

MEASURING THE EFFECTIVENESS OF NATIONAL SINGLE WINDOW IN MALAYSIA AS TRADE FACILITATION TOOL

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Introduction

International trade is generally an exchange of goods from one country to one another to fulfil the supply and demand between nations which evolved broader supply chain activities. It normally involves three categories of cross border movement, namely cargo, people and modes of transport either land transport, air transport, or sea vessel (Choon, 2011). Beyond the physical movement of goods, there are detail information that entwined with the cargo that reflects the status of the cargo (ADB, 2009a). Cargo information management plays an important role to measure the supply chain process efficiency, public administrators efficiency and legislative impact on market efficiency (Fudong & Jiang, 2005). Therefore, management of information at international border is very important because it determines information traffic during clearance of goods at the border (Djankov, Freund, & Pham, 2006).

Literature Review

Trade Facilitation

In 1998, trade facilitation was introduced by the United Nation as a potential solution to the world trade with the objectives of simplifying the trade process and minimizing transaction costs in international trade while maintaining effective levels of government control. Trade facilitation is defined as *“systematic rationalization of customs procedures and documents. In a broader sense, it covers all the measures that affect the movement of goods between buyers and sellers, along the entire international supply chain”* (ADB, 2009a). As indicated in the trade facilitation action agenda, the establishment of a single window will force authorities to collaborate and streamline their processes, to collaborate and consult with the business community and also lead to coordinated border management, cutting lead time not only in the administrative procedures but also in the actual border-crossing (Pontén, 2011).

Single Window

The single window concept was created as part of an initiative for a solution to impediments to trade from trade procedures and documentation perspectives. Trade procedures are divided into commercial, transport, regulatory and financial categories. According to a study conducted by UNESCAP in 2001 and 2002 in a few trade friendly countries in Asia, for an export procedure, trade will interface with 15 parties, 24 documents and approximately 700 data elements for a total transit time of more than 22 days (ADB, 2009b). The phenomena in trade are becoming an unnecessary burden towards the buyer and seller due to the existence of the additional cost of trade procedures through the requirement of exchange of information and documents between parties. Therefore, Single Window recommendation was developed as part of the trade facilitation agenda to eliminate or minimizing the procedures by enhancing efficient information exchange.

Single Window is defined by UNECE in their Recommendation No. 33 as *“A facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once”* (UNCEFACT, 2005). In another word, Single Window is an adoption of ‘standardization’ element of the trade facilitation concept that was derived by UNCTAD in 2002 which emphasize on international standard through agreed format, procedures and information practice for all member countries (ADB, 2009a). Single Window could assist government to have a better risk management handling and improve security management gain from traders’ compliance while traders in return will gain a transparent rules and productive public (ADB, 2009b).

The development of Single Window in the logistics industry is associated with paperless trading; an adoption of information system management whereby a comprehensive framework of information flows has been developed in order to trigger the movement of goods (Graiger, 2010). Single Window are closely related with ICT (Information Communication Technology) as a key enabler of the speed of information transfer but still allow the provision of hardcopy documents transaction in the operation (UN/CEFACT, 2005).

Malaysian Single Window

The emergence of National Single Window in Malaysia was initiated from the adaption of trade facilitation measures developed by UNCEFACT purposely to facilitate the trade through effective management of information (UN/CEFACT, 2005). Thus, a committee was set up in the mid 1990s and led by the Ministry of International Trade and Industry (MITI) that brought to the appointment of Dagang Net Technologies Sdn Bhd to serve as national IT service providers to develop a reliable framework for the operation of Single Window in Malaysia. Since then, Dagang Net Sdn Bhd has become the sole assessment service providers to design, develop, manage and operate NSW system in Malaysia until 2014, after another contract renewal in 2009 (Choon, 2011). Single Window in Malaysia is design to operate in electronics means to assist the clearance process between trade community and custom office at the border. This trade community consists of port operators, shipping agencies, forwarding agents and traders. In the existing structure, National Single Window consists of five core services namely Electronic Declarations (e-Declare), Electronic Manifest (e-Manifest), Electronic Duty Payment (e-Payment) and Electronic Preferential Certificate of Origin (e-PCO) to cover basic cross boarding activities (UNNExT, 2010). Figure 1 shows simple diagram on information transaction process in national single window from the users to the respective authority. The submission process will be assisted by system moderator currently host by DagangNet Technologies Sdn Bhd that will act based specific request on main five core services.

