Re-evaluate the readiness of ASEAN Economic Community (AEC): Conceptual review from Malaysia's single window

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Abstract

ASEAN members (Singapore, Malaysia, Thailand, Brunei, Laos, Cambodia, Vietnam, Philippine, Indonesia and Myanmar) have worked tightly since decades to improve Asia economic. These ten countries' leaders had agreed to form ASEAN Economic Community (AEC), a consortium for better flow of information among members, free movement of goods, capital and investment. In order to achieve this target, all members need to reach mutual understanding and make sure their national Single Window is well implemented before enter into ASEAN Single Window. However, the differences in ICT infrastructure, various institutions, IT literacy, etc. within and among ASEAN members may become the obstacle. With no delay, AEC was formed in 2015, and its following 3 years performance was significantly ineffective as expected by many economists. It is due to most of ASEAN members' single window is not well prepared due to their country's development from the perspective of technology and other political factors. This study is important to re-evaluate the readiness of ASEAN members in AEC by comparing the Information Technology (IT) development among all members. Furthermore, European Union (successful Economic Community) was chosen as an example to review the requirements for a single window which can be served as the improvement for ASEAN Single Window.

Keywords: ASEAN Economic Community, information technology, single window.

1. Introduction

National single window is a virtue system established for the trade facilitation to increase the efficiency of the government delivery system and provides benefits to all members of the trading parties (Wong, 2016). It is served as a single point of entry for the submission of data and information to avoid repeated duplicate of resources which can fasten the trade system, reducing processing time and boundaries' barriers. On 20 November 2007, ASEAN leaders had agreed to form ASEAN Economic Community (AEC) for free movement of goods, capital and investment by 2015 (Thanya, 2012). On the same time, ASEAN Single Window must be integrated. Under the agreement to establish the ASEAN Single Window, the Nation Single Window will be implemented in Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand by 2008, and in Cambodia, Lao PDR, Myanmar and Vietnam by 2012 (USAID, 2010). After the establishment of the AEC, Malaysia's exports have increased with a rising from RM213.4 billion in 2014 to RM230.93 billion in 2016 (The Star Online, 2017). It is reported by Malaysia External Trade Development Corporation (Matrade). Besides, Malaysian small businesses are also expected to grow approximately 35% and the revenue from exports expected to grow 12%. It shows that AEC has benefit Malaysia's dynamic small businesses (Wong, 2018; Malley, 2016). However, not all ASEAN members had enjoyed benefits from AEC because of most of their single window is not well prepared due to their country's development from the perspective of technology and other political factors.

In recent years, much cynicism as to whether ASEAN remains on track to achieve its goal for economic integration has surfaced. There is also a lot of political rhetoric involved when it comes to the AEC and ASEAN members are always upbeat about the progress and level of integration they had achieved (Monash University, 2017). Besides, ASEAN Business Outlook Survey showed that just 4% of respondents have confidence on the development of AEC (Fensom, 2015). Some scholars believed that AEC is formed in rush because the durations given to all members are different and too short for some members, especially Lao PDR and Myanmar. Therefore, re-evaluate the readiness of ASEAN members is in need to make sure the effectiveness of AEC in future. There are many considerations for its effectiveness. The main concerns are the barriers to trade exist as a result of a lack of trade facilitating infrastructure and advance technology for networks facilitation is needed which can provide the smooth transaction for all members in ASEAN (Karim & Ramlah, 2007). Besides, the different in ASEAN countries such as living standard, government policies, poverty and culture may become the obstacles (Jones, 2017). For example, the less developed Southeast Asian countries, Cambodia, Laos, Myanmar and others are still fall under low incomes countries which have poor IT infrastructure (Hussin & Saidin, 2012). Green (2008) found that in terms of the economic growth, the countries in ASEAN are generally different from each other ranging from poor, rural to the developed nation such as Singapore.

2. Literature review

The economic development of South East Asia is expanding rapidly, especially Malaysia as one of the major players in Asia international market which has formed the vision to become another high income country after Singapore by the end of 2020 (Wong, 2017). In this study, European Union (successful Economic Community) was chosen as an example to review the requirements for a single window which can be served as the improvement for ASEAN Single Window. EU is viewed as one of the world's oldest integrations of economy which has achieved high degree of maturity and effective results. More than 10 countries work hand by hand in EU where this union had generated 33.9% of the world's economic output reported by World Fact Book. As the result of successful integration, the strongest country in EU, Germany itself had produced $4.2 trillion (Amadeo, 2018). Even though European countries are having different culture compared to South East Asia countries, the way how they succeed the integration and the characteristics of EU can be taken as the requirements to form a successful consortium. Besides, efforts done by EU in advancing information technology since 2010 can become the critical references for ASEAN members to further enhance their single consortium (AEC).

