by strong political will and budget allocation, as well as a national trade committee with participants from private industry associations, including those from small and medium-sized enterprises.

- Interagency coordination at the policy-making level provides a channel to uphold political will and support for the project. To be more specific, the lead agency should set up and chair an interagency steering committee with private sector representation as early as possible. The steering committee will consider policy issues and set the direction for the subcommittees to construct the necessary procedures and implement the single window system (Koh, 2013). This will ensure the private sector's support and usage of the new system upon completion. And this kind of steering committee may draw its membership from a national trade facilitation body, as was the case in Korea.

- A taskforce for coordinating different agencies related to a single window is important for its establishment, especially in the initial stage. It minimises trial and error during the implementation by formulating the overarching strategy, which encompasses the goal and objectives of the single window project, the roles and responsibilities of involved parties, and the timeframe and roadmap for the project. In determining the needs of all participating agencies and stakeholders, a full appreciation and clear understanding of the other agencies is required. Organisations strive to maintain their interests, policies and core values. These must be taken into consideration in order to facilitate interagency coordination.

- Purposeful interagency coordination is essential for promoting the development of single windows. Proper institutional arrangements are necessary, but are not sufficient. They provide frameworks for coordination, but not the engines that drive coordination toward its goal. Therefore, an interagency coordination strategy is extremely important, including structural coordination, procedural coordination, public-private coordination, technical coordination and international coordination.

The creation of such interagency coordination mechanisms does not, however, ensure seamless interagency coordination, especially for crosscutting issues emerging from the implementation of single windows. Consequently, it is necessary for countries that have established or wish to establish single windows to make full use of the procedural arrangements and technical instruments available to facilitate interagency coordination. In addition, formal institutional arrangements should be put in place to facilitate the participation of all stakeholders in the development of a single window, including relevant government agencies and private sector representatives.

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Notes

1 But in the case of Korea, a more comprehensive concept of single window was adopted and more functions were added to it. In addition to regulatory procedures that are usually managed by government authorities, Korea included some private business areas in the concept of single window. For example, the banking sector which performs such the role of trade financing and payment is included in Korea's model. Also, Korean traders have connection to logistics areas through the single entry point. Eventually, global trading partners will be a target of single entry point connection in Korea's model.

2 Established by Korea Customs Service, CUPIA is a leading promotion association specialising in the customs information technology sector in order to implement efficient and effective computerised customs administration system for foreign customs. CUPIA's areas of focus include the operation and maintenance of Korea Customs e-clearance system, UNI-PASS; R&D for customs standardisation; client services (help-desk call center of Korea Customs Service) customs modernisation and customs computerisation consultancy; technology assessment; project management; international customs information analysis and service; and promotion of UNI-PASS system and its technology. CUPIA aims to provide efficient and useful Korea Customs e-clearance system for the advancement of customs information and communication technologies. Its purpose is to contribute the advancement of ICT, the promotion of UNI-PASS and the development of customs modernisation and computerisation for foreign customs by providing the latest Korea Customs technological advances and international recommendations needed for the planning, design and operation of global customs administration system and related customs information services, in close collaboration with customs, governmental organisations, companies and groups, etc.

3 In Thailand, the Cabinet appointed the National Committee on Logistics Development (NCLD). It consists of permanent secretaries from economic-related ministers and representatives from trade-related associations. While the engagement of the National Competitiveness Development Committee (NCDC) in the project reinforced strategic integration and thus mutual commitment among high-level decision-makers, the appointment of NCLD brought together the high-level management to plan and monitor single window implementation. See Untied National Economic Commission for Europe, Single Window Implementation Framework, United Nations, Geneva and New York, 2011.

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