



2020

INSIGHT JOURNAL

UiTM Cawangan Johor

**International, Refereed, Open Access,
Online Journal**



Volume 7 Issue 2

Indexed in MyJurnal MGC

Abstracted in Asian Digital Library (ADL)

INSIGHT JOURNAL (IJ)
UiTM Cawangan Johor Online Journal Vol. 7: 2020
eISSN :2600-8564
Published by UiTM Cawangan Johor
insightjournal.my

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INSIGHT Journal is an online, open access, multidisciplinary international refereed research journal established by Universiti Teknologi MARA Cawangan Johor, Malaysia. It is indexed in MyJurnal MCC. Furthermore, it is abstracted in Asian Digital Library (ADL).

The main aim of INSIGHT Journal is to provide an intellectual forum for the publication and dissemination of original work that contributes to the understanding of the main and related disciplines of the following areas: Accounting, Business Management, Law, Information Management, Engineering, Administrative Science and Policy Studies, Language Studies, Islamic Studies and Education.

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FOREWORD BY DEPUTY RECTOR OF RESEARCH, INDUSTRIAL LINKAGES & ALUMNI

INSIGHT JOURNAL (IJ) has published several issues since its inception in 2018. These have included scheduled publications as well as special issues for international conference proceedings and continue its excellent record by issuing its second publication for 2020. IJ serves as platform for academicians to share their research findings as well as an incubator for knowledge transfer. IJ is open access journal indexed in MyJurnal MCC and abstracted in Asian Digital Library (ADL), hence, ensuring that it reaches out to a wider spectrum of readership. The journal is also served by international reviewers from various prestigious universities, guaranteeing rigorous editorial process in all its articles. This issue of IJ provides the latest research findings from the fields of Social Sciences and, Science and Technology in keeping abreast with the current trend in research. It is hoped that IJ would continue to lead the way in providing up to date research findings and become a major hub of knowledge. Lastly, I would like to thank the Rector of UiTM Johor, Professor Dr. Ismail Ahmad for his distinctive support, IJ Managing Editor for this issue, Associate Professor Dr. Noriah Ismail, IJ Assistant Managing Editor, Dr. Siti Nuur-Ila Mat Kamal as well as all the reviewers and editors who have contributed in the publication of this issue.

Thank you.

ASSOCIATE PROF. DR. SAUNAH ZAINON

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Insight Journal

UiTM Cawangan Johor

Volume 7

Disember 2020

eISSN: 2600-8564

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Fraud Triangle Theory: Calling for New Factors

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Received Date: 4 July 2020

Accepted Date: 27 July 2020

ABSTRACT

The famous financial scandal of Enron, WorldCom and 1 Malaysia Development Berhad has harmed the auditor's reputation as the protector of shareholders' rights. Auditors have done their part by conducting systematic audit procedures and "What Could Go Wrong" analysis in assessing the possible risk area to assist fraud detection in the client's financial matters. However, fraud cases never seem to decline. Regardless of any safeguarding measures established, fraud incidents can just occur and be worsened by economic downturn and prolonged inflation especially after the pandemic ends. Additionally, the characteristic of the modern business environment, technology sophistication and new generation traits had challenged Cressey Fraud Triangle Theory on its validity and relevancy. Therefore, associating all these possible challenges into consideration, this study aims to review prior literature related to the evolution of Cressey fraud theory to propose a new insight in considering relevant motivation factors that drive fraud penetrations. From the review, the study discovered the need for a detailed evaluation and research on the essential fraud element in constructing an all-rounded fraud prevention mechanism.

Keywords: Cressey Fraud Triangle Theory, factor, fraud and fraud penetration

1. INTRODUCTION

Fraud is a silent killer but causes a loud effect when it is detected. It causes great pain to the nation as the effect is so significant, not just in monetary form but emotional impairment to the parties involved. Based on a survey conducted by the Association of Certified Fraud Examiner (ACFE) on occupational fraud, it was discovered that there were 2,504 cases of occupational fraud that occur in 125 countries around the world for the period from January 2018 to September 2019. The number of cases resulted in huge total losses of around 3.6 billion dollars. Fraud has tremendously affected people's life; some have lost their jobs, investors were led to deceptive decision making and risk the business' solvency (Mackevičius & Giriūnas, 2013). Apart from monetary losses, fraud also affects people emotionally and mentally. Victims might experience constant anger, feeling helpless and loss of trust in others while doers feel ashamed, embarrassed and guilty. It can be worsened if they suffer depression over fraud or have suicidal thoughts (deBlanc, 2015).

Realizing the seriousness of this issue, researchers are finding ways to prevent fraud by investigating the motivation factors that drive the perpetrators to commit fraud. If these motivations disappear, the effort to prevent fraud could be way easier as it is the root problem of this worrying issue. The most popular fraud motivation factor theory is the Fraud Triangle Theory introduced by Cressey (1953). He concluded three elements of fraud that must be presented simultaneously for the fraud to happen. They are pressure, opportunity and rationalization. Since its debut, this theory has become famous in empirical studies on any field including criminal (Huber, Mui, & Mailley, 2015), financial (Cieslewicz, 2012; Tugas, 2012; Yusof, Khair, & Simon, 2016) and academic fraud (Djajadikerta & Susan, 2020; Meiseberg, Ehrmann, & Prinz, 2017).

In this changing world, fraud design and structure are following the trend. Technology advancement makes everyone visible to fraud penetration (ACFE). On the other hand, the changes in the modern business environment, especially in the case of large multinational organization and complex organizational matrix (Mackevičius & Giriūnas, 2013) makes fraud prevention measures more challenging. On top of that, new generation traits should also be concerning the business as they are the future faces of the nation. In preparing for an up-to-date, solid and comprehensive fraud prevention measure, this study aims to explore the evolution of Cressey Fraud Triangle Theory. It is compulsory to determine whether Cressey Fraud Triangle Theory is still valid to the current sophisticated business environment, societal changes and the world without boundaries.

