

Acceptance of Trade Finance Digitalization among SMEs in Malaysia: A Conceptual Model

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Abstract: The Internet is a very powerful tool and become a major challenge to service providers with the amount and scale of products and services offered online. The rapid growth of Internet and IT/IS applications used in businesses has resulted to digitalization of trade finance. However, the trade finance Internet banking services is under-utilized despite availability. Service providers that had heavily invested in trade finance Internet banking services will be very much interested to know what are the determinants that can increase the system's acceptance and utilization. The purpose of the study is to investigate the determinants that affect acceptance of trade finance Internet banking services. Small and Medium-Sized Enterprises (SME) are they key focus for this study as they are the catalyst and key contributors to national economies. This study will make contribution to banking literature by providing insights on the IT/IS acceptance. It will also help service providers to better justify their investments.

1 BACKGROUND

The Bank of International Settlements (BIS) has noted that there is no single, comprehensive source of statistics allowing for evaluation of the exact composition and size of trade finance markets. However, it is gauged that almost 67 per cent (USD 12 trillion annually out of USD 18 trillion of exports and / or imports) were transacted through trade finance (WTO, 2016). DBS Bank Ltd. (2017) also testified that trade finance powers international trade and is vital for turning the wheels of trade globally. These roles make trade finance an important pillar for banking business as it is one of the most profitable and ever-growing division. However, challenges remain in mitigating risks and improving operational efficiencies.

The Internet is a very powerful tool and it brings closer people to people, people to businesses or businesses to businesses. It can change the way we do things and also transform our life style via information technology / information system (IT/IS) innovation. Not only has the Internet demanded that individuals and businesses change their habits and even learn new skills, it has also become a major challenge to service providers with the amount and scale of products and services offered online. e-

Commerce is the latest in the evolution of business transactions using the Internet platform. In the field of financial services, Internet or online banking is defined as the use of Internet as a remote delivery channel of banking system via the World Wide Web. Services provided include bank transfers, payments, credit cards, trade settlement and others (Nasri and Charfeddine, 2012). In tandem with the rapid growth of Internet usage and IT/IS applications used in businesses has resulted the need for trade finance Internet banking services.

Simultaneously, Megatrends have been described as large, transformative global forces that impact individuals and businesses. Four Megatrends have been identified for Small and Medium Enterprises (SME) businesses, which are: (1) Digital Future and 4th Industrial Revolution (IR 4.0), (2) Rise of Entrepreneurship, (3) Globalization and (4) Community Living. Referring to Megatrend 1: Digital Future and 4th Industrial Revolution (IR4.0), we noted that technology changes business process and transforms the way people work i.e. increasingly enabling machines and software to substitute humans (SME Annual Report 2016-17). Those who can seize the opportunities offered by digital advances stand to gain significantly while those who cannot may become obsolete. Under Industrial

Internet of Things (IoT), communication is improved with connecting the embedded devices, plants, offices and companies, which enables real-time data sharing between all parts of the system and all connected parties. The trade finance Internet banking service is one of the systems or services that enables to achieve the above-mentioned in the area of handling trade transactions.

The Trade Finance Review (2016) also recognized that technology is driving change within the field. The trade arena is increasingly warming to digitization but a number of barriers to adoption persist. The acceptance or uptake of trade finance Internet banking services seems to be slow and the system is underutilized despite availability.

1.1 Trade Finance Internet Banking Services

International trade finance transactions involve numerous parties in different countries, using various documents as payment instrument or international guarantees to secure payment as agreed. Trade finance department handle or assist in simple to complex domestic and international trade transactions and hence involve voluminous data and documentations. The conventional way of trade financing is full of voluminous physical documents. Moving towards digitalization, trade finance Internet banking service is a full-featured console for the online management for trade finance businesses and transactions. It provides straight through processing via direct data entry and online transaction enquiries. This will improve efficiency and accuracy; reduce processing time, as well as cost and paperwork. The online service also enables customers to utilize and monitor their trade financing activities and status online anywhere, anytime (<http://maybank2e.com.my>).