2.1 Evaluation on European Union (EU) regarding to the information handling

The population in Europe is kept increasing and the average life expectancy has increased to 80 years old in year 2010. This change has brought significant challenges to Europe's society. However, this challenge can be solved by the helps of Information and communication technology (ICT). This is because ICT can help people to improve quality of life and fasten the daily transactions (Chen & Mcqueen, 2010). Therefore, European Union is very encouraging the development of ICT in order to form the knowledge societies among the members. For example, there is an action plan on ageing well in the information society introduced in 2008 which support EU's visions to increase the IT awareness (European Commission, 2010).

Table 2(a) extracted from Internet World Stats (2018) shows the percentage of EU internet users and usage in global. From the research, it clearly shows that the population in EU is just consists of a small portion in the world (6.7%) but its internet users have reached more than 10% of the world's populations. Besides, the internet penetration rate has also reached 85.7% of the world's population.

Table 2(a): European Union internet users & usage

	Population (2017)	Internet user	Penetration (% population)
European Union	6.70%	11.30%	85.70%
Rest of World	93.30%	88.80%	49.20%
Total	100%	100%	100%

2.2 Limitation on information processing faced by European Union

Data protection and standard of ICT procedures & legal requirements were discussed.

2.2.1 Data protection

The personal information process is an issue concerned by most of the EU members due to the data protection. Personal information refers to all kinds of information that directly or indirectly can be recognized to a living, individual physical person such as personal data, birthday, and family or employment condition.

In European, there is a council called European Parliament and the Council Europe's Directive 95/46/EU in charged on the protection of individual's data when handling the personal information (Hanlon, 2012). This directive enables the free flow of personal information among EU countries with certain protection procedures. However, it also allows EU countries to transfer personal information to another country within the union even though that country does not have sufficient protection level (CODEX, 2013). It can be done as long as the country representative can guarantee the personal information will be protected. The reason is due to the fair treatment to all EU members in the online transaction. EU also faced the risk on transmitting personal information abroad. Some European data controllers may simply transmit the data to countries outside Europe such as Japan or any other country without domestic data protection laws (Christopher & Timothy, 2011).

2.2.2 Standard of ICT procedures and legal requirements

The different ICT procedures among EU members will create the problem for information handling in single window. Even though all members in EU have reached the mutual agreement on single window concept, the lack on common standards for information assessment procedures will result in conflict among some members (Europe Economics, 2011). For example, the health and social care issue. The differences in social and health care schemes within the EU members result in different legal requirements (European Union, 2012).

2.3 European union best practices in informational technologies on single window (e-maritime and port community system)

This system has been implemented in European ports to serve as an efficient system that would facilitate procedures and information exchange in port areas and the logistic chain among EU members (ESPO, 2012). In EU main economic activities' supply chain, maritime port plays an important role in the market. It consists of 90% Europe's international trade and 40% of intra-community trade. Therefore, EU needs an effective electronic platform to monitor and facilitate the information flows. ICT plays an important role in the implementation of e-maritime and port community system because it can

facilitate the information flow of goods at different international ports (Howard, Kay, Omulf & Maria, 2012). The developments in international trade had increased the needs of ICT due to the globalization. Besides, ICT is needed to make sure the logistic can be done smoothly in international supply chain. It has been known as "Best practice guide on Single Window".

By using this system, the transferring goods become more efficiency, reduce the administrative costs, reduce the human error and time in the information transfer process and enhance port's merchandise dispatch procedures (George, Maria, Nikitakos & Nikolaos, 2011). Besides, the application of ICT in port system can reduce the waiting time at border, secure processing data and provide accurate information to transport operations (Graff, 2009). For the EU members, the introduced of e-maritime increase the opportunities to have new transactions which include new users among the countries by simplification of administrative (SKEMA, 2009).

2.4 Evaluation on Malaysia's readiness on single window and IT infrastructure

ASEAN leaders consist of Singapore, Malaysia, Thailand, Brunei, Laos, Cambodia, Vietnam, Philippine, Indonesia and Myanmar. Each member has different standard of infrastructure, information and communication technology, human capital, culture, political policies and other considerations. Malaysia is not ready to implement AEC in the aspects of information sharing, management and control and IT infrastructure readiness. It is because Malaysia itself has no sufficient ICT readiness and most of the members in ASEAN are not ready as well.

2.4.1 Digital economic readiness among ASEAN countries

A survey done by Economist Intelligent Unit (2018), Malaysia is ranked as the 27 out of 82 world's largest economies in the technological readiness ranking. This unit is form by 650 analyses from global to forecast the political, economic and business conditions in 200 countries. This ranking is a measure of the quality of a country's ICT infrastructure and the ability of its consumers, businesses and government to use ICT to their benefits which is critical to implement single window. This is very important because the aid of ICT in trade facilitation can make sure the economy becomes more transparent and efficient (Cador, Melo & Portugal, 2007). Table 2(b) shows the technological readiness ranking.

