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Challenges from the disastrous COVID-19 pandemic: exposure to opportunities for branchless banking in Malaysia

Khairi Azhar Aziz, Marzanah A. Jabar, Salfarina Abdullah, Rozi Nor Haizan Nor
Department of Software Engineering and Information System, Faculty of Computer Science and Information Technology,
Universiti Putra Malaysia, Serdang, Malaysia

Article Info

ABSTRACT

Branchless banking is a new digitalization of artificial intelligence (AI) for future banking services. The rapid digitalization and technological advancement of financial institutions (FI) have changed due to the COVID-19 pandemic. Such branchless banks are expected to offer financial customers meaningful access whilst promoting responsible usage of suitable and affordable financial solutions. The objectives of this paper are to identify CSF to conduct branchless banking for bank performance during the attack of the COVID-19 pandemic in Malaysia. These CSFs are important to reinforce the new business model recommended by the central bank of Malaysia (BNM). Through this study five CSFs have been identified which are customers do not physically attend to the bank for their banking needs, it is more efficient, saves time, secured, and low cost. As the industrial revolution (IR) 4.0 approaches, public acceptance, innovation, and strong financial services, as well as demand of digital payment will take over the country. National savings bank (BSN) was officially the first bank in Malaysia to conduct branchless banking through agent banking. In line with the BNM division strategy 2011–2020, BSN had launched banking beyond branches via BSN agents who offer banking services on behalf of BSN.
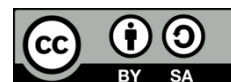
Corresponding Author:

Marzanah A. Jabar
Department of Software Engineering and Information System
Faculty of Computer Science and Information Technology, Universiti Putra Malaysia
St. Universiti 1 Serdang, 43400 Seri Kembangan, Selangor, Malaysia
Email: marzanah@upm.edu.my

1. INTRODUCTION

Fidelity National Information Services Inc (FIs) digital technologies advancement are growing rapidly. These technologies became crucial amongst banking platforms. To penetrate new markets for the rise of innovation the rapid advancement of branchless technologies and synchronization into financial models is the key for banks in achieving better scale [1]. The global phenomenon urged customers to quickly adopt branchless banking and services as their new business models [1]. Due to the COVID-19 pandemic, most banks' gross incomes were affected, and they were required to utilize other backups to maintain their yearly revenue. By 16 March 2020, the Malaysian Government had announced the movement control order (MCO) from 18 March 2020 until 31 March 2020. The MCO was then continued and regulated in the form of conditional movement control order (CMCO) on 4 May 2020, followed by the recovery movement control order (RMCO) from 10 June to 31 August 2020 which extended to 30 December 2020.

Due to the increase of COVID-19 cases, this MCO was prolonged till 4th February 2021. The MCO exposed troubles in the Malaysian economy and caused massive supply chain disruption [2]. Therefore, central bank of Malaysia (BNM) had urged customers to adopt virtual banking instead of visits for over-the-counter

banking. Virtual banking was a preferred method as customers could easily use the digital platform to perform their financial transactions hassle free [3]. The online platforms of FIs have improved financial growth for a better experience. BNM begun its transformation involving the FI's enhancements of current banking systems [3]. According to [4], branchless banking is the combination of digital banking and branchless banking. Branchless banking is defined as banking not done over the counter, instead they performed their transactions through an internet banking platform with the authorized secure mechanism. Thus, digital banking is an online technology application to ensure smooth operations of financial transactions. The objectives of this paper are to identify CSF to conduct branchless banking for bank performance during the attack of the COVID-19 pandemic.