Currently, seven banks have introduced trade finance Internet banking i.e. Alliance Bank, CIMB, Citibank, Hong Leong Bank, Maybank, OCBC and Standard Chartered. These banks provide fairly similar and standard services via Internet banking such as real-time online trade status checking facilities, online application for trade transactions and etc. The claimed benefits for businesses to use trade finance Internet banking services includes: cost savings, increase productivity and efficiency etc.

1.2 Small and Medium-Sized Enterprises in Malaysia

Effective 1st Jan, 2014, the SMEs definition in

Malaysia have been revised. For manufacturing sector, SMEs have been reclassified as companies whose annual turnover is less than RM50 million with workers not exceeding 200, from the previous definition of less than RM25 million in revenue and less than 150 workers. As for services sector, the value threshold has also been raised, with SMEs defined as firms with annual sales not exceeding RM20 million (less than RM5 million at previously) or not more than 75 workers (less than 50 previously) while micro enterprises are firms with annual sales of less than RM300,000 or fewer than 5 workers. The former Malaysia Prime Minister YAB Dato' Sri Haji Mohammad Najib announced that the number of SMEs is expected to increase from 97.3 per cent to 98.5 per cent under the new definition for SMEs. The review is right noting the changing economy and these will facilitate the country's transformation into a high income nation (The Sun, July 12, 2013).

Focusing on the utilization of ICT among SMEs, a survey conducted by SME Corporation, Malaysia found that majority of the SMEs utilizes computers, smartphones and Internet in their daily business operation. As at Q1 2017, it is found that 87.9% of SMEs participated in the survey are using computer, laptop, notebook in their business operation, 77.6% using smartphones, tablets and 69.0% adopted Internet service. Comparing Q1 2017 to Q3 2016, there is also an increase in SMEs maintaining official company website and SMEs' participation in e-commerce marketplace (SME Annual Report 2016-17). It is apparent that SMEs have acknowledged the importance of ICT and adopted various IT/IS to realign their businesses to the new technology. However, it is also found that most SMEs adopt the Internet if it fits their particular communication needs. For example, the "wait-and-see" attitude (until profitability is demonstrated) towards Internet adoption is currently prevalent among SMEs (Sadowski et al., 2002).

Specifically, on the acceptance of trade finance Internet banking services, an interview with two distinguished Heads (from one local and one foreign bank) heading the trade business in Northern Malaysia also confirmed that the acceptance and actual usage of trade finance Internet banking services is below 20 percent out of their trade finance clients' base. It is of high concern that the bank's trade finance Internet banking services is under-utilized despite availability. To address this issue and to ensure achievement of return on investment (ROI), both banks had embarked in various and continuous initiatives to increase their

system's acceptance and utilization rate. On-going campaign is also being launched to attract new customers to come on-board and to encourage the existing customers to sustain the usage of the system.

2 REVIEW OF PREVIOUS LITERATURE

Tornatzky and Fleischer (1990) defined innovation as "the situational new development and introduction of knowledge-derived tools, artifacts, and devices by which people extend and interact with their environment. The authors had identified three aspects of an enterprise's context (technology, organization and environment) that influence the process by which it adopts and implements a technological innovation. The original Technology, Organization and Environment (TOE) framework was adapted in numerous IT/IS adoption studies and provides a useful analytical framework that can be used for studying the adoption and assimilation of various types of innovation.

By applying the TOE framework, Ifinedo (2011) found that perceived benefits (representing the technology context) are a significant predictor of Internet and e-business technology acceptance among the Canadian SMEs. Scholtz et al., (2016) examined the interface usability of Enterprise Resource Planning (ERP) software system and found that interface usability has a significant impact on users' perceptions of usefulness and ease of use which ultimately affects attitudes and intention to use the ERP software. Yoon and Steege (2013) also found that website usability significantly influence customers' Internet banking use.

In lieu of organization context, Ramdani, Chevers and Williams (2013) found that top management support and organizational readiness are significant determinants of enterprise application (EA) adoption by SMEs. Gutierrez et al. (2015) found that technology readiness pressure influence organization's adoption decision of cloud computing. As such, it is apparent that technology and organization contexts have a significant impact for organization's IT/IS acceptance.

This conceptual framework focuses on the internal aspects of the organization i.e. technology and organization contexts. This is because the decision for acceptance of trade finance Internet banking services is highly based on the specific internal consideration and evaluation on the IT/IS by

the organization. Presently, acceptance of trade finance Internet banking services is based on voluntary choice and not a mandatory system to be adopted by the trade clientele.