2. LITERATURE REVIEW

2.1 Fraud Conception

In general, fraud can be defined as the crime of getting money by deceiving people (Cambridge Advanced Learner's Dictionary & Thesaurus, 2020). According to The Institute of Internal Auditors (2016), fraud is an unlawful act described by cheating, concealment and breach of trust. It is not limited to physical violation to take advantage of money, services, property, business and personal gain. Fraud in the accounting and auditing field can be regarded as an intentional act that results in a material misstatement in financial statements that subject to audit either related to misstatement arising from fraudulent financial reporting or misappropriation of assets (Public Company Accounting Oversight Board, 2018). The conception of fraud may change depending on on the study setting but one thing for sure, fraudsters always try to conceal their act by vanishing all possible traces that make fraud uncovered (Vousinas, 2019)

In 1953, Cressey developed a three-factors fraud theory that caused people to commit fraud which is called the Fraud Triangle Theory. The framework was developed by gathering information from interview sessions with the fraud convicts in the United States. The elements of pressure, opportunity and rationalization were concluded to be the essential ingredients for fraud. He defined pressure as an individual financial difficulty that leads to fraud in a way to ease the financial burden that has been kept a secret to themselves. Another key element of fraud is opportunity. Opportunity refers to the ability to commit fraud without being caught by holding a position. Penetrators must possess certain skills and knowledge about the current operating procedure to allow fraud to happen by exploiting all discovered weaknesses. The third key element of fraud is rationalization. It is an individual own justification guided by personal manner. A wrong rationalization will make the penetrators think it is fine to conceal something or deceive others. Cressey suggested that all three factors must present concurrently for a fraud to happen.



Figure 1: Fraud Triangle Theory by Cressey (1953)

Late in 1984, Albrecht, Albrecht et al. modified Cressey theory and introduced Fraud Scale Theory by replacing the rationalization element with personal integrity as their study focuses on financial statement fraud. They discovered that people with high integrity are less likely to commit financial fraud. The other two elements of pressure and opportunity remain unchanged. Then, a study by Wolfe and Hermanson (2004) added the fourth essence to Fraud Triangle Theory and named it as the Fraud Diamond Theory. They suggested that capability is compulsory to be accessed simultaneously with pressure, rationalization and opportunity as capability enables penetrators to recognize the opportunity to exploit it.

Dorminey, Fleming, Kranacher, and Riley Jr (2010) in *Certified Public Accounting (CPA) Journal* had come out with M.I.C.E (money, ideology, coercion and ego) acronym to explain the motivating factors behind financial fraud commitment. Money motivation needs no introduction as it is the central motive of fraud. Ideology is someone's belief about what is right or wrong. It resembles rationalization in the pioneer theory of the Fraud Triangle. Coercion happens when someone is forced to be involved in a fraud case. The pressure may come from his or her the superior. On the other hand, ego is a form of social pressure to maintain a good reputation in the eyes of colleagues, family and society. MICE model is not so different from the original theory of Fraud Triangle and Fraud Diamond. However, the proposal to include ego as part of fraud central element was proven necessary by various high-profile financial scandals around the world involving top management who abuse their power to escape failure. This includes the most recent case of Wirecard AG (Browne, 2020) and Luckin Coffee (Lucas, 2020) in which their Chief Executive Officer was fired over financial falsification.

The ego element as a fraud motivator was supported by the other studies by Crowe (2011), Yusof et al. (2016) and Vousinas (2019). Crowe (2011) and Yusof et al. (2016) grouped ego as part of arrogance factor that leads people to commit fraud. Arrogance, as the newly identified element of fraud, is the attitude of superiority and entitlement over internal control procedures. It includes bullying, big egos, autocratic management style and status oriented. According to another study by Vousinas (2019), they suggested that when a person has power over others and situations, they might think they have the right to use all possible ways to accomplish something even in an unlawful way. This is supported by the real finding from a few fraud cases that prove ego makes people decline failure by doing something unethical. Incorporation of ego as one of the fraud key motivators is somehow related to the capability's element. This relationship can be seen in reported fraud cases in which most of the fraud penetrators are the most trusted individual in an organization holding an important position and having the power

to cross the line. They are among the last ones to be suspected for committing fraud (deBlanc, 2015).

2.3 Challenges of Fraud in the 21st Century

2.3.1 External regulatory influence

Tugas (2012) reviewed a case study on eight fraud cases around the world and proposed that external regulatory influence should be added as the grounded element to the current Fraud Diamond Theory called Fraud Pentagon Theory. From his investigation, he discovered that laws and regulations should be tightened up to reduce fraud attempts in business dealing activities. Therefore, the key player in the fraud prevention mechanism will have to redesign a more defined measure to suit new laws and regulations to combat fraud occurrence. For instance, regulatory efforts to promote whistle-blowing will make penetrators reconsider the fraud attempt (Free, 2015). This is because external control is important as much as for internal control procedures. When multiple levels of authorization and segregation of duties are used to safeguard internal control of an organization, the external part should also be governed by good governance. By working hand in hand, fraud penetration can be minimized.

2.3.2 Societal influences

Another significant study related to Cressey theory by Cieslewicz (2012), he opined that the Fraud Triangle Theory should be revisited to test its validity in a different setting other than the United States, the place it was first originated. From his observation and interview session with the Chinese national, he concluded that societal influences should not be ignored. Societal influence covers religion, culture, social norms, the country law, political status and philosophical. Different societies will have different fraud conception and the interpretation of the best fraud prevention measure that should be in place might be inconsistent. Societal influences in a way affect the three main elements of fraud. For instance, how religion affects the penetrator's rationalization. A study by Said, Alam, Karim, and Johari (2018) proved that religion has an impact on fraud (misappropriation of assets) in which higher religiosity individuals will reduce the tendency of fraud penetration among Malaysian police officers. Thus, it is not fair to generalize the result internationally due to all these differences. These entire factors will influence individual views and perception about fraud.

2.3.3 New generation morality standard

Apart from country differences, different generations do perceive things differently. It will not be excluded for fraud cases. There are a lot of studies on the characteristics of different generations and how they affect corporate success. One of them was conducted by Bencsik, Horváth-Csikós, and Juhász (2016) on Y and Z Generations at workplaces. Gen- Z is an individual born between 1996 and 2012 that will be joining the workforce and business soon. Bencsik et al. (2016) discovered that Gen-Z are brave, impatient and unaware of the struggling concept. At the same time, they are not scared of uncertainty as they look forward to new challenges and think that they hold more information from the net. As Gen-Zs represent the future of work (Ramirez, 2019), there is a need to be prepared for their perception towards fraud penetration. It would be interesting for future researchers to focus their studies on how the new generation perceive fraud penetration based on their morality standard that is largely shaped through societal influences from family, friends, workplace, religious association and society as a whole (Setiawan, 2018). It can be hypothesized that a person with high morality value has reduced the tendency of fraud occurrence (Swanepoel & Meiring, 2017).