2.   LITERATURE REVIEW

In this section, the researcher explores information from previous studies with regards to branchless banking. Branchless banking is defined as performing the financial service activities outside any bank building. Branchless banking allows customers to conduct basic financial transactions such as deposits and withdrawals at everyday retail stores by using technology readily available to both customers and store clerks in the form of cards or mobile phones to properly secure and authorize the transactions. Digital banking is the application of technology to ensure processing of banking operations and transactions are smooth from end-to-end [4]. Branchless banking is about building a general payment infrastructure allowing people and businesses to deposit, withdraw funds and make electronic payments from everyday retail stores, which eliminates the need for bank branches or other bank-specific infrastructure. Mobile banking is thus a subset of branchless banking wherein customers can utilize their own mobile devices. Banks are no longer required to distribute new cards to customers and point-of-sale terminals to stores [4]. During the COVID-19 pandemic, banks, and other business service providers sought new methods or strategies of making money by offering financial services and goods for unbanked individuals rapidly [5]. They also offered banking and payment services including grocers, supermarkets, seed, and fertilizer stores and fuel stations, in addition to their own field officials and bank branches. The community economics is expected to smoothly to promote economic growth and equitable development economy in Malaysia, emphazising on villages and cities [6]. Currently, people prefer using online platform and are the main contributors to the economic growth. A research of internet users in Malaysia found that the number of active usershave exceeded 20 million with 16.8 million being active in social media. The survey also shows 43.5% of the users in Malaysia are millennials aged between 20 to 29 [4]. There are many critical success factors (CSFs) to conduct branchless banking during the COVID-19 pandemic based on the previous research. However, the researchers need more insights into the CSFs to ensure continuity of the banking event's success growth that fits within the Malaysian context. Researchers [7] reveals that, branchless banking brings several advantages to commercial banks including reaching customers at a global level, accessing new business strategies, and enhancing the banks'performance and efficiency. Branchless banking makes banking services more flexible and simpler to use. Furthermore, when customers adopt a new technologies like internet banking, it provides the bank with a competitive edge in ensuring it maintains its market share. Customers who use internet banking save both money and time by avoiding long queues atbanks and conducting the necessary transactions at their convenience. Utilizing the branchless banking program in remote areas, will cause an accumulation and flow of funds, thereby increasing the production capacity of the community to overcome poverty [6]. Table 1 shows the countries that practice branchless banking.

2.1. Technology model support for the branchless banking technology acceptance model

The theory acceptance model (TAM) is a model developed by Davis to predict the acceptance of new technology in a workplace environment. TAM is the most influential model widely used to study the acceptance of the new technology [4]. As shown in Figure 1, TAM consists of six variables. These variables are related and may influence the acceptance of the actual system. Davis also explained that perceive usefulness is defined as the degree to which a user believes that using specific technology could improve their job performance. The variables can be categorized into two which are construct variables and measured variables. Construct variables consist of three variables which are perceive usefulness, perceive ease of use, and attitudes toward use. The measured variable consists other three variables which are external variables, intention to use and actual system usage. External variables are self-measure such as years of experience, job category, or the familiarity with the technology. Intention to use refers to the number of times the respondents intend to use the technology and actual system usage refers to the actual time the system is used by the users [4].

TAM has been applied in many studies to examine user acceptance of different technologies based on a variety of variables. For example, previous researchers have used TAM in testing online system acceptance based on CSF such as perceive credibility, perceive enjoyment, and perceive self-efficacy. In addition, other researchers also use TAM as the model in understanding the consumer's acceptance towards electronic

commerce [4]. Figure 2 shows that perceive usefulness (H1), perceive ease of use (H2), perceive self-efficacy (H3) and amount of information (H4) are positively associated with branchless digital banking acceptance.

