

# THE LEGAL ISSUES IMPACT ON THE E-COMMERCE

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**Abstract**---This study investigate the legal issues impact on the E-commerce in Malaysia. Based on a finding, 34% of mobile phone owners have received unwanted Short Message Service (SMS) regularly. Complaints have been made but it is difficult for individual to fight this unhealthy trend unless the authorities take steps to minimize such personal intrusion. Looking forward, once the mobile devices can handle emails, web browser with 3G technology, it is foreseeable that there is a rise in m-commerce, and also it will come together with the criminal activities such as spamming, hacking of personal data from mobile devices. At this stage, the security of current wireless technology is a big issue with mobile devices.

**Keywords:** short message service, e-commerce, cellular phone subscribers, wireless technologies

## I. Introduction

The booming of Internet in the late 1990s, the term electronic-commerce or e-commerce is a trend for all businesses worldwide. In this century, a mobile phone is a necessity for everyone. In view of the launch of 3G services by Telekom Malaysia and Maxis in Malaysia in 2005, it is expected that the mobile phone services will go to another peak in the very near future. M-commerce will be the next watermark in businesses.

Tahun	Suku	Telefon selular				Perkhidmatan pesanan pendek	
		Jumlah ('000)	Kadar pertumbuhan (%)	Kadar penembusan	% digital	Jumlah (juta)	Per langganan
1998		2,150	-12.6	9.7	74.5		
1999		2,717	26.4	12.0	83.7		
2000		5,122	88.5	21.8	91.8		
2001		7,385	44.2	30.8	95.6		
2002		9,053	22.6	36.9	97.9	3,605.9	398
2003		11,124	22.9	43.9	98.9	6,163.5	554
2004	1	11,762	5.7	46.2	99.1	1,996.7	170
	2	12,398	5.4	48.5	99.2	2,087.7	168
	3	13,072	5.4	50.8	99.3	2,500.9	191
	4	14,611	11.8	56.5	99.8	2,946.8	204
2005	1	15,829	8.3	60.9	99.9	3,406.9	215
Year	Qtr	Cellular phones				Short message services (SMS)	
		Total ('000)	Growth rate (%)	Penetration rate	% digital	Total (million)	Per subscriptions

Figure 1. Cellular Phone Subscribers. (Source: www.mcmc.gov.my)

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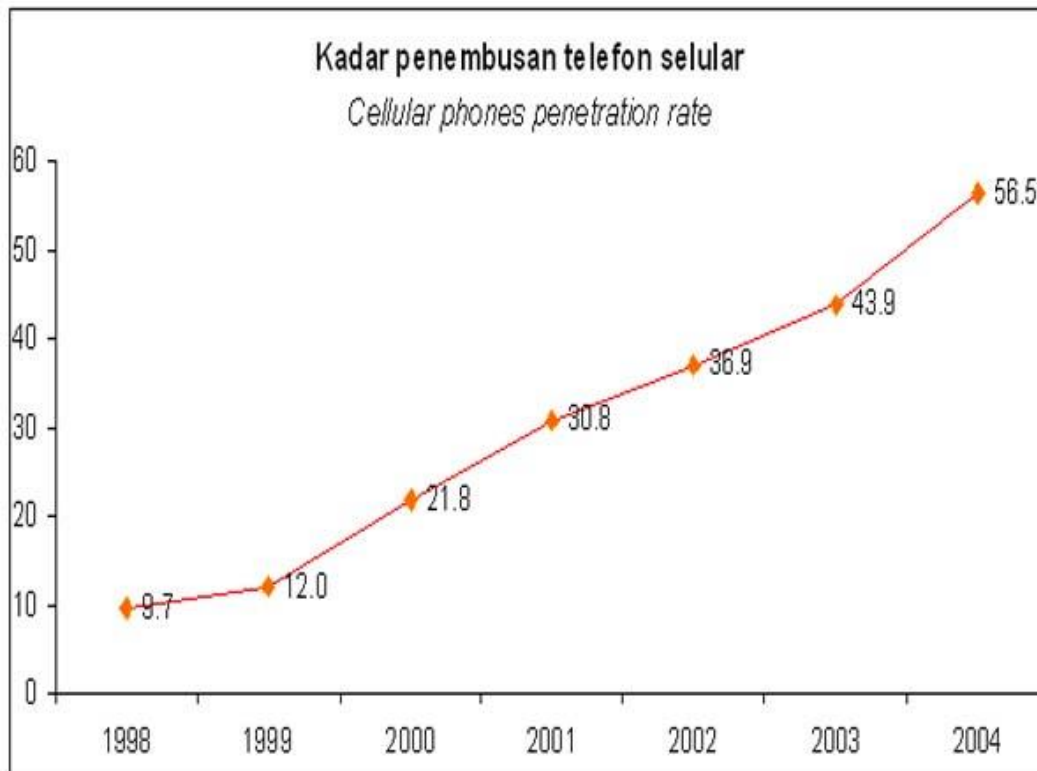