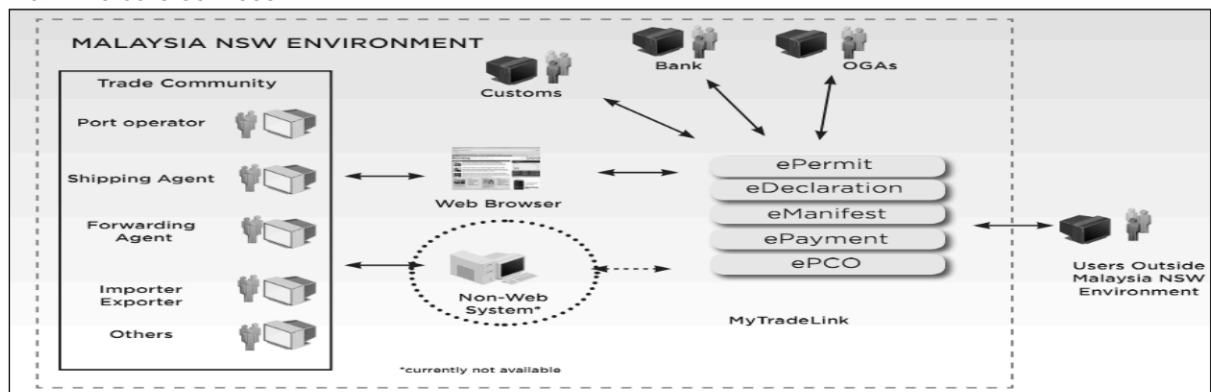


Figure 1: Malaysia single window environment system operational map. Source: UNNExT. (2010). Case of Malaysia's National Single Window. *Towards Single Window Trading Environment*, (Brief No. 04), 1-8. Retrieved from <http://www.unescap.org/unnext>

Research Methodology

Case Study Method

The core strategy of this research is the individual experience of the subjects interviewed, represented through narrative analysis and interpretation to determine any pattern or trend especially for further research efforts. The target audience is specific and focused on the group of users from private and public sectors unique to the national single window service in Malaysia particularly freight forwarders in the operation line.

Within the qualitative paradigm research, sampling size is not judgmental referring to the nature of this research, which adopts the phenomenologist point of research. The sample selection may be small to be more focus and maintained the closeness to the situation and transform them to a pattern (Hussey & Hussey, 1997). This research adopts single window private users as the unit analysis. It represents various types of organizations with a different portfolio in the industry including freight forwarders, shipping agent and traders. The percentage of respondent is selected according to purposive sampling as it allows researcher to examine a selected group of subjects (Singh, et al., 2006). 21 participants were selected

active national single window users in Klang Valley area. The users view were taken from of regulators and freight forwarding agencies. Majority of the participants are participated directly in the cross border clearance at Port Klang and Kuala Lumpur International Airport as applicants and authorities accordingly.

The main data was collected based on in-depth, open-ended interviews using a prepared interview guidelines. Average interview length is one hour for each participant.

According to Glesne & Peshkin (1992), data analysis in qualitative research is managing, filtering as well as selecting data using detail judgment and interpretation. It is spelled out using an entails process consist of sensing themes, constant comparison, recursiveness, inductive and/or deductive thinking and interpretation to generate meaning (Ruona, 2005). In this research, interview session voice data was properly recorded and data were translated and filed according participants' unique code for easy references and pseudonyms were used to maintain its confidentiality. Hence, the data were transcribed and analyzed to extract out the themes that were highlighted by homogenous groups, who share the same interest like freight forwarders and traders as its main users.

Findings

After each interview, common themes were identified across interview transcripts. Seven (7) measures were found from the interviews data and were provided in Table 1.

No	Elements	Factors
1	<ul style="list-style-type: none"> • System ownership • Security • Internet Communication Technology (ICT) • Institutional Collaboration • Financial Facility • Data Harmonization • Investment Incentive 	Policy establishment
2	<ul style="list-style-type: none"> • Authority Collaboration • Data sharing • Trust 	Institutional Cooperation
3	<ul style="list-style-type: none"> • Publicity • Resistance to change • User knowledge • Information channel 	Stakeholder Awareness
4	<ul style="list-style-type: none"> • System ownership • Data security • Value added services • Administrative custom evaluation 	Electronic System Reliability
5	<ul style="list-style-type: none"> • Training availability • Training schedule • Training module • Electronic system literacy 	Training
6	<ul style="list-style-type: none"> • Mobilized equipment • System investment • Telecommunication infrastructure • Financial facility 	ICT Supporting facility
7	<ul style="list-style-type: none"> • Process re-engineering • Timeliness • Trust accountability • Data sharing 	Simplified Procedure

Table 1: List of measures for an gathered from user's point of view.