2.3.4 Ignorance

Yusof et al. (2016) provided an all-rounded empirical evidence on the factors influencing financial fraud in Malaysia. He tested all notable fraud theories to see its relevancy in a Malaysian setting. He recommended 'ignorance' and 'greed' as other factors to be considered in Malaysia that made up the Fraud Heptagon Model. Greed forms a part of the pressure element identified by Cressey in 1953. However, ignorance is a newly identified member of the fraud theory. An ignorant person may commit fraud, claiming that he or she is not aware of the established rules and procedures. In other words, the figures in the financial report might be manipulated for personal gains that they think is acceptable and lawful by applying creative accounting.

2.3.5 Collusion

Vousinas (2019) introduced the Fraud Hexagon Theory presented by the S.C.C.O.R.E acronym (stimulus, capability, collusion, opportunity, rationalization, and ego). The additional identified element of fraud under this model is collusion. Expansion of business size, complex business dealing and sophisticated organizational matrix hinder individual work of fraud, therefore, a single fraud penetrator is rarely found in recent years and has been replaced with collusion

(Free, 2015). Collusion is a conspiracy between two or more individuals within the same unit or with related external parties to deceive others. A recent survey by ACFE (2020) on occupational fraud reported about 51 percent of frauds involved cooperation between multiple fraudsters. This number should be concerning anti-fraud professionals and auditors as the increase in the number of fraudsters will increase the economic losses associated with it. When more people are involved in collusion, more opportunities can be explored and the effort for concealment would be much easier (Rechtman, 2019). This central factor of complex fraud cases may develop a corrupt culture if it is uncovered and make it even worst if this group of people undermines the standard operating procedures by placing their people all over the control of segregation of duties. With collusion, segregation of duties is no longer a good internal control (Rechtman, 2019). The summary of the Evolution of the Fraud Triangle Theory is summarized in Table 1.

Table 1: Evolution of Fraud Triangle Theory

Authors (Year) / Fraud Theory	Title	Elements of Fraud
Cressey (1953) / Fraud Triangle	Other People's Money: A Study on the Social Psychology of Embezzlement	1. Pressure 2. Opportunity 3. Rationalization
Albrecht et al. (1984) / Fraud Scale	Deterring Fraud: The Internal Auditor's Perspective.	1. Pressure 2. Opportunity 3. Personal integrity
Wolfe and Hermanson (2004) / Fraud Diamond	The Fraud Diamond: Considering the Four Elements of Fraud	1. Pressure 2. Opportunity 3. Rationalization 4. Capability
Dorminey et al. (2010) / MICE acronym	Beyond the fraud triangle	1. Money 2. Ideology Coercion 3. Ego
Crowe (2011) / Fraud Pentagon	Why the Fraud Triangle is No Longer Enough	1. Pressure 2. Opportunity 3. Rationalization 4. Capability 5. Arrogance 6. Competence (capability)
Tugas (2012) / Fraud Pentagon	Exploring a New Element of Fraud: A Study on Selected Financial Accounting Fraud Cases in the World	1. Pressure 2. Opportunity 3. Rationalization 4. Capability 5. Arrogance 6. Competence 7. External Regulatory Influences
Cieslewicz (2012) / Modified Fraud Triangle	The Fraud Model in International Contexts: A Call to Include Societal-level Influences in the Model	1. Pressure 2. Opportunity 3. Rationalization 4. Societal Influences
Yusof et al. (2016) / Fraud Heptagon	Fraudulent financial reporting: an application of fraud models to Malaysian public listed companies	1. Pressure 2. Opportunity 3. Rationalization 4. Capability 5. Arrogance 6. Ignorance 7. Greed
Vousinas (2019) / Fraud Hexagon (SCCORE acronym)	Advancing theory of fraud: the S.C.O.R.E. model	1. Pressure 2. Capability 3. Collusion 4. Opportunity 5. Rationalization 6. Ego

2.3.6 Technology advancement

In this digital era, most of the businesses are shifting from the traditional way they conduct business to a digitalized platform to take advantage of the efficiency, accessibility and speed. Unfortunately, technology advancement also creates room for fraud to happen internationally, through the net on a larger scale. The use of technology, mainly the internet has provided a new landscape and offers wider opportunities for fraud penetration (Cross, 2019). In most financial fraud cases, the fraudster steals sensitive information like a password to authorize a transaction to divert money (Button & Cross, 2017). This conduct is known as hacking. Besides that, fraudsters may create fraudulent sales to inflate profit figures by generating fictitious invoices in the electronic integrated sales system. As most of business routine activities are now relying on the internet and other electronic devices, fraudsters see it as a vulnerability to be exploited especially for big companies.

In considering the factor that may lead to fraud penetration, the use of technology should be investigated further with the hypothesis that high technology-reliant business is more vulnerable to massive fraud penetration. But as at this date, there is no single study that examines the relevancy of using the Fraud Triangle Theory to prove the validity of opportunity element in cyber fraud environment. However, technology is quite an issue in today's sophisticated business environment that should not be skipped.

3. CONCLUSION

The Cressey Triangle Theory is a pioneer study in investigating fraud motivation factor. Up to this date, there are abundant studies examining its validity in different fields and settings. Regardless of various perceptions, attitudes and critics towards the theory, its essence remains the same for almost seventy years and it has proven that research pertaining to fraud will still be relevant in the future, especially in battling the upward trend of fraud cases worldwide. However, the proposed framework should be tailored to the recent changes in the modern business environment, technology advancement and new generation traits by associating internal and external factors that are crucial for fraud prevention mechanisms. The threat of collusion in a complex business environment, external governance mechanism, new generation morality standard and societal changes as well as technological advancement, should be given careful consideration by fraud examination professionals, authority bodies, management and auditors.

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The Role of Maqasid Shariah and Islamic Religiosity in Tourism Perspectives

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Received Date: 5 July 2020

Accepted Date: 28 July 2020

Abstract

Conventional tourism had opened a “window” for Islamic tourism to operationalize which at present is expanded throughout the world. As the Muslim population is rising rapidly, Muslim consumer market should be critically concerned by tourism businesses to satisfy the needs and wants of the consumers. This paper attempts to explain the concept of Islamic tourism in the context of maqasid shariah – protection of religion, protection of intellect, protection of life, protection of wealth and protection of offspring; discusses the role of Islamic religiosity in shaping tourists’ behaviour, as well as tourism industry’s role in applying Islamic tourism according to maqasid shariah, from the tourism industry’s perspective and tourists’ perspective. To date, there is still lack of knowledge and related literature review on the implementation of maqasid shariah in the concept of tourism industry. The ultimate goals of shariah are vital as the platform in the development of Islamic tourism as well as Islamic religiosity among Muslim consumers because it resembles the value of Islamic concept in tourism perspectives.