Table 1. Countries that practice branchless banking

| Country	Provider	Model
Afganistan	Roshan (mobile operator)	M-banking
Chile	Banco Estado (bank)	Card-based
Colombia	Banco Caja Social (bank)	Card-based
DR Congo	Celpay (bank)	M-banking
India	SKS Microfinance (MFI)	M-banking
	State Bank of India (bank)	M-banking
Kenya	Safaricom (mobile operator)	M-banking
	Equity Bank (bank)	M-banking
Malawi	Opportunity International (bank)	Card-based
	First Mechant Bank (bank)	Card-based
Mexico	Banamex (bank)	Card-based
Mongolia	XacBank (bank)	M-banking
Pakistan	Tameer Bank (bank)	M-banking
Peru	Banco de Credito (bank)	Card-based
Philippines	SMART (mobile operator)	M-banking
	GXI (mobile operator)	M-banking
Russia	Tavrichesky Bank (bank)	M-banking
Senegal	Ferlo (third-party)	Card-based
South Africa	MTN Banking (bank-mobile operator joint venture)	M-banking
	WIZZIT (third-party)	M-banking
Tanzania	Vodacom (mobile operator)	M-banking
Uganda	Uganda Microfinance Ltd. (MFI)	Card-based
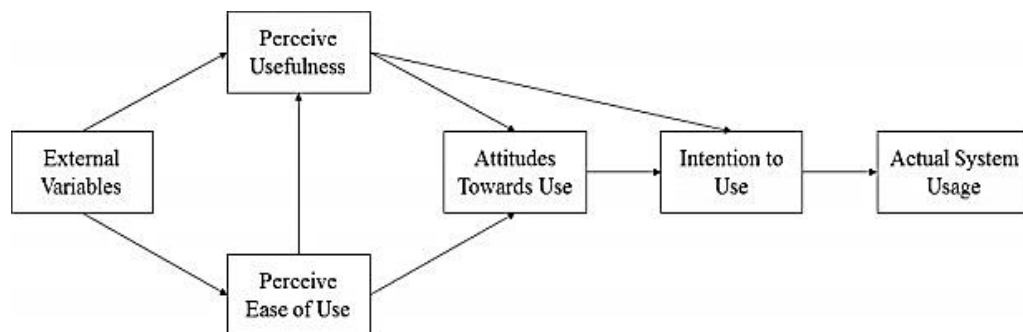
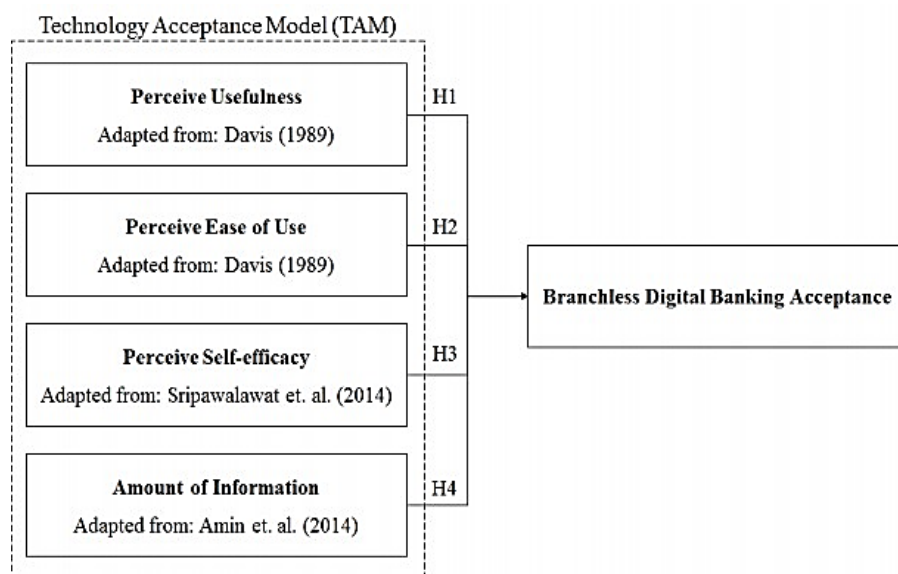Figure 1. Technology acceptance model

Figure 2. Research model [4]

Based on the previous research, [8] also used TAM theory to measure customer's attitude towards branchless banking adoption. Nevertheless, [9] interprets TAM theory with regards to trust in explaining customer intention to use branchless banking. Currently, technology has changed the way consumers want to interact. Researchers [10] used TAM theory on factors influencing customers to use branchless banking application. Branchless banking has become an interesting topic during COVID-19 pandemic and [11] reveals the TAM theory on branchless banking in Malaysia.