Figure 2. Cellular Phone Penetration Rate. (Source: [www.mcmc.gov.my](http://www.mcmc.gov.my))

While the telecommunication industry and other businesses are going aggressively into 3G related services, there is a new set of question being raised. Is Malaysian legislation ready for m-commerce? Are Malaysian consumers and businesses aware of the legal issues behind m-commerce?

Mobile phone and PDA are currently the most common wireless devices. They have web browsing capability but mostly only displaying text as the main user interface. This is due to the limitation of display areas in the gadget, the screen is small as compared to computers. Some applications are being used to allow users to make transactions over the mobile phones. The transactions can be making a purchase, making a reservation on movie tickets, enquiring bank balances, to top up the prepaid phone cards. Users also access the stock indexes real times through mobile phones. This is predictable that in the coming several years, m-commerce will be bring vast benefits to many industries.

The finance industry is where m-commerce started and benefiting the most. Banks and other financial institutions always provide many channels to get closer to its customers. During the e-commerce era, most of the banks provided Internet access for its customers, and it made the rise of a new term – “e-banking” or “Internet Banking”. After the Internet bubble burst in early 2000s, all the Internet companies have disappeared, but e-banking is still going strong and stronger.

In the entertainment industries, wireless technology allows users to download movies to their 3G mobile phones and PDA. M-commerce is not only a useful mean for businesses such as banking, stock broking. And it is very trendy that such users also can access new games available to the market, they can download games to the mobile phones, make payment without setting foot to computer games stores.

## II. Literature Review

Businesses rush to embrace m-commerce, many are quickly realizing that wireless technologies present unique security challenges. Some challenges are similar to the challenges in e-commerce environment, and some are unique to m-commerce environment (De Silva et al., 2018a; De Silva et al., 2018b; Nikhashemi et al., 2013; Dewi et al., 2019; Pambreni et al., 2019; Tarofder et al., 2017; Doa et al., 2019; Maghfuriyah et al., 2019; Nguyen et al., 2019).

There are many incidents that mobile devices are having the threats like computer virus. All Internet browsers support Secure Sockets Layers (SSL). SSL provides a secure platform for users to perform transactions through Internet browser. To protect m-commerce can be a very challenging task. It may be even more difficult than protecting e-commerce which goes under wired network because wireless communications via radio signals are far more easily intercepted. There are many limitations in m-commerce making it so vulnerable. Constrained bandwidth and computing power, short battery life, small memory and various network configurations are contributing to the factors (Pathiratne et al., 2018; Rachmawati et al., 2019; Seneviratne et al., 2019; Sudari et al., 2019; Tarofder et al., 2019). With the limited memory in mobile device, it makes the use of strong authentication and encryption difficult. The only option is to have a scale down form of SSL.

Short Message Service, or better known as SMS, is very popular in mobile communication. It is convenient and less costly. Some retailers can see SMS will be a useful tool to generate revenue for them. SMS can be also a useful mean in m-commerce. In the use of text messaging, there are many security issues have been identified and these can be extended to m-commerce. While a SMS can be considered safe since it can be encrypted during its transition from one mobile device to another mobile device, but because of the text message can be forwarded, it makes SMS are vulnerable to be corrupted or shared (Nikhashemi et al., 2017; Tarofder et al., 2019; Ulfah et al., 2019; Tarofder et al., 2016; Udriyah et al., 2019).