Keywords: Islamic tourism, maqasid shariah, Islamic religiosity, Muslim consumer market.

1. INTRODUCTION

Tourism industry is extensively visualized into a new concept in Islamic perspectives. According to the study conducted by Committee for Economic and Commercial Cooperation of the Organization of Islamic Cooperation (COMCEC) in 2016, Muslim travellers denoted the travel sector was worth RM121 billion in 2014 and the total number of Muslim visitor arrivals reached to RM116 billion. This figure represents 10.2 percent of the visitor arrivals globally. Travel is seen as beneficial in terms of socialization such as visiting friends and relatives (VFR),

acquiring new knowledge, enrichment of health and to appreciate the majesty of God's creations as mentioned in Qur'an (Oktadiana, Pearce & Chon, 2016). In the expansion of tourism businesses, Muslims are more aware with the valuable of socialization in Islamic tourism, thus they are keen to travel with the adherence of Islamic practises and beliefs. In 2014, Muslim population was comprised of 1.7 billion people globally and is expected to rise to 2.2 billion by the year of 2030 and it continues to increase by 1.5 percent annually (Zailani, Ali, Iranmanesh, Moghavvemi & Musa, 2016). This shows that Islamic tourism is potentially emerged in the market.

قُلْ سِيرُوا فِي الْأَرْضِ فَانظُرُوا كَيْفَ بَدَأَ الْخَلْقَ ثُمَّ اللَّهُ يُنشِئُ النَّشْأَةَ الْآخِرَةَ إِنَّ اللَّهَ عَلَىٰ كُلِّ شَيْءٍ قَدِيرٌ

“Travel through the land and see how He began creation. Then Allah will produce the final creation. Indeed Allah, over all things, is competent”.

(Surah Al Ankaabut Verse 20)

Indeed, the verse from Holy Quran elucidated that Islam encourages us to travel to gain knowledge, experience and discover Allah's creatures on earth. Nevertheless, Muslim travelers should comply with Shariah-compliance so that they can earn great experience during the vacation with Allah's blessings. Islamic tourism is flexible where Islam allows Muslims to travel with many purposes such as medical, shopping, sport, religion and visit (Nora'in, Rozian & Shaya'a, 2015). Any activities are permissible as long as Muslim tourists adhere with the Shariah-compliance, for example Halal food consumption, cover “aurat”, perform prayers and limit the social interaction among men and women. These will be deeply discussed in maqasid shariah sections on how the implementation of the Shariah goals among Muslim tourists should be applied when travelling.

2. ISLAMIC TOURISM

Islamic tourism is any activity, experience and event undertaken in a state of travel which is in accordance with Islam (Islamic Tourism Centre, 2016). In Islam, exploring the world's creature and travelling can be well-thought-out as 'ibadah and da'wah where 'ibadah is everything that humans do or speak that Allah accepts and loves whereas da'wah means to preach someone into a right way of life in accordance to Islam (Laderlah, Ab Rahman, Awang & Che Man, 2011). Therefore, tourism will turn out to be an 'ibadah if a person travels for the sake of gaining God's blessings and avoiding from illegal or unlawful activities. If a person has

decent manner and knowledge, the person can as well travel with da'wah in order to deliver moral message to the community, which always be practiced by the preachers or da'i. As Muslims have different demand towards Islamic tourism products such as Halal food, separate facilities for men and women, dress code, tourism operators should be more attentive about the consideration in Islamic tourism context. Hence, tourism players should provide their staff with training on how to accommodate and serve Muslim tourists with good wills, and also learn about cross-cultural communication (Eid & El-Gohary, 2015). This is where Islamic religiosity takes place in influencing tourists' demand towards Islamic tourism products and services.

Jafari & Scott (2014) stated that Islamic tourism is essentially a new “touristic” understanding of pilgrimage that composed together with religious and leisure tourism. In old days, Islamic tourism is well-connected with pilgrimage where people perform Hajj and Umrah at Makkah but in current days, leisure tourism has emerged into a new dimension of Islamic tourism. In Islam, there is no wrong to have leisure as long as the activities adhere with Shariah-compliance in terms of lodging, food, social interaction, dress code, ‘ibadah and cultural perspectives. Islamic tourism also embraces good values that represent the Islamic values of the products and services. By way of what Islam teaches us, Muslims are encouraged to travel but must comply with Shariah, hence maqasid shariah plays an important role in the implementation of Islamic tourism. Maqasid refers to aim, objective, purpose and goal whereas Shariah refers to Islamic law or rules. Basically, maqasid shariah is defined as the ultimate goals or objectives of shariah. It comprises of five key areas – (1) protection of religion, (2) protection of intellect, (3) protection of life, (4) protection of wealth and (5) protection of offspring. Figure 1 demonstrates the framework of maqasid shariah in Islamic tourism perspectives.

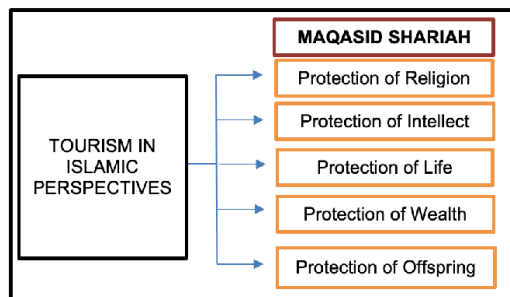


Figure 1: The framework of maqasid shariah in Islamic tourism perspectives

3. MAQASID SHARIAH IN TOURISM PERSPECTIVES

3.1 Protection of Religion (Hifz ad-Din)

Eid & El-Gohary (2015) indicated that religion plays a crucial role in determining consumption experiences including tourism activities and choices among Muslim customers. Thus, it can be realized that religion has a significance influence on people's attitudes, behavior and values.

وَمَا خَلَقْتُ الْجِنَّ وَالْإِنْسَ إِلَّا لِيَعْبُدُوا

"And I did not create the jinn and mankind except to worship Me".