Table 2(b): Technological Readiness rankings and score (Malaysia) in 2018

2018 rank (of 82)	2017 rank	Country	2018 score (of 10)	2017 score
27	29	Malaysia	7.47	6.91

For other ASEAN members, only Singapore, Thailand, Philippine, Vietnam and Indonesia are found from the list. In other words, only these five countries together with Malaysia are

having their good IT infrastructures to facilitate the online trading but not all ASEAN countries; even though AEC is already formed in 2015. When compare among these six countries, their gap in rankings is huge. It will increase the difficulty to work together for information sharing. Table 2(c) shows their technology readiness ranking.

Table 2(c): Technological Readiness rankings and score (Others) in 2018

2018 rank (of 82)	2017 rank	Country	2018 score (of 10)	2017 score
1	3	Singapore	9.72	9.16
49	50	Thailand	5.78	5.22
55	66	Philippine	5.55	4.66
65	67	Vietnam	4.66	3.53
67	69	Indonesia	4.38	3.25

2.4.2 Information technology literacy development between Europe and Asia

Information technology literacy is a set of skills needed to find, retrieve, analyse and use information for trading purpose. Single window system will be monitored by ICT infrastructure from every member. It is very important to make sure all countries have sufficient IT literacy, professionals and human capital to facilitate the system. Strong information technology literacy enables the member aware of resources available; know how to facilitate online trading, evaluate the e-commerce and communicate the information conscientiously and ethically (Diljit & Tan, 2008).

When compare with Europe, Asia who has 55.1% of world's population is still very lags behind in the internet adoption. In terms of the population and internet users between Europe and Asia, the internet penetration rates in EU are surpassing 50% of the total population. More than half citizens in Europe are get used with internet services which is a very important requirement to form single market. Table 2(d) shows the comparison between Europe and Asia in Dec 2017. It is clearly stated that AEC is failed due to most citizens from ASEAN are poor in using internet as the platform for their daily transaction.

Table 2(d): Composition of population vs. internet users for Europe and Asia, December 31, 2017- update

Country	Population	Population (%)	Internet Penetration (%)
	2017	2017	2017
Asia	4,207,588,157	55.1%	48.1%
Europe	827,650,849	10.8%	85.2%

2.4.3 Other conditions in ASEAN countries Affect the ICT infrastructure

Economic condition and internet speed were discussed.

2.4.3.1 Economic condition

The economic conditions will affect the country's ICT infrastructure. Government plays an important role in providing good ICT infrastructure to support the e-commerce industry. It is the key to enter into single market because without improvement in ICT, the law enforcement as well as electronic trading support services will not growth smoothly (Pakeh, 2012). However, different economic conditions in ASEAN countries may affect the implementation of single window. For example, Malaysia, Brunei and Singapore have the good economic conditions to support ICT infrastructure but not for other members (Maftuh, 2011). When evolve into ASEAN Single Market, there will be the IT gap among nations and make the online trading become harder.

According to ASEAN Working Group (2010), higher GDP per capital countries such as Brunei, Singapore and Malaysia have higher internet penetration rates but lower GDP per capital countries such as Cambodia, Lao and Myanmar have lower penetrations rates.

2.4.3.2 Internet speed among ASEAN members Q4'2016

Internet connection speed plays an important role in the effectiveness of ASEAN Single Market. The faster speed of connection can make the online transaction become much easier and smoother. According to the research, Malaysia was listed among the slowest countries in the world for loading web pages. Result shown that the average web page loading speed in Malaysia is more than 14.3 second, ranked as one of the world slowest (Maierbrugger, 2017). Table 2(e) shows the average connection speed in ASEAN. Only six countries are listed in global rank whereas other AEC members are out from the rank (super low connection speed).

Table 2(e): Average connection speed in ASEAN

Global Rank	Country	Q4'16 Avg. Mbps
8	Singapore	20.20%
31	Thailand	13.30%
64	Vietnam	8.30%
66	Malaysia	8.20%
80	Indonesia	6.70%
108	Philippines	4.50%

2.5 Malaysians' concept on IT usage and needed

A survey done by Malaysian Communications and Multimedia Commission (2017) determined that the percentage of internet users in 2016 was 76.9%. The reasons for not using internet are shown in table 2(f). It is clearly shows that many Malaysians are less educated to use internet. Besides, the high internet cost is discouraging citizens to adopt higher speed connection due to the charges are overpriced. Malaysia is known to have one of the most expensive internet rates but comes with lowest speed in Southeast Asia. Further, the internet coverage is also very poor where the connection is always unstable in most of the places as the result of slower bandwidth and lack of fibre optic which discovered by IT professional (Kaur, 2017).