Policy Establishment

Most of the participants are unanimously agreed that government policy plays a vital role to encourage single window implementation. This particularly leads to the need of coherence

principle through government policy to highlight segregation of the single window implementation and integrated border management effectively towards accomplishing single window mission statement. Under this measure there are seven (7) supporting elements. Policy according to the participants should clearly underline the system ownership for national single window. It is preferably belongs to the government and is also operated by government to avoid the possibility of having a personal business interest that may lead to other negative consequences. It also highlighted that data security policy should also be emphasised to both public and private users because both parties were very sensitive in terms of data status. The public authority concerned about few threats. Among others, are potential data manipulation from smugglers that will harm the national security especially for highly sensitive items such as medical drugs. For private users, main concerned was the potential data leakage to their competitors. The policy should also embed the element of internet communication technology, especially on the mandatory single medium of transaction by waiving the hard copy submission. Therefore, it will highlight the importance of ICT in national single window which able to promote greater efficiency. The national single window will also need a policy to align the institutional collaborations. This was due to the involvement of multiple government agencies that rule by different jurisdiction and portfolio. Therefore, the national single window needs to highlight the institutional collaboration in term of commitment to cross border activities. The findings also showed that the financial facility was also important in order to monitor those agencies or business who needs support to initiate an in-house system to promote operational efficiency. Consequently, data harmonization is required by various agencies during customs clearance to bypass the potential bureaucracy along the clearance chain. In addition, the data demonstrated that, the investment incentive should be given to those, who has made an effort by putting in their investment for national single window value added network in encouraging more supporters to the national single window. Those policy elements have led to the effective measures of national single window.

Institutional Support

Institutional collaboration was identified in this research as the second factors contributing to national single window implementation. Within this research the 'institutional' aspect is referring to the public agencies who are responsible as an appointed authorities for the purpose of tax collection as well as for trade protection in terms of security and control in cross border clearance. In this aspect, the users feedback and opinions were presented to the current institutional platform for national single window practice. The opinion was driven by the institutional support towards the single window as part of facilitation tools during border crossing processes. There are three (3) elements derived from the interviews representing this measure including authority collaboration, data sharing and trust. The highest debate among participants was authority collaboration. It is found that others border authorities (other than Royal Malaysian Customs) towards single window and it was considered as one of the biggest hurdles discussed by the users. The data showed a conflicting roles among border authorities that end up with a formulation of redundancy in border clearance processes due to a layer of procedures involving agencies that jeopardizing simplification border crossing process. Another point that was also being highlighted is regarding the institutional support is the data sharing among the agencies. The current single window requires the applicant to make a repetitive process involving certain data to different agencies in order for acquiring certain approval. There were also lacking of trust between agencies that lead to the emplacement of individual policy by agency as additional control measures that conflicting to a single window.

Stakeholder Awareness

Participants are also being asked about the awareness with the single window system in their daily operation. According to participants response the result was lead to certain agreement that support the awareness factor as one of the important measurement in ensuring single window effective implementation. Under this measure publicity plays a vital role in the single window community. The majority of the business users agreed that low publicity efforts led to a low commitment level of business sector towards single window. There is only a certain group of companies who work closely with the government or having adequate info about the single window development. Whereas the majority of the participants responded that they personally hold very limited knowledge about single window and not aware of the latest development. The stakeholder awareness also influences by the users' behaviour who resist

to change with new technology. As a result, it led to passive acceptance towards the single window system, therefore they have very limited knowledge on the latest single window development. On the other hand users knowledge also plays an important role towards national single window awareness. Participants from both freight forwarders and regulatory bodies agreed that level of knowledge depends on the key single window person in charge in each agency or company. Knowledge about single window affecting the person in charge interest to keep themselves aware about single window development. Other elements agreed by the participants were the information channel. The current information channel for the latest single window development are very limited. It is highly depended on the announcement in the service provider's website or through close meeting at the leading ministry. Therefore the information about the latest single window development are hardly arriving to the layman end.

Electronic System reliability

The majority of the interviewed participants emphasised that electronic system reliability has become one of important impediment towards electronic service that gave impact to their businesses. According to a participant, system integrity plays an important role in the electronic declaration because once service fails it affects companies' performance. The effective single window is directly measured by the system reliability from the element of system ownership. The current system is based on public private partnership shares. The government owns the data, but the system run by a private company. This scenario creates a tense atmosphere among the business because the integrity of the system were doubtful as far as they are concerned the private company have their own interest. It then leads to another element in the electronic system reliability measure which is data security. Based on the participants' response the data are administered by the host company and it is solely based on trust without proper agreement between users and the host company especially regarding the data status. Thus, its raised data security concern among the responded participants. Moreover, according to participants, the current single window doesnot show any value added activities. It is just a transformation of manual data submission to an electroic medium. The procedures and th processes are maintain the same with the additional of electronic submission as a 'pre-clearance' process. The actual border clearance process still undergoing customs hardcopy evaluation process which create hassle through a redundant procedures by embedding electronic submission on top of hard copy validation to the customs desk officer.