(Surah Az-Zaariyat Verse 56)

From the Quran verse above, Imam al Qurtubi ordered mankind and jinn to worship Allah as the only God (Tafsir al Qurtubi 17/55). If ones travel with adherence of Shariah compliance, no doubt they can protect their religion because they adhere to Islam. The main objective to travel is to explore and appreciate Allah's creatures, thus no other things that human should worship, only Allah.

إِنَّ الدِّينَ عِنْدَ اللَّهِ الْإِسْلَامُ

"The true religion with Allah is Islam".

(Surah Ali Imran Verse 19)

Based on the Quran verse above, it is significantly important to portray a good image of Islam because it is a true religion. In the context of tourism activities, religious characteristics are crucial in determining experience when they have options either to travel or not to travel among Muslim customers (Eid & El-Gohary, 2015). This proved that religion affects the customer behavior in order to gain experience when travelling. Protection of religion is compulsory in the Islamic tourism characteristic which led to avoidance of commit immorality or sin to Allah SWT (Fisol, Suid, Saufi & Bahari, 2019). Therefore, Muslim tourists should not neglect the remembrance of Allah SWT when travel such as perform prayers and other obligations which are delegated to Allah SWT. Pertaining to this matter, Islam had provided rukhsah which means alternative to perform prayer in case of travelling or musafir such as sholat Jamak and Qasar. Muslims can shorten the number of rakaat or combine two prayer times into one. Meanwhile, other

rukhsah are tayammum, fasting exception and perform prayer in the transportation (airplanes, trains, buses and others). It is crucial to observe prayer times because in Islam, five times prayer a day is compulsory. Surah Al-Isra' verse 78 mentioned "Establish prayer at the decline of the sun (from its meridian) until the darkness of the night and the Qur'an of dawn". The verse explained that Muslims must perform prayer from the dawn (Subuh) until night (Isyak).

Islam is all-encompassing in societies where religion and culture are related and Shariah law managed what is measured acceptable (halal) concerning leisure travel (Zamani-Farahani & Henderson, 2009). Islam allows people to travel for leisure as long as the activities are not in the contrary with Shariah compliance, for example sightseeing, recreation, educational trip, Hajj and umrah, visit friends and relatives and medical purposes as well.

3.2 Protection of Intellect (Hifz al-'Aql)

لَقَدْ خَلَقْنَا الْإِنْسَانَ فِي أَحْسَنِ تَقْوِيمٍ

"Verily, We create man in the best conformation".

(Surah At-Tin Verse 4)

From the Quran verse above, it is proved that Allah created human in the best figure, He cares about the positive qualities, mental and physical. It is under deliberation of human itself on how they behave and use their intellectual (aqal) in doing activities. Protection of intellect requires human to accomplish good deeds when travelling, such as gain knowledge and avoid from forbidden acts, such as alcohol and drugs consumption (Auda, 2007). Due to religious belief, people find the consumption of alcohol to be nasty and offensive, thus it can damage the intellectual of ones who consumed alcohol. Shariah compliance hotels should include nonalcohol to be served on the premises, practicing Islamic dress codes, banning of gambling and alcohol, instead the hotel should offer Islamic entertainments (Fisol, Suid, Saufi & Bahari, 2019).

Islamic shariah forbids to provide or sell alcohol in a way to perform business which includes tourism and hospitality industry and other sectors, even the Holy Quran stated that consuming alcohol is devil's action (El-Gohary, 2016). It is significant for all Muslims to consume only products that are allowed by Allah and associated under jurisdiction of shariah.

فَلَا تَتَفَكَّرُونَ

“Why you do not reflect (think)?”

(Surah Al An'am Verse 50)

Muslims must stress on using their thought (aqal) wisely in whatever we do in life, even in travelling since Islam teaches us the do's and don'ts when managing any activities. Tourism activities cannot simply be conducted without procedures that need to be adhered. Good planning and implementation are related with the utilization of “aqal” in line with the protection of intellect so that the activities are in accordance with shariah compliance.

3.3 Protection of life (Hifz An-Nafs)

وَأَنْفِقُوا فِي سَبِيلِ اللَّهِ وَلَا تُلْقُوا بِأَيْدِيكُمْ إِلَى التَّهْلُكَةِ ۚ وَأَحْسِنُوا ۚ إِنَّ اللَّهَ يُحِبُّ الْمُحْسِنِينَ

“Spend in the way of Allah and do not cast yourselves into destruction with your own hands; do good, for Allah loves those who do good.”

(Surah Al Baqarah Verse 195)

From the Quran verse above, Allah ordered us to preserve ourselves from conducting any harmful activities that may affect our life. In the context of tourism activities, Muslim tourists should take into consideration to have a safe trip including transportation and accommodation (Fisol, Suid, Saufi & Bahari, 2019). Thus, tourism industry players should develop safety concerns to protect tourists' lives such as encouraging tourists to purchase takaful or insurance as an added value in the Islamic tourism packages.

The application of “protection of life” as one of the maqasid shariah in tourism businesses will strengthen the safety and security of Muslim tourists, hence the awareness should be implemented by the industry players. Knowing the importance of protecting one's life, tourists should avoid dangerous places that might threaten their lives, such as places that exposed to war, terrorism, crimes and infectious diseases.

In line with the current situation where coronavirus (COVID-19) has spread worldwide, it created pandemic that caused the slowdown of the economic activities, including tourism industry. Hence, travelling during this pandemic is prohibited in order to reduce the spreads and save lives. As the life of human is at

risks due to the infection of the coronavirus, the virus has emerged as a substantial threat to human (Hoque, Shikha, Hasanat, Arif, & Hamid, 2020). Thus, it is crucial for the tourists to preserve their lives by avoiding visiting any dangerous places with the concern of hifz an-nafs.

3.4 Protection of Wealth (Hifz Al-Mal)

The protection of wealth is an inevitability for the nourishment revenue with permissible (halal) services and gained Allah's blessings (Fisol, Suid, Saufi & Bahari, 2019). In the context of tourism players as the suppliers, the development of Islamic tourism is important in the global economy as its effectiveness will generate the economy of the business. Islamic tourism needs to be empowered with efficient services and perform competitively in the market in order to fulfil the needs and wants of Muslim customers. By having profits earned from Islamic tourism products and services, this can contribute to the community as well through the distribution of zakat. Hence, Islamic tourism is not only beneficial for local and global economy, but it can indirectly help the needy and poor community so that poverty gap can be reduced in the future.