3. PROBLEM STATEMENT

During the COVID-19 pandemic, most businesses including non-essential businesses' growth were impacted. To emphasize this statement, BNM announced that the global economic growth experienced a sharp slowdown in the first quarter of 2020 and this includes the banking business industries. Malaysians began staying home to fight the COVID-19 pandemic outbreak since March 2020. The spread of COVID-19 resulted in a lockdown and social distancing practices in force in major economic platforms. Stay-at-home orders by the Malaysian Government impacted Malaysians' daily activities such as physical banking business, physical withdrawal, bill payment over the counter, and other exercises pertaining to the banking platform [12]. The financial sector, credit institutions, and banks play a vital counter cyclical role to support customers and organization sectors during the pandemic. Due to the circumstances of the pandemic, the FIs had to ensure that the financial activities were able to run as smoothly as possible. The MCO announced by the Malaysian Government would restrict Malaysians' needs. Thus, branchless banking is expected to offer meaningful access to customers and promote responsible usage of suitable and affordable financial solutions to the customers. Hence, as instructed by BNM, this paper needs to identify CSFs as the new business model recommended by BNM to cater to the Malaysians' needs.

4. METHOD

The method used in this research are previous related work, face-to-face structured individual interviews, and focus groups approaches. The subjects in this research are industry experts from the banking field and academicians. In this paper, the experts share their knowledge and experiences for branchless banking. The industry experts and academicians shared their input related to opportunities in conducting branchless banking during the MCO. All experts were contacted through email and communication were conducted in virtual and face-to-face discussions. In this paper, the authors develop a template that could be used to validate the survey instrument (proposed CSF). After the item pool is generated in the instrument development process, the template is completed and sent to the experts. The reviewer will be able to give the necessary feedback through the template that will be helpful to the researcher in finalizing the instrument. Graphical abstract process as Figure 3. To orchestrate the CSF, data and information were obtained from experts' demographics as shown in. Table 2 and Table 3 shows information related to branchless banking obtained from the academician expert and industries expert.
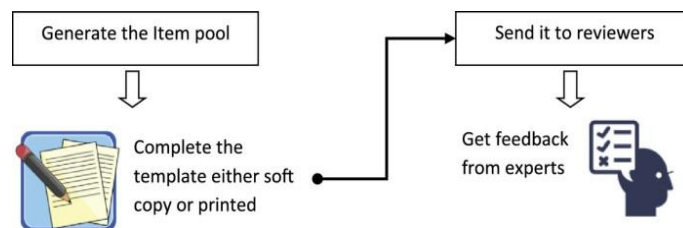

Figure 3. Graphical abstracts [13]

Table 2. Academician expert

Expert No.	Job Title	Area of Expertise	Working Experience
1.	Professor	Lecturer Information System	32 years
2.	Associate Professor	Lecturer Software Project Management, Knowledge Management, and Information System	22 years
3.	Associate Professor	Lecturer Computer Science and Software Engineering	19 years
4.	Associate Professor	Lecturer Information System and Requirements Engineering	22 years

Table 3. Industries expert

Expert No.	Job Title	Area of Expertise	Working Experience
1.	IT Manager	Core Banking and IT Project	15 years
2.	Business User Manager	Internet Banking	8 years
3.	IT Officer	Information System and Architecture	20 years

5. CSF TO ORCHESTRATE BRANCHLESS BANKING

The Malaysian Government has implemented MCO on 18 March 2020 as a preventive measure against the COVID-19 pandemic. This caused the evolution of branchless banking and expedited user experiences. The lockdown orders impacted all industries, excluding essential services such as manufacturing, construction, education, public and corporate sector, supermarkets, stores selling daily necessities, and essential services. During the affected time, BNM recommended all FIs in Malaysia initiate branchless banking as a medium to sustain their performance. Besides this new initiative, BNM also recommended FIs adopt, implement, and execute these opportunities as a new platform to remain sustainable. The exposures to conduct branchless banking were as shown in:

5.1. Customers do not physically come to the bank for business purposes

Essentially, a branchless banking provider can reduce their fixed costs by advising customers to use devices or smart applications to access the bank systems. This is more efficient whereas customers can just call the bank and initiate their needs. In terms of value development, according to [14], branchless banking services increased the financial activities accessed from the society and supported the growth and bank development. This service is required to make it easier for customer's access.