Training

Based on the interview result, training was also identified as an effective measure for national single window. There are four pertinent elements that were heavily discussed under this measure, namely training availability, training schedule, training module and electronic system phobia. The result reveal that there were limited single window training session for users available to the community. The training according to the participants are highly important especially to the community new comers from both public agency users or industry as an introduction to single window users. Current practice new comers will be trained by the senior staff who had attended single window official training due to lack of training support for single window. The third element, training schedule is also highlighted as one of the important aspect in the training for single window effectiveness. Consistent schedule allow potential users plan for adequate training session before they practice single window. Another pertinent element that highlighted training as measurement for effectiveness of single window is the training module. The current training modules are limited to the users of the five core services. Each training module are offered according to registered uers for the core services that limit opportunities to new users joining the programe. The last element that highlight training as an effective measure to single window is the electronic system literacy. Interview result revealed that majority of the users are not information technology (IT) savy, therefore it is very important to ensure that the users are familiar with the system to avoid users resistant.

ICT Supporting Facility

It is indeed important to have a proper device or equipment to support the internet communication technology (ICT). This includes the mobilized equipment to keep the users connected to internet connections. The users, especially the operation staff who involved with ground operation werenot always available in the office. Therefore, supporting device

were very useful to enhance the national single window service operation. Thus, the commitment to invest installing the system by the public and private stakeholders are vital in ensuring successful implementation. The single window implementation needs an advance internet solution with a sufficient equipment for its consistent performance. Consequently, it can assist sending and retrieving data or information from the main provider. The users fully support the importance of an effective system in implementing a successful national single window. The respondents also highlighted that the telecommunication infrastructure plays a pertinent supporting role to ensure the stability of the system network. These telecommunication infrastructures includes the internet networking service and the electrical supplies at the every critical location will facilitate the single window delivery. The last element to measure an effective single window service is the financial facility given by the government. Supporting these efforts were important to encourage users, especially from small and medium size business operators to participate actively by having their established internet host system at their end instead of using third party provider service which is more costly in the long term.

Simplified Procedure

The existing scenario for the national single window in Malaysia showed that although the electronic system was set up to support the border crossing activities. For Royal Malaysian Custom, the single window implementation was exceptionally relevant because it facilitate their operation. But for the other government agency, the single window was seen as additional duty that need to be managed wisely. Under the simplified procures there are four (4) main elements that highly discussed by the participants including process re-engineering, timeliness, trust accountability and data sharing. The re-engineering process was seen as critical element duly to the reason that the current procedures in cross border clearance process conflicting single window objective. Obviously, the current its involves multiple submission and approval from various authorities for border clearance formalities. Thus, redundant processes lead to urgency of re-engineering process for simplified procedure. Likewise, timeliness also contribute to simplified procedures in measuring effective single window. The current back to back practice for verification and approval from various agencies for border clearance affecting single window performance through the messy procedures. Its lead to the third element related to trust accountability. Layers of approval portrays low level of trust accountability between border agencies because it shows that among agencies are not acknowledging each others credibility in getting product shipment release. Thus, its end up with individual agency judgement to confirm the appropriate undertaken control measures for certain item before cargo release. The final point for ensuring this measure contribution is the data sharing element. Data sharing among border agencies are highly demanded in single window to creates simplified procedures for trade border crossing environment. In this sense, according to participants the data sharing are possible practice through electronic single window that be able to minimize layers of agencies for approval purposes in border crossing activities. Therefore, the electronic single window will really fully utilized and creates effective single window service.

Conclusion

In conclusion, since the national single window is one of the main components that facilitate the cross border activity, it is crucial to address the factors affecting its effectiveness especially from the users' perspective. This is because users use the system daily and therefore they are the best category of respondents to assess the effectiveness of the system. Thus, it is also derived from this research that the measurement of the effectiveness of national single window did not influence by one single factor. In fact the effectiveness is influenced by a combination of factors that are affecting each other. The measurement factors are indeed interpreting between one another, creating a unique symbiosis in the single window community. In single window implementation, it is not a matter of a stringent policy implemented or adapting the best system in the world, but it totally depends on great cooperation among the stakeholders involved in the system. Greater benefits could be exploited through the commitment of every stakeholder that would complement each others' strength and weaknesses.

Though the policy establishment is the root of all factors, however other factors are similarly important. The stakeholders, especially the main border regulatory body really need dramatic action in the international border clearance environment which possibly facilitate the border activities at the same time protect the national and international interest. On the other hand,

the regulatory agencies, the financial institution and the business stakeholders should aware of each others interest to enhance harmonization within the community. The electronic medium is compulsory to the fact that the entire single window need a certain transaction tool so that standardization could be established at the centre of operation that would improve the effectiveness of its implementation.

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