وَلَا تَأْكُلُوا أَمْوَالَكُمْ بَيْنَكُمْ بِالْبَاطِلِ وَتَذَلُّوا بِهَا إِلَى الْخُكَّامِ لِتَأْكُلُوا فَرِيقًا مِّنْ أَمْوَالِ النَّاسِ بِالْإِثْمِ وَأَنْتُمْ تَعْلَمُونَ

“Do not eat up one another's property among yourselves by false means (unjustly) nor give bribery to the judges so that you may knowingly eat up a part of the property of others sinfully”.

(Surah Al Baqarah Verse 188)

On the other hand, in the context of preservation of wealth by individual or consumer, it is vital to protect their wealth when travelling. Tourists need to take care of their belongings during vacation. This can be clearly seen when a lot of crime cases such as robbery happened to the tourists due to their negligence of taking care of their belongings. New Straits Times reported two Bangladeshis caught posing as international police robbed tourists in the city of Kuala Lumpur (Nurul Hidayah Bahaudin, 2018). In order to prevent such crimes, tourists should implement the maqasid shariah (protection of wealth) by being extra careful when travelling. This can be done if tourists carry a minimum amount of cash in their wallets and avoid wearing jewellerys for women which will attract robbers to snatch those belongings.

3.5 Protection of Offspring (Hifz An-Nasab)

In Islam, it is important to preserve the progeny as it is one of the goals of shariah (maqasid shariah) to create a healthy community and portray a good image of Islam. Allah SWT said in al-Quran:

لَا تَقْرَبُوا الزَّوْجَىٰ إِنَّهُ كَانَ فَاحِشَةً وَسَاءَ سَبِيلًا

“Do not approach adultery! Surely it is an indecency and evil way”.

(Surah Al Isra' Verse 32)

In Islamic tourism concept, Muslim travellers are prohibited from travelling to any destination that can lead to adultery because it might cause the birth of children out of wedlock's (Fisol, Suid, Saufi & Bahari, 2019). As industry players, tourism suppliers such as hotels should consider to provide separate facilities for men and women, for example separate swimming pools and other recreational facilities. Some of the Muslim-friendly hotels such as Grand Blue Wave Hotel in Shah Alam has provided such facilities; the hotel provides swimming pool and gyms only for female use and also a women-only level located on the 17th floor of the hotel. This effort is clearly seen as protecting the community from shameful deed like zina. Thus, the development of Islamic tourism should be in line with what has been written in al-Quran and as-Sunnah, so that Shariah principles can be implemented well. Indeed, al-Quran is the best guidance. Besides, Muslim women should aware on how to protect their dignity, such as covering their “aurat” to avoid bad intention from men, not to forget men also should embrace their faith or “iman” as well. This can avoid adultery which lead to the birth of child out of wedlock. This is where faith in Islam takes place among Muslims to avoid such forbidden acts.

4. ISLAMIC RELIGIOSITY

Religiosity refers to the degree to which an individual adheres to her or his religious values, beliefs and practices that they perform in their routine life (Abdul Shukor & Jamal, 2013). Religiosity also reflects the quality or to what extent a person is religious. For instance, an individual may consider himself or herself being connected with Islam, however, the degree of religiosity may differ from other Muslim if the person does not truthfully adhere with the teaching of Islam. The spiritual values that a person owns might contribute to the religiousness of him or her. Undoubtedly, religious beliefs influence and inspire Muslim tourists to travel to certain destinations and the Islamic beliefs can give influence to their behavior and attitudes, emotions and also perceptions at the destinations, where Islamic

belief is a part of Islamic religiosity (Eid & El-Gohary, 2015).

Hence, the level of Islamic religiosity is related to the attachment of Allah when travelling to any destination. Muslims should realize that the level of religiosity is not judged by other people, but only judged by Allah, however only the person knows his or her level of religiousness whether they are attached, overly attached or less attached to religion. Religiosity is judged based on the religious activities that been performed while travelling and how attached a person to his or her religion to Allah, with the adherence of Holy Quran and Sunnah. Thus, Islamic religiosity plays a vital role in shaping tourists' behavior to ensure that the implementation of Islamic tourism is well structured.

5. CONCLUSION

The ultimate goals of shariah (maqasid shariah) in which protection of religion, protection of intellect, protection of life, protection of wealth and protection of offspring should be the platform for the development of the Islamic tourism concept. Leisure tourism is permissible with the accordance of shariah-compliance as Islam encourages Muslims to travel. Islamic travel has become an alternative to hedonic concept of tourism since it is not restricted only for pilgrimage but also leisure tourism. Maqasid shariah is one of the interesting sub areas falls under Islamic tourism which it is related to Islamic law or rules. In Islam, virtue and morality are the basis for modesty and happiness, where virtue is associated with values and morality as well (Mohsin, Ramli & Alkhulayfi, 2016). Since there is a demand in Islamic tourism, more researches need to be conducted in order to improvise the products and services for Muslim tourists in adherence to Shariah-compliance.

Islamic religiosity is the focal point of religion in expressing one's life in accordance with religious role prospect and the concepts about the way to live that are reflecting the values and attitudes of the individual and community (Eid & El-Gohary, 2015). In Islamic tourism context, Islamic practices and beliefs of Muslim tourists portray their religiousness towards the religion. Tourism players should be conscious of this value because the level of Islamic religiosity affect the purchase decision of Muslim consumers towards tourism products and services. Islamic religiosity is crucial in determining the Muslim behavior and satisfaction in experiencing Islamic tour. Future research may focus on the Islamic attributes that affect the Islamic religiosity of Muslim travelers and their satisfaction.

Eid & El-Gohary (2015) indicated that knowledge related to Islamic perspective on tourism is still lacking in the literature although Muslims are one of the largest tourist markets in the world. Hence, current research intends to contribute in

the literature to assemble the theoretical Islamic tourism thoughts in line with conventional tourism paradigms. The application of the Islamic tourism concept will be more organized with the accomplishment of the maqasid shariah and Islamic religiosity among Muslim consumer market.