Table 2(f): Reasons for not using internet

Reasons	%
Lack of confidence or skills	58.1
Lack of interest	46.3
Not enough time	32.7
Cost too high	28.1
No internet access	26.9

2.6 Information technology security concern - perceived risk

The important of security risk has been acknowledged in the implementation of single window. This issue has raised the public concern especially in Malaysia's banking industry (Ndubisi & Sinti, 2006). It is also treated as the barrier in the adoption of electronic commerce regardless age group, education and income level (Poon, 2008). Besides, perceived security risk is viewed as the major obstacle in the evolution of nationwide single market due to the confidential data may be jeopardized easily during the online transaction (Sonja & Rita, 2008).

In other words, trust in very important in improving ASEAN single window. Yousafzai, Pallister and Foxall (2009) stated that the successful of transaction through electronic form, trading information and trade facilitation depend on whether the ICT system from different parties is perceived trustworthy by the customers. In Malaysia, the government is concerns about this issue due to the gaps in IT are different among ASEAN members, such as the online banking infrastructure (Wong, 2017; Alain, Chong, Ooi & Tan, 2010). Table 2(h) show the trust of the internet perceived by Malaysians. 55.1% neither trust nor distrust what they read on the internet.

Table 2(h): Trust on internet

	%
Do not trust	13.1
Distrust	6.9
Neutral	55.1
Trust	22.4
Completely trust	2.4

Online trading in Malaysia is still considered a starting stage (Rajaainul, 2010). Most of the SMEs in Malaysia are left behind in online business transaction. Although the e-commerce has been implemented in Malaysia for many years, most of the Malaysians still perceive internet is a medium for entertainment and communication, but not for trading. There is only a small portion of Malaysians buy online compare to western countries. One of the reasons is security issue such as information losses, theft of data, virus infection and data manipulation (Abidin & Mansor, 2010). This issue has become a major concern for many businesses and consumers when they consider to do online trading. Table 2(i) shows the purpose for use of the internet.

Table 2(i): Purpose for use of the internet

Objective	%
Getting information	76.9
Communication	74.8
Leisure	50.1
Social networking	46.8
Educational	46
Financial activities	27.2
Government services	19.6
Maintain homepage	7
Others	7.6

3. Recommendations

In order to improve the existing ASEAN Economic Community (AEC), Malaysia and other ASEAN countries besides Singapore need to put more effort to improve its ICT infrastructure and literacy through education.

3.1 Increase the usage of internet

Increase the usage of internet is the way to encourage people goes for online trading. The facilities of internet are every important to let people connected to cyber world which create the awareness of e-commerce. Malaysia can improve the broadband performance to let it becomes more common in all possible geographical areas. Currently, the broadband service is more concern on the developed cities according to the survey done by the *Suruhanjaya Kommunikasi Dan Multimedia Malaysia* (SKMM, 2011). The coverage of broadband should expand to rural areas instead of just focus on urban areas.

Besides, the WIFI infrastructure should improve further. People usually will connect to internet through public WIFI when go for information searching. It is because the public WIFI is free and it will encourage more and more users to access the internet. Research done by SKMM has shown that users will prefer to use net book or laptop when access to internet. With the availability of WIFI, they can easily connect into internet and mobile internet is expected to overtake the desktop internet. Table 3(a) shows the 83.2% users used the laptop to access the internet conducted by SKMM.

Table 3(a): Facilities to access internet by Malaysian in year 2011

Netbook/Laptop	83.20%
PC	40.40%
Smartphone	21.50%
Other Mobile Phone	13.10%
Tablets	13.00%
Game Console	1.50%
Others	0.40%

3.2 Promote IT awareness

IT literacy rate in Malaysia need to further increase to make sure all Malaysians can utilise the opportunity of online trading. Government can motivate people to make online transaction by create the awareness of advantages of e-commerce such as IT campaign. Besides, online trading procedures can be simplified to make ease of using. When all Malaysians are closed to IT and understood the benefits of online trading, they will ready to accept the concept of single market. This is because all transactions will be done online and facilitate by virtue system in single market (Alshawi & Salleh, 2005).

4. Conclusion

ASEAN Economic Community (AEC) for free movement of goods, capital and investment was formed in 2015. However, this consortium is viewed to have many problems and is in need for better improvement. The readiness of AEC has to re-evaluate as well to make sure all benefits' of all members are being protected in order to enhance Southeast Asia's economy.

There are many considerations for the improvement such as the barriers to trade, lack of trade facilitating infrastructure and high technology transport networks are needed to provide the smooth transaction for all members in ASEAN.

The implementation of AEC is not just about Malaysia but involve all ASEAN parties. When evaluate the whole societies, Malaysia and other ASEAN countries still need to work much harder toward the effectiveness of AEC. In order to get ready for a better AEC, Malaysia government needs to put more effort to improve the ICT infrastructure, increase the IT education and set the better ICT policies.

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