There is another new technology which drives the mobile communication. Bluetooth was originally a communication method by which mobile devices such as PDA or Bluetooth-enabled mobile phone could establish close range, wireless connections with each other. The advantage of using Bluetooth is to remove the messy cables connecting around the computers. At this stage, the security issues on Bluetooth are being discussed by many parties. Even Bluetooth developers candidly admit that the current specification has several well-known security loopholes modify and copy addresses stored in the phone without leaving any trace of the unauthorized access.

In most of the time, personal information and credit card information are required for validation; they are usually saved in the mobile device to avoid the cumbersome data re-entry procedure. If the device falls into wrong hand, the important information will be exposed to third party. The price of mobile device especially mobile phone is very low and attractive. If a person loses a mobile phone today, he can pick up a new one around the corner. However, the lost phone may cause the person lost his bank saving, made transactions and charged to his credit card.

Digital Signature Act (DSA) in Malaysia was enacted in 1997. The objective is to promote electronic transactions and provide a safe legal environment for businesses to run e-commerce. DSA principles can be extended to m-commerce based on the following requirements because DSA recognizes asymmetric cryptosystem in verifying digital signatures. WPKI is a wireless PKI which is also an asymmetric cryptosystem.

DSA sets high requirements for certificates authorities and repositories. It accepts PKI algorithm as a trustworthy system to generate private keys and public keys, those are the main components in forming the digital signatures. Section 27 in the act states that-

The following natures of mobile device will give authority difficulty to determine a trustworthy system:

1. Data transmission in radio signal.
2. Limited capacity of the device such as short battery life, limited bandwidth and small display screen.
3. Easily get stolen or lost.

The problem in m-commerce is not coming from how CA can create a certificate. The question is on the transmission of the certificate to a mobile device. In the wireless environment where data are converted into signal travel through radio frequency, and it is different from e-commerce environment where the data transmitted through the wired network. The transmission through the air interface is imposing greater risk because it travels in open air, and therefore it can also be easily intercepted or being distorted. For authority to determine the criteria of a trustworthy system in this nature, it may be a new challenge.

Due to the limitation of mobile device, can authority accept a scale-down WPKI? For example, the PKI is e-commerce is 1024 bits. To reduce the power consumption and calculation power in mobile device and to transmit using limited bandwidth, a scale-down WPKI such as 56 bits may be used. However, it may create doubts to the authority whether such scale-down WPKI will still remain as a trustworthy system.

If a mobile device is stolen and fallen into another hand, the information in the mobile device is exposed or transferred to another mobile device. The private key may not be considered valid. CA has to use a new and trustworthy technology and additional procedures to determine the originality of the private key.

If there is a RA or PKI portal in between mobile device and CA (see Figure 3), DSA needs to be reviewed. A new rules and regulations may be required to impose on RA. However, this remains as a concept and yet to see its effectiveness in m-commerce environment.

In general, the international society especially United States of America is of the opinion that Malaysian Constitution does not particularly recognize the right to privacy. The Constitution provides the freedom of speech but it is very limited in the name of public order. When a person is suspected of carrying out illegal activities, police can search the person and his properties without a warrant. Needless to say if the person is said to disturb the harmony of the multiracial society, Internal Security Act is such a powerful act in the country. Nevertheless, there are some laws which provide privacy protection to Malaysian.

The Personal Data Protection Bill is drafted and it is more towards e-commerce requirements, the personal data defined in the bill are related to a person's personal details, financial data and other confidential information. As compare the digital environment today with the environment back in 1998, the businesses are moving from Internet to wireless Internet. This bill does not take into consideration of location privacy which is unique to m-commerce. It is recommended that this bill has to be reviewed, and consider the requirement of location privacy, setting the territorial scope of offence, and giving the adequate guidelines to police to search, seize and arrest by using location based information. By setting up a clear legislation, location information will not be misused by any parties who have access to the information.