3 PROPOSED CONCEPTUAL FRAMEWORK

In this study, the proposed conceptual framework as per depicted in Figure 1 is adapted from TOE. Tornatzky and Fleischer (1990) defined acceptance as making the technology available to the users. Featherman and Pavlou (2003) had highlighted that it is important to distinguish the difference between conducting basic e-commerce purchases and adopting e-services. In comparison to one-time e-commerce-based purchases, the e-service adoption / acceptance decision is more complex as they initiate a long-term relationship between the consumer and service provider. When an organization accepts the trade finance Internet banking services, they are entering into a business relationship with a distant and faceless e-service provider. Moreover, unlike product purchases where consumers receive tangible goods, acceptance of e-service only entitle access to the functionality provided by web-portal.

The proposed determinants to study technology context are perceived benefits and website usability. Kuan and Chau (2001) defined perceived benefits as perceived technological benefits (direct and indirect), which refer to the degree to which the IT/IS is perceived as providing the benefits to the organization. The trade finance Internet banking services provides numerous benefits such as convenience, improve efficiency and accuracy; reduce processing time, as well as cost and paperwork.

According to Scholtz et al., (2016) website usability is measured by three criteria of usability i.e. navigation (design issue), presentation (appropriateness of the layout of menus, dialog boxes, controls and information elements on the data entry screen as well as included in output) and learnability (ease with which new or novice users can start effective interaction with the system and achieve maximum performance. Trade finance transactions (domestic and international) normally involve various parties coupled with voluminous documents. Hence, it is very important for service providers to design and offer a system that is able to assist to the nature of trade finance transactions. This is because website usability can influence end user's

attitude and behavior to use the trade finance Internet banking services.

The organization context will be studied using technology readiness and top management support. Parasuraman (2000) defined technology readiness as people’s propensity to embrace and use new technologies for accomplishing goals in home life and at work. As highlighted by Trade Finance Review (2016), one of the barriers to the growth of electronic trade finance is the significant level of investment needed. Comparatively to big corporations, SMEs may not maintain a separate budget or tend to have smaller budget to commit to substantial costly infrastructures such as setup of IT/IS and also providing comprehensive training to their staffs.

Top management support is defined as involvement, enthusiasm, motivation and encouragement provided by management towards the acceptance of IT/IS innovations (Ifinedo, 2011). Decision to accept trade finance Internet banking services fall on the top management. Top management like Finance Director or Finance Manager plays an important role and is the decision maker to accept or reject the acceptance of trade finance Internet banking services.

Financial institutions or service providers that had heavily invested in trade finance Internet banking services will be very much interested to know what determinants that can increase the system’s acceptance and utilization. The study also focuses on SMEs as they are the catalyst and key contributors to national economies. Besides that, SMEs also hold the biggest percentage in market share under the financial institutions commercial customers’ portfolio.

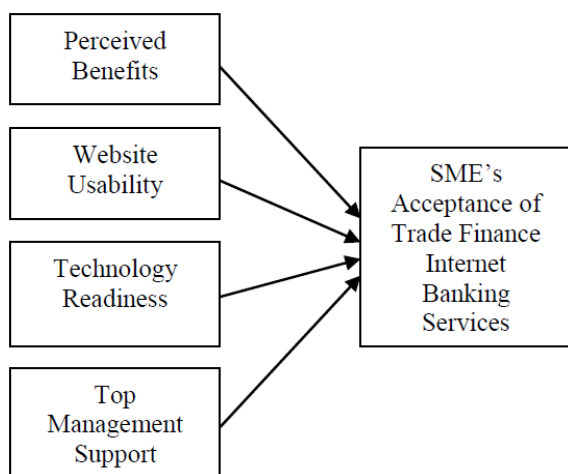


Figure 1: Proposed Conceptual Framework.

4 SIGNIFICANCE OF STUDY

Digital trade finance is the trend for the future. Theoretically, this study will make contribution to trade finance Internet banking services literature by providing insights on the IT/IS acceptance. To date, there has been little scholarly research pertaining to barriers and commercial banking customers’ readiness to accept such system. This research also focuses on IT/IS acceptance among SMEs which are business organizations.