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Firms' Specific Determinants of Capital Structure: An Analysis into Construction Firms in Malaysia and Singapore

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Received Date: 27 June 2020

Accepted Date: 27 July 2020

ABSTRACT

The study aims to examine the firm-specific factors such as firm size, profitability and asset tangibility in the capital structure decisions (leverage) on a sample of twenty construction firms in Malaysia and Singapore from 2009 to 2018, with 200 observations. The sample firms are chosen based on convenience sampling technique and the availability of the data. Prior studies documented inconclusive findings on the determinants of capital structure and different industries tend to reveal different patterns of relationship. In addition, the empirical evidence on comparative analysis between construction firms in Malaysia and Singapore is lacking. Hence, the objective of this study is to extend the prior work by investigating the impact of the determinants on capital structure on the construction firms in Malaysia and Singapore. The study uses panel data analysis to test the effectivity of trade-off, pecking order and agency cost theories of capital structure. The empirical findings reveal positive and significant association between firm size and capital structure for Singapore firms. Meanwhile, profitability and asset tangibility correlate negatively with capital structure. As for Malaysian firms, the three determinants exhibit insignificant association with the capital structure. The study only examines 10 construction firms in Malaysia and 10 construction firms in Singapore, therefore, the small sample size becomes the limitation of the study. Nevertheless, the findings of this study may contribute to the body of knowledge on the importance of some firm-specific determinants such as profitability, tangible assets, and firm size in order to determine the optimal level of capital structure for firms in these countries.

Keywords: Firm size, Profitability, Asset Tangibility, Leverage.

1. INTRODUCTION

Capital structure is a term used in corporate finance to describe the mix of a firm's long-term debt, short-term debt, common equity and preferred equity. It is how a firm finances its operations and its growth by using various accessible sources of funds. Accordingly, decisions concerning debt and equity result in a given capital structure of the firm. Sub-optimal financing decisions could lead to corporate failure. The objective of financing decisions is wealth maximization and the immediate way of measuring the quality of any financing decision is to examine the effect of such decision on the firm's performance (Mwangi, Makau, and Kosimbei, 2014). In addition, Abor (2005) argues that financing decision is important because it has an impact on the firm's ability to grow in a competitive environment and to maximize shareholders' wealth. According to Mardiyanto (2009) the decision of a firm's capital structure is the funding decision related to the long term funding composition obtained through either the debt issuance or owner's equity. Firm must be able to collect funds from anywhere outside of the firm efficiently, that is a condition in which the funding composition can minimize the capital cost which should be borne by the firm (Prabansari and Kusuma, 2005). The capital cost is the cost incurred as the consequence of the funding decision taken by the firm.

Prior studies examine various firm-specific determinants of capital structure such as growth, size, profitability, asset tangibility, non-debt tax shield and earnings volatility. However, the empirical findings are mixed and inconclusive. Some scholars argue that leverage is expanded with growth, size, profitability, asset tangibility, non-debt tax shield, and earnings volatility. However, other scholars have proven, that leverage is curbed with growth, size, profitability, asset tangibility, non-debt tax shield, and earnings volatility (Moradi and Paulet, 2019; Coelho, 2019; Kabeer and Rafique, 2018; Flor and Petersen, 2018; M'ng, Rahman and Sannacy, 2017; Nha, Loan and Nhung, 2016; Pratheepan and Yatiwella, 2016; Vo, 2016; Acaravci, 2015; Li and Islam, 2019; Zafar, Wongsurawat and Camino, 2019; Hamzah and Marimuthu, 2018; Khemiria and Noubbigh, 2018; Wagenvoort, 2016; Chipeta and Deressa, 2016; Hussain, Hamza and Miras, 2015; Hedau, Singh and Janor, 2018; Mallisa and Kusuma, 2017; Nguyen, Nguyen and Dang, 2017). Despite the numerous studies, the results remain inconclusive which makes the determinants of capital structure not clearly understood. Thus, further research is needed.

In addition, prior studies investigating firm-specific determinants of capital structure have been done on various industries. M'ng et al. (2017) examine the determinant

of capital structure on public listed companies in Malaysia, Singapore and Thailand. Hamzah et al. (2018) investigate the determinant of capital structure on Oil and Gas firms in Malaysia. Li et al. (2019) study the determinant of capital structure on Australian public listed firms. Kabeer et al (2018) assess the determinant of capital structure on manufacturing firms in Pakistan. Hussain et al (2015) investigate the determinant of capital structure on Food industry in Malaysia. The empirical findings of these studies document variations of determinants of capital structure. The variations are due to each industry has its own features or requirements which determines and influence the level of leverage. In addition, there is limited study on firm-specific determinants of capital structure focusing on a comparative analysis between construction firms in Malaysia and Singapore.

Accordingly, this study examines the impact of firm-specifics determinants on capital structure of Malaysian and Singapore construction firms. Construction industry is chosen because this industry plays an important role in any country's economic development. It establishes the infrastructure required for socio-economic development and ultimately contributing significantly towards economic growth. Malaysia and Singapore are selected for this study because both countries have common attributes, such as history, culture and geographical location. Moreover, firms operating in the same industry have been found to have a homogenous capital structure due to the same level of operating risk and thus, having equal optimal capital structure (Nha et al., 2016). Hence, the objective of this study is to extend prior work by investigating the impact of the determinants on capital structure on the construction firms in Malaysia and Singapore. The findings of this study may contribute to the body of knowledge on the importance of some firm-specific determinants such as profitability, tangible assets, and firm size in order to determine the optimal level of capital structure for firms in these countries.

The remainder of this paper is structured as follows. The next part, part 2 provides the literature review. Part 3 explains the data and methodology of this study. This is followed by part 4 which presents the findings and discussions on the data analysis. The last part, part 5 concludes the study.

2. LITERATURE REVIEW

To explain the determinants of capital structure, this study adopts three theories namely trade-off, pecking order and agency cost. The trade-off theory requires the setting of a target debt level and this is normally based on a trade-off between the costs and benefits of debt (Li et al, 2019). The theory suggests that firms should raise their debt level to the extent that the tax benefits is equal to the cost of financial bankruptcy. As such, it is assumed that bankruptcy cost is negatively

related to the leverage ratio. The literature shows that firms with high levels of asset tangibility represent lower risk for creditors; therefore, asset tangibility is expected to be positively related to leverage (Li et al., 2019; Frank and Goyal, 2009; Rajan and Zingales, 1995; Titman and Wessels, 1988). Similarly, larger firms have lower bankruptcy risk as they have better and greater access to a wider range of financial sources, and have flexibility in redeploying assets, as compared to smaller firms. Meanwhile, pecking order theory suggests that firms do not have a leverage target and focus on information costs and signaling effects. Some scholars argue that the cost of funds determine a firm's financial choices (Myers and Majluf, 1984; Li et al., 2019; M'ng et al., 2017). Three major sources of funds are available which include retained earnings, debt, and equity. Firms prefer to finance projects from internally generated cash flows such as retained earnings. When this source of funds is exhausted, then debt financing becomes available. Equity will be issued only when debt is not sufficient to meet financing needs as issuing additional equity is the most expensive source of financing as it encompasses information asymmetries between managers, existing shareholders and potential new shareholders. Thus, this hierarchy is justified by differences in financing costs. Therefore, pecking order theory suggests that profitable firms will have more retained earnings. Thus, become less leveraged, while unprofitable firms will have higher leverage ratios. Consequently, a negative relationship is predicted between profitability and leverage.