While the Personal Data Protection Bill has yet to be reviewed and enacted, and there is no clear sign that this law will be gazetted within the near future. The possible reasons that data protection law is not enacted until now may be due to the authority has not seen the urgency of enacting such law, while there are other legislation can be applied to protect privacy such as Official Secret Act 1972, Communications and Multimedia Act 1998 and Banking and Financial Institutions Act 1989 (BAFIA).

The primary objective of Official Secret Act 1972 is for the interest of national security, it does not mean for consumers. This Act is to govern the information secrecy in public services stated in Article 132 of the Constitution including any Ministry, any departments of the government. Whereas Communication and Multimedia Act 1998 is to assure foreign firms to know that when they setup businesses in Malaysia, their communication via the Internet will not be intercepted, unless the authority believes that the communication contains unlawful materials which may jeopardize national security. Generally, m-commerce is a commercial activity related to monetary transactions. It is expected that financial institutions such as banks will be the frontiers in m-commerce. This is similar to the experience in e-banking, where banking through Internet. E-banking is taking off successfully even though the Internet bubble burst in year 2000. Financial institution provides many channels to its customers to access their bank accounts, this saves time for customers from lining up in the front desk and it also improves the efficiency for the banking staff, so that they can concentrate on higher values tasks rather than handling small issues at the front counters. By using mobile device, customers can press the buttons on the mobile device to enquire account balance without presenting themselves at the bank premises.

Jurisdiction is the power of a court to hear a case. Due to the nature of Internet, it has no boundaries for conducting business in Internet. A customer can access Internet from any corner in the world and make a transaction. For example, a Malaysian student can visit Amazon website and buy a book, where the Amazon's office is located in United States, and the website can be hosted outside of United States. The rise of Internet, the Information technology, somehow challenges the sovereign jurisdictions. "Such that the maintenance of the suit does not offend traditional notions of fair play and substantial justice". M-commerce is part of the new technology emerged from Internet. Such as website contents are similar to 3G contents. There are content providers exist in e-commerce and as well as m-commerce. Similarly, a mobile phone user can perform a transaction around the world as long as his mobile phone is connected. M-commerce has same jurisdiction issues faced by e-commerce conducted through Internet.

In many recent cases happen in United States, it is an interesting trend that the courts are shifting away from Zippo Test to Calder Effect Test in order to decide jurisdiction. Matwysyn (2004) referred the arguments made by Professor Problems certainly arise where the contents provided in mobile devices most of the time are partially interactive. It provides static information, and it also provides interface for user to interact. As according to the second criticism from Geist, Zippo test becomes uncertain when it encounters a new technology.

In the recent cases quoted by Reidenberg (2005), courts in United States start to look into online targeting and to deleterious effects within the forum to determine if personal jurisdiction is appropriate.

*As a proponent of technological immunity, Yahoo! Believed that democratically chosen laws should not apply to its online activities. The company located in United States transmitted images of Nazi objects that were constitutional protected in the United States, but illegal to display in France where the users were located and where Yahoo! targeted advertising. Yahoo! failed to defense that France did not have personal jurisdiction over the United States based company because it was operating on the Internet from United States and that French law did not apply to the images because they were stored on a server in the United States. Yahoo! also argued that the technology offered it no means to comply with French law. When French court rejected the technology based defenses and ruled against Yahoo!, the company went forum shopping and sought to deny enforcement of the French order by suing for a declaratory judgment in Federal Court in California. Yahoo! wanted to avoid the application and enforcement of a law it did not like in a country where it did business over the Internet. Yahoo! found a willing accomplice at the United States District Court to get immunity from financial liability, the United States Court of Appeals overturned the lower court decision*

*and held that the California court had no personal jurisdiction over the French parties and that France had every right to hold Yahoo! accountable in France.*

Business deals can be done very much quickly through online services than paper. There are many deals are communicated through emails without a piece of paper. Here is another question, once the deal is done, is everyone always really sure that the terms and conditions are towards what the signers have agreed?