Practically, this study will be significant for service providers to understand the underlying factors that could increase the acceptance of trade finance Internet banking services by their commercial clientele. With the understanding of the degree of influence towards trade finance Internet banking services, financial institutions could concentrate and pay careful attention to the area to be focused or improved. It will also help service providers; namely financial institutions to better justify their investments and ensure continuous revenue to maintain system’s sustainability. As for business entity level, this study will enable companies to understand and appreciate the managerial implications of utilizing trade finance Internet banking services.

5 CONCLUSION

The trade finance Internet banking services will benefit the SMEs in term of cost savings, increase productivity and efficiency. On the other hand, a well-accepted trade finance Internet banking services enables the service provider to reduce operating costs, increase revenue, ensure customer retention and attraction. Understanding customers’ needs and providing up-to-date services in accordance to IT/IS innovation is crucial in any service industry. This study will help to increase and achieve widespread acceptance of trade finance Internet banking services among the SMEs. It will also help service providers; namely financial institutions to better justify their investments.

REFERENCES

DBS Bank Ltd. (2017), “The digital journey in trade finance”, *Digital Trade Infographic*, February 2017.
 Featherman, M.S. and Pavlou, P.A. (2003), “Predicting e-service adoption: a perceived risk facets perspective”, *Int. J. Human-Computer Studies*, 59, pp. 451-474.

- Gutierrez, A., Boukrami, E. and Lumsden, R. (2015), "Technological, organizational and environmental factors influencing managers' decision to adopt cloud computing in the UK", *Journal of Enterprise Information Management*, 28(6), pp.788-807.
- Ifinedo, P. (2011), "Internet / e-business technologies acceptance in Canada's SMEs: an exploratory investigation", *Internet Research*, 21(3), pp. 255-281.
- Kuan, K.K.Y. and Chau, P.Y.K. (2001), "A perception-based model for EDI adoption in small businesses using a technology-organization-environment framework", *Information & Management*, 38(2001), pp. 507-521.
- Parasuraman, A. (2000), "Technology Readiness Index (TRI). A multiple-item scale to measure readiness to embrace new technologies", *Journal of Service Research*, 2(4), pp. 307-320.
- Nasri, W. and Charfeddine, L. (2012), "Factors affecting the adoption of Internet banking in Tunisia: An integration theory of acceptance model and theory of planned behavior", *Journal of High Technology Management Research*, 23(2012), pp. 1-14.
- Ramdani, B., Chevers, D. and Williams, D.A. (2013), "SMEs' adoption of enterprise applications. A technology-organization-environment model", *Journal of Small Business and Enterprise Development*, 20(4), pp. 735-753.
- Sadowski, B.M., Maitland, C. and Dongen, J.V. (2002), "Strategic use of the Internet by small-and medium-sized companies: an exploratory study", *Information Economics and Policy*, 14(2002), pp. 75-93.
- Scholtz, B., Mahmud, I., and Ramayah, T. (2016). "Does usability matter? An analysis of the impact of usability on technology acceptance in ERP settings", *Interdisciplinary Journal of Information, Knowledge, and Management*, 11, pp. 309-330. Retrieved from <http://www.informingscience.org/Publications/3591>
- SME Annual Report 2016/17, "SME Developments and Outlook"
<http://www.smeCorp.gov.my/index.php/en/slides/2151-sme-annual-report-2016-17>. Accessed 5th June 2018.
- The Sun (2013). "Najib announces new definition of 'SME'", *The Sun*, dated July 12, 2013.
- Tornatzky, L. and Fleischer, M. (1990), "The processes of technological innovation". New York: Lexington Books.
- Trade Finance Review (2016), "Digitizing trade finance – a work in progress" <http://www.tfreview.com>. Accessed 5th June 2018.
- World Trade Organization (2016), "Trade Finance and SMEs. Bridging the gaps in provision", *A publication of World Trade Organization*, publications@wto.org
- Yoon, H.S. and Stege, L.M.B., (2013), "Development of a quantitative model of the impact of customers' personality and perceptions on Internet banking use", *Computers in Human Behavior*, 29(2013), pp. 1133-1141.