To those who were unable to use branchless banking, bank agents would assist them to obtain their information, especially in rural areas where they have limited access to internet connection. Researchers [15] show that the evolution of branchless banking has improved financial activity performance. To attract customers, banks will involve mediums such as agent banking and electronic banking channel to promote their products and services. In statements [10] to mitigate operational risks, BNM has recommended business continuity plans (BCPs) to FIs to continue essential services to customers whilst protecting well-being of customers. The activation of BCPs has effectively supported transactions which enabled FIs to continue their banking business.

5.2. More efficient, time saving, secured, and low cost

Customers feel that branchless banking could save time as agent banking is closely located near their homes. Additionally, the services can be accessed at anytime and anywhere depending on the customers' needs. Customers, especially from the low income background and rural areas also felt it was more cost efficient as they saved on travelling costs. Researchers [14] states that apart from using branchless banking services, customers felt it was more secured and convenient using these services. With access to cashless payment mechanisms, customers can reap the benefit and at the same time decrease physical security risks related to the cash transaction.

In terms of the evolution of information communication technology (ICT) and internet of thing (IoT) technologies, mobile banking, and agent banking service providers should improve their security level to obtain the customers' acceptance and trust [14]. The agent banking appointed by the Fis should be recognized by the customers. This is to prevent scams, money laundering, and trust issues. Essentially, in rural areas, agent banking should work at petrol stations, groceries stalls, handphone credit stores, or any place easily accessible to rural customers. According to [16], by making use of infrastructures provided by the bank through agent banking they are able to penetrate underserved locations at a low cost. The branchless banking through agent banking procedure as Figure 4. The activation of split operations between banks' headquarters, working from home culture, and alternate sites would improve daily banking business. Branchless banking as proposed by BNM predominantly reduces the risk operational supported by the bank management during the MCO period.

5.3. Industrial revolution 4.0 approaches

ICT is evolving rapidly. Traditional banking methods are moving fast towards branchless banking. [10] states that IR 4.0 has been addressed in the most developed countries such as Austria, Belgium, France, Germany, Italy, Spain, and Sweden. IR 4.0 is associated with artificial intelligence (AI) wherein there are less human assistance and minimal control by parties. Researchers [17] reveals that IR 4.0 is referring to the digital integration of using devices and capability processes to transmit data. The new technologies have brought branchless banking to be more efficient and user friendly.

The rapid evolution of banks from traditional over the counter banking to using the ATMs, has shown banking services requires fewer human contact. As for internet banking these services can be accessed anytime

and any with an internet network connection. Mobile banking is the one AI technology that makes it easier for customers to bring their smartphones anywhere and perform financial transactions without any hassle. Agent banking is one of the branchless banking mechanisms, where in services can be obtained from an urban or rural area. Figure 5 shows the evolution of banking through the spread of technology.
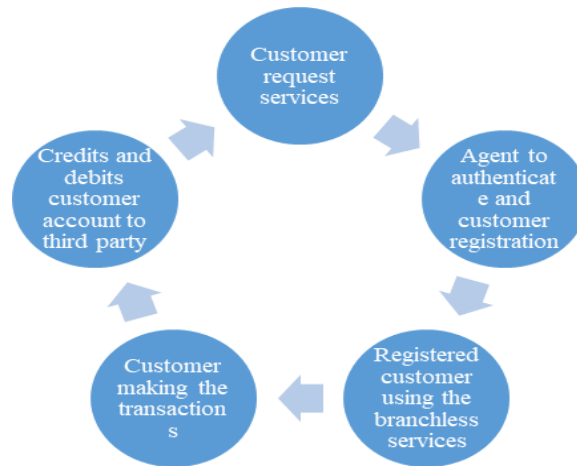

Figure 4. Branchless banking through agent banking

Figure 5. Evalution of branchless banking

5.4. Public acceptance, innovative and strong financial services

The acceptance of innovative branchless banking is the performance contribution to the banking environment. Researchers [18] reveals that national savings bank (BSN) was the first bank in Malaysia to implement branchless banking through agent banking. For companies with branches, the agent is more critical for business growth and financial services. Subsequently, by the accepting the technology, the contribution of branchless banking will increase the volume of transactions at BSN in Malaysia.