There is a general perception that electronic documents may not always be scrutinized as closely as those done in paper. For example, documents may be reviewed only on the screen, under the pressure to get the deal done quickly. Since electronic documents are available, bulky paper printouts are seen as unnecessary. As a result, the exact meeting of the minds the parties think they had may be hard to determine after the fact, or to reasonably and realistically reconstruct in memory.

Once bargaining has ended, a mistake can be hard to fix, especially if both parties do not agree that it is a mistake. It can lead to a situation in which the cost of making the deal can increase if both parties cannot settle the disputes and decide to take civil action. Both parties have to spend legal fees just to argue about what they had agreed to, and the particulars of the agreement.

This contract comes to worse in the context of m-commerce. Due to the limited display of mobile devices, a full agreement is not possible to display in complete to the users. It can be unfair to the users when a full agreement is not easily to be read. Under such situation, users would press the button to agree.

To handle the 2 issues aforementioned, there is a challenge. The display screen of a mobile device is rather small. This is difficult to show the lengthy words of the terms and conditions. Terms and conditions are normally rules for purchasing or selling an item or service, warranty, disclaimers, indemnity provision, limitation of liabilities clauses and forum selection clauses. In the typical e-commerce environment, the terms and conditions are displayed in website. Normally, Internet users have to scroll down to the bottom of the webpage and click on "I agree" button to proceed.

The solution is to mail or fax the terms and conditions to the mobile device user, asking the user to review and agree on the terms and conditions before committing the transaction. However, this is back to the traditional way of contract binding. It is not taking the advantage of the new technology. To make use of the latest technology, an electronic signature is adopted here. An electronic signature is a digital signature created through the use of PKI, which is the most common form used in electronic transactions, either in e-commerce or m-commerce.

Contract Act 1950 (Revised 1974) is enacted in Malaysia covering the legal issues of agreement binding between parties. There is no particular legislation is specially dealing with electronic contract. It does not mean that contracts done in electronic forms are not protected by Malaysian legislation. The traditional Contract Act can be extended to m-commerce environment. Section 3, 4, 5, 6 and 7 are still applicable. The act is at the high level, it is not only applicable to the paper form of contract, but it can be applied to electronic form. Section 3 and 4 are dealing with communication, acceptance and revocation of proposals. The communication of proposal and acceptance can be in any form, it does not mean only by telephone or letter. In the m-commerce environment, the communication can be instant. Such as a brief contract is sent to a potential consumer's mobile device, by pressing a button the agreement is done.

In section 10(1) recognizes that all agreements made between competent parties are contract: All agreement are contracts if they are made by the free consent of parties competent to contract, for a lawful consideration and with a lawful object, and are not hereby expressly declared to be void. Every person is competent to contract who is the age of majority according to

the law to which he is subject, and who is of sound mind, and is not disqualified from contracting by any law to which he is subject. Section 11 in Contract Act can be used together with DSA. Only person who is competent from the legal point of view can apply for digital signature. That is the person must be a majority with sound mind and still legally signing contract. Once he holds a genuine private key, he can make a contract in electronic form. A question to be asked may be how the agreement can be clearly delivered to the mobile device user due to the limited display screen of the device. The suggestion is that the E-Sign and UETA discussed in the previous section can be used as references to review Malaysian's DSA to suit today new digital environment. A new legislation shall enforce the following:

1. Agreement shall be able to be re-produced upon whenever it is required.
2. To allow consumer to access to the original copy of agreement whenever it is required.
3. The authentication of an agreement.

### **Analysis**

In completing the external and internal analysis that have been discussed earlier, strategic choice would be the last analysis that combine both studies and make it into one analysis. The external factors that have been listed as the Political, Economic, Social-cultural and Technological factors are going to be used in SWOT analysis below.

### **SWOT Analysis**

#### **(a) STRENGTHS**

- ❖ The retrofitted and redefined first and business class would certainly enhance the Airline's value. These assets are important for Malaysia Airlines to provide the full satisfactory service especially to its business traveler's customers.
- ❖ Malaysia Airlines has been in the industry for more than 50 years, and the vast experience that they have formidable compared to new industry players.
- ❖ Malaysia Airlines is a national flag carrier. They have a critical role as an ambassador – they carry the Malaysian reputation with them. They received a strong support from the government, and Malaysia Airlines can depend on the government to protect itself from financial distress and any other difficulties.
- ❖ A strong collaboration with the Malaysian Tourism board. The Malaysian Tourism board will always associate the airline in line with all of their promotions.
- ❖ Malaysia Airlines have received strong recognitions in terms of its services in the airline industry. The numerous awards that they won have certainly helped them in numerous ways especially in promoting its business and build their customers and staff's confidence towards the Airline.
- ❖ Malaysia Airlines has diversified its operations into human resource development, training, catering, and technical ground support for aircrafts.
- ❖ Serves both domestic and international destinations. Continue to offer incentives to boost domestic travel demand such as special fares (student fares, supersavers) to ensure Malaysia Airlines services is accessible to a wider segment of the Malaysian traveling public.

#### **(b) WEAKNESSES**

- ❖ Issues regarding the Human Resource policy
- ❖ The compensation package for the overall staff is not as competitive as the other airlines.
- ❖ Malaysia Airlines' customer service is still not up to the standard compared to its international competitors (e.g. British Airways, Singapore Airlines).
- ❖ Higher operating cost associated with the increase in crude oil prices. The rising fuel cost has impact on Malaysia Airlines earnings potential although fuel surcharge and fuel hedging will continue to mitigate their exposure.

(c) **OPPORTUNITIES**

- ❖ Malaysia Airlines has identified some new market to be captured. Many people used Malaysia Airlines to travel to Indonesia, China, Thailand and India,
- ❖ Launched internet booking facility for both domestic and international passenger services
- ❖ The open skies agreement with Singapore Airlines and the extended agreement with Korean Air as to continue in pursuing synergistic partnership.

(d) **THREATS**

- ❖ Reemergence of bird flu in China, Thailand, and Vietnam could impact Asia travel industry.
- ❖ Rapid growth of Low Cost Carriers in major Regional hubs of Singapore and Bangkok.
- ❖ Environmental factors and natural disasters will continue to have an impact on the aviation industry.
- ❖ Increase competition on the Australia route with greater frequency and non-stop flights from Middle East to Australia.
- ❖ Increased cost from new security measure forced into airlines such as *sky marshals*, random checking of cargo, increased travel hassle of being photographed and finger printed, and new transit visa requirements.

### III. Conclusion

Collection of location information can be categorized according to 2 groups: internally and externally. Internally, location information is collected by the communication towers and purely for communication efficiency purposes. Externally, location information is collected for commercial purposes and such information shall be classified as personal data. If the information is used for commercial purpose, consumers should have the right to safeguard their personal data. The bright side of location-based information is useful for the law enforcement authorities to curb criminal activities. However, no one will like their movements being monitored from time to time and without their consent. Every individual has the right to be left alone.

Some online content such as child pornography falls within universal jurisdiction, but this cannot be used to generalize for any cases where the content is not in line with local preferences. A good approach is to impose the burden of



responsibilities to the 3G vendors and the content providers, thereby giving substantial playground to the states to protect its interests. It would provide foreseeability of legal order and at the same time it would adequately handle the concern of enforcement.

To bind an agreement in m-commerce environment, the measurements adopted in e-commerce can be useful in m-commerce to some extent. However, due to the nature of mobile devices, it has a limitation of the display, a full view of terms and conditions may not able be viewed by consumers, and it gives the tendency that consumers click on the “I agree” button without going through the details. The terms and conditions should be displayed effectively to consumers to reduce the risk of future dispute. Consumer’s concern over the electronic transaction in m-commerce should be taken care of. The businesses must have ways to address all the concerns in a proactive manner.