Branchless banking may increase profit, and most agent banking interested to manage these services. Despite running other businesses, agent banking could generate income through wages and agent banking. These services could also improve banking performance which are limited by time. Additionally, customers can make financial transactions with these services, even with minimal cash [14].

The services provided by BSN are inclusive of cash withdrawals, cash deposits, transfers, among others, and payment of bills, which have been successfully adopted by customers. However, the acceptance of agent banking have not been well acknowledged by customers. Nevertheless, over 95% out of the 837 districts throughout the country have gained access to the bank services [18].

5.5. Demand for digital payment over the country

Currently, most businesses take the opportunity to revamp their organization from traditional methods to the digital platform. These are technology-based innovations for customers to adopt the technology whilst remaining sustainable. The adoption of a new digital banking platform is an opportunity for the development of the industry. Most companies would express their interest and recognize industries in relation to their product and services.

The popularity of e-wallet, cashless banking, DuitNow, mobile transfer, and other digital payment would gain adoption and interest among customers in Malaysia. Branchless banking through digital payment is predicted to adopted by bank customers [19]. Branchless banking in Malaysia is still in the beginning stages. Due to the COVID-19 pandemic, branchless banking was able to maximize profits by reducing physical bank branches. This is one of the new approaches to maintain their financial performance [20]. Subsequently, to keep the bank's sustainability, they have decided to collaborate with mobile Telco providers to provide new

features to ease customers' adoption of branchless banking through the mobile applications [21]. In marketing, banks measure their product and services to meet customers' expectations and hence these new approaches are adopted [22].

Even though Malaysia maintained a struggling economy during MCO, the small and medium enterprises (SMEs) still soldiered on, and their guarantee schemes were also used to support the economy [23]. Asian Development Bank Institute revealed that SMEs would achieve their profit and performance through digital payment such as PayPal and Venmo. Nowadays, cashless adoption would be reducing risk of carrying physical cash [24].

6.   RESULTS AND DISCUSSION

This study shows the potential contribution of branchless banking in Malaysia. This paper proved that critical findings, using the CSFs to orchestrate branchless banking, was successfully launched in Malaysia. To affirm this contribution, BSN was officially the first bank in Malaysia to conduct branchless banking through agent banking. In line with the BNM (division strategy 2011–2020), BSN had launched banking beyond branches by appointing a BSN agent to conduct the services on behalf of BSN [18]. However, the innovations of banking technologies would create an enormous impact on customer's adoption. Although these services are new to specific customers, the technologies are accepted due to trust.

Nevertheless, customers in urban locations said that they could trust agent banking if they were always in touch with legitimate banking officials. Besides the TAM theory used to predict the acceptance of new technology, the disruptive innovation theory (DIT) proposed by [25] also revealed that innovation has a tremendous impact on developing economies [26]. It also indicates that innovations change the performance values, customers' expectations, and rapidly implements new functionality. Hence, this proves that in the circumstances of the COVID-19 pandemic, it is truly an innovation to change from traditional banking to the newly invented branchless banking. These kinds of innovations have affected performance and customer satisfaction positively.

BNM also encourages all FIs in Malaysia to transform to digital banking by 2022. These services would provide better communication in the banking industry for the future. In line with government outlines, Malaysian businesses should gopaperless and focus on digital platforms. The opportunities via Branchless banking may have a good impact in urban lives and rural areas in Malaysia.

7.   LIMITATIONS AND FUTURE WORK

From the research that has been executed, this study still has some limitations, and it is reflected in this paper. Generally, this paper on branchless banking is only focused on urban lives and rural areas in Malaysia. It is not conducted in a specified location in Malaysia. This paper has discussed benefits or opportunities to conduct branchless banking without using sample or population in research. The concept of business model analysis to be used in future work would be more profitable and viable. This paper is to gain an understanding of how branchless banking is to be measured and conducted. The structured questionnaire surveys are used to determine which factor or dimension influences customers in adopting branchless banking services. The future quantitative mechanism should consider generalization, customer behavior, customer geographical location in its research. Customers' awareness of branchless banking is still low in the initial stages. The procedures and policies such as customer protection policies, to conduct agent banking should be included for the future effectiveness of branchless banking. The Malaysian Government should have a campaign encouraging banks to conduct branchless marketing for their customers. Branchless banking should create a regulatory authority to involve bank agents around the country. Not all banks have adapted the usage of branchless banking as they are still monitoring market survey approaches. Besides, this paper should have also include the benefits of using branchless banking during other natural disasters such as extreme precipitation and flooding, earthquakes, and landslides.