## REFERENCES

- [1] De Silva A.D.A., Khatibi A., Azam S.M.F. (2018a). Can parental involvement mitigate swing away from science? Sri Lankan perspectives, *Cogent Education*
- [2] De Silva A.D.A., Khatibi A., Azam, S. M. F. (2018b). Do the Demographic Differences Manifest in Motivation to Learn Science and Impact on Science Performance? Evidence from Sri Lanka, *International Journal of Science and Mathematics Education*
- [3] Delafrooz N., Paim L.H., Khatibi A. (2009). Developing an instrument for measurement of attitude toward online shopping, *European Journal of Social Sciences*
- [4] Dewi N.F., Azam, S. M. F., Yusoff S.K.M. (2019). Factors influencing the information quality of local government financial statement and financial accountability, *Management Science Letters*
- [5] Doa N.H., Tham J., Khatibi A.A., Azam S.M.F. (2019). An empirical analysis of Cambodian behavior intention towards mobile payment. *Management Science Letters*
- [6] Maghfuriyah A., Azam, S. M. F., Shukri S. (2019). Market structure and Islamic banking performance in Indonesia: An error correction model, *Management Science Letters*
- [7] Nguyen H.N., Tham J., Khatibi A., Azam S.M.F. (2019). Enhancing the capacity of tax authorities and its impact on transfer pricing activities of FDI enterprises in Ha Noi, Ho Chi Minh, Dong Nai, and Binh Duong province of Vietnam , *Management Science Letters*
- [8] Nikhashemi S.R., Paim L., Haque A., Khatibi A., Tarofder A. K. (2013). Internet technology, Crm and customer loyalty: Customer retention and satisfaction perspective , *Middle East Journal of Scientific Research*
- [9] Nikhashemi S.R., Valaei N., Tarofder A. K. (2017). Does Brand Personality and Perceived Product Quality Play a Major Role in Mobile Phone Consumers’ Switching Behaviour? *Global Business Review*
- [10] Pambreni Y., Khatibi A., Azam, S. M. F., Tham J. (2019). The influence of total quality management toward organization performance, *Management Science Letters*
- [11] Pathiratne S.U., Khatibi A., Md Johar M.G. (2018). CSFs for Six Sigma in service and manufacturing companies: an insight on literature, *International Journal of Lean Six Sigma*
- [12] Rachmawati D., Shukri S., Azam, S. M. F., Khatibi A. (2019). Factors influencing customers’ purchase decision of residential property in Selangor, Malaysia , *Management Science Letters*
- [13] Seneviratne K., Hamid J.A., Khatibi A., Azam F., Sudasinghe S. (2019). Multi-faceted professional development designs for science teachers' self-efficacy for inquiry-based teaching: A critical review, *Universal Journal of Educational Research*
- [14] Sudari S.A., Tarofder A.K., Khatibi A., Tham J. (2019). Measuring the critical effect of marketing mix on customer loyalty through customer satisfaction in food and beverage products, *Management Science Letters*
- [15] Tarofder A.K., Azam S.M.F., Jalal A. N. (2017). Operational or strategic benefits: Empirical investigation of internet adoption in supply chain management, *Management Research Review*
- [16] Tarofder A.K., Haque A., Hashim N., Azam, S. M. F., Sherief S. R. (2019). Impact of ecological factors on nationwide supply chain performance, *Ekoloji*
- [17] Tarofder A.K., Jawabri A., Haque A., Azam S.M.F., Sherief S.R. (2019). Competitive advantages through it-enabled supply chain management (SCM) context, *Polish Journal of Management Studies*
- [18] Tarofder A.K., Nikhashemi S.R., Azam S. M. F., Selvantharan P., Haque A. (2016). The mediating influence of service failure explanation on customer repurchase intention through customers’ satisfaction, *International Journal of Quality and Service Sciences*
- [19] Udriyah, Tham J., Azam, S. M. F. (2019). The effects of market orientation and innovation on competitive advantage and business performance of textile SMEs, *Management Science Letters*

- [20] Ulfah R., Amril Jaharadak A., Khatibi A.A. (2019). Motivational factors influencing MSU accounting students to become a certified public accountant (CPA), *Management Science Letters*