8.   CONCLUSION

To increase branchless banking acceptance, all FIs in Malaysia should rapidly implement these services in line with other developed countries globally. Malaysians should continue to adapt and accept branchless banking to ensure sustainability as well as increase in economic and social assistance programs. This study also encourages banking customers to use branchless banking services as it is easily accessible to all customers whether in urban or in rural areas. There are also many more platforms to explore the upsides of transitioning to be cashless without banking society. With regards to evolution and transition of acceptance towards branchless banking, Malaysia should implement more activities during the COVID-19 pandemic, using cashless systems heading towards IR 4.0. This is important to ensure Malaysia's branchless banking

initiatives are in line with globalization trends that continues growing with the other industries and e- commerce organizations.

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BIOGRAPHIES OF AUTHORS

Khairi Azhar Aziz ⓘ 🔍 SC Ⓟ received the Bachelor of Computer Science in Software Engineering from Universiti Putra Malaysia in 2010. He holds a Master in Information System from the Universiti Kebangsaan Malaysia in 2017. In his doctoral research, his investigates in the area internet banking adoption. His area of interest is multidisciplinary that encompasses the fields of information system, knowledge management, software management, enterprise system application, knowledge based system, software testing, and information communication technology. He can be contacted at email: hairie_azdhar@yahoo.com.

Assoc. Professor Dr. Marzanah A. Jabar ⓘ 🔍 SC Ⓟ is a senior lecturer at the Department of Software Engineering and Information System, Universiti Putra Malaysia. She graduated in Bachelor of Computer Science from Universiti Kebangsaan Malaysia in 1986. She received the Master of Science in Computer Science from Universiti Putra Malaysia in 2002. Besides, she completed her Ph.D. in Management Information System from Universiti Putra Malaysia in 2008. Her research interests are primarily in software development, enterprise system development, software project management, human computer interaction, ethic in computing, database application development, and information system. She can be contacted at email: marzanah@upm.edu.my.

Dr. Salfarina Abdullah ⓘ 🔍 SC Ⓟ is currently a Senior Lecturer at the Department of Software Engineering and Information System, Faculty of Computer Science and Information Technology, Universiti Putra Malaysia. She holds a Bachelor of Computer Science (Computer System), a Master of Science in Management Information System and a Ph.D. in knowledge management from Universiti Putra Malaysia. Her research interests are primarily in information system (business informatics), software engineering, knowledge management, IT project management, information system management, and IT governance. She can be contacted at email: salfarina@upm.edu.my.

Ts. Dr. Rozi Nor Haizan Nor ⓘ 🔍 SC Ⓟ has acquired her doctorate from the University of Technology Malaysia (UTM), Skudai Johore, Malaysia in Computer Science in the year 2013. She is currently working as a senior lecturer in the Department of Software Engineering and Information System (SEIS) in the Faculty of Computer Science and Information Technology (CSiT), Universiti Putra Malaysia (UPM) Selangor, Malaysia. Currently, she is a member of Malaysia Board Technologists (MBOT) Malaysia, and holds the title of Professional Technologist. Her expertise is in the area of Information Systems, ICT service quality, ICT governance, and a part of software engineering field. Her current research is related to citizen participation towards ICT e-services and governance of collaborative systems. She has over a tenth year experienced as a lecturer in the area of information systems and software engineering. To date, she has experience as a project leader for 2 research grants valued at about RM90 000 and has published more than 50 articles in journals, conferences proceedings, seminars, technical reports, and book chapter as an author and co-author. Additionally, she also has about 3 copyrights with her name. She can be contacted at email: rozinor@upm.edu.my.