On the other hand, agency theory states that agency costs play an important role in financing decisions due to the conflict that may exist between shareholders and creditors (Li et al., 2019). An optimal capital structure is determined by minimizing agency costs and balancing the interests of the parties involved. Therefore, profitable firms with great potential are more likely to issue equity to fund new projects instead of borrowing, implying that growth opportunities and profitability are expected to have a negative impact on a firm's leverage ratio. In addition, tangible assets can be used as collateral to mitigate creditor risk, implying a positive relationship between tangibility and financial leverage, which is consistent with the pecking order theory.

2.1 Firm Size and Capital Structure

M'ng et al. (2017) investigate the determinants of capital structure from public listed companies in Malaysia, Singapore and Thailand and the sample firms are taken from public listed companies in Bursa Malaysia, Singapore Stock Exchange and Thailand Stock Exchange. The period of analysis is from 2004 to 2013 and they found that firm size has a significant and positive influence on capital structure for the three countries. The same findings is reported by Kabeer et al. (2018), they

study the relationship between firm size and leverage on 400 manufacturing firms in Pakistan and the period of analysis is from 2001 to 2014. A study by Moradi et al. (2019) on the firm-specific determinants of capital structure, using a sample from 559 firms in six European countries before and during the period of 1999 to 2015 find that firm size is significantly and positively correlated with leverage. They argue that large firms are more diversified, have access to capital market, borrow at favorable interest rates, have lower cost of bankruptcy and have lesser information asymmetry.

2.2 Profitability and Capital Structure

There are many studies that examined the relationship between profitability and leverage. For instance, a recent study by Moradi et al. (2019) on the relationship between profitability and leverage using a sample from 559 firms in six European countries before and during the period of 1999 to 2015, they found that profitability is negatively related to leverage. In Australia, a study by Li et al. (2019) uses a sample of Australian public listed companies and covering a period of 4 years from 1999 to 2012, found that there is a negative relationship between profitability and leverage. Most scholars document negative relationship between profitability and leverage suggesting profitable firms prefer to finance their operation using retained earnings and this is consistent with pecking order theory.

2.3 Asset Tangibility and Capital Structure

Most of the prior empirical studies show mixed results. M'ng et al. (2017) investigates asset tangibility and leverage of public listed companies in Malaysia, Singapore and Thailand from 2004 to 2013, their findings show that asset tangibility has a significant positive influence on capital structure for Malaysia and Singapore but insignificant for Thailand. In a similar study conducted by Moradi et al. (2019) reveal that assets tangibility has a positive and significant effect on leverage. Their study uses 559 firms in six European countries before and during the period of 1999 to 2015. Kabeer et al. (2018) examine asset tangibility and leverage on 400 manufacturing firms of Pakistan from 2001 to 2014 and the findings reveal that asset tangibility has a positive impact on leverage. The results are similar to a study by Wagenvoort (2016) which come to a conclusion that asset tangibility relates positively to leverage. He investigates the relationship between asset tangibility and leverage and the influence of the financial crisis on the relationship using Dutch firms. He compares two timeframes namely the pre-crisis period (2006 to 2007) and crisis period (2008 to 2009) and the findings reveal that asset tangibility is positively related to leverage before the crisis. Most prior studies on

asset tangibility and leverage document a positive relationship. The scholars argue that assets tangibility provides collateral; hence, lenders feel secured due to the guarantee provided.

3. DATA AND METHODOLOGY

The period of analysis for this study is from 2009 to 2018 and data are based on ten firms in construction industry in both countries, Malaysia and Singapore, which provide a panel of 200 observations. As of 31 December 2019, there are approximately 50 construction firms operating in the main board of Bursa Malaysia and 35 construction firms in Singapore. The data represent 20% (10 of 50) and 28.6% (10 of 35) of construction firms in both countries. The sample firms are collected based on convenience sampling technique and the availability of the data. Panel data procedure is employed to analyse the data.

3.1 Measurement of Dependent Variable

The dependent variable in this study is capital structure (Leverage). The proxy for capital structure is total debt over total asset. Total debt is the sum of short term debt and long terms debt. Total debt is a measure of firm's financing leverage. According to Kabeer et al. (2018) this ratio is used to measure capital structure provided by total debt in relation to the total assets of the firm. The total debt over total asset can be calculated using the formula below:

$$\text{Leverage} = \text{Total Debt} / \text{Total Assets} \quad (3.1)$$

3.2 Measurement of Independent Variable

Independent variables are the variables that influence the dependent variable that can give negative or positive impact. This study uses three independent variables in order to examine the firm-specific determinants of capital structure evidence from construction firms in Malaysia and Singapore.

3.2.1 Firm size

The firm size is measured as the natural logarithm of total asset (Moradi et al., 2019; M'ng et al., 2017). The trade-off theory predicts a positive relationship between firm size and leverage considering that large firms have lower monitoring costs, less agency costs of debt, less volatile cash flows, easier access to credit market and need more debt to fully benefit from the tax shield (M'ng et al., 2017;

Sbeiti, 2010).

Firm Size = the natural logarithm of total asset (3.2)

3.2.2 Profitability

Return on assets (ROA) is a proxy for profitability which is the ratio of earnings before interest and tax (EBIT) over total assets (Moradi et al., 2019; Kabeer et al, 2018; M'ng et al, 2017). The trade-off theory predicts that capital market frictions such as agency costs, taxes, and bankruptcy costs substantially influence profitable firms' preference for debt financing thus profitability has a positive effect on firm leverage. Profitable firms are less likely to go bankrupt and can avail more debt at lower interest rates, thereby reducing bankruptcy costs when profitability increases (M'ng et al., 2017; Ali, 2011). Tax shields derived from interest payment deductibility prompt firms to raise debt financing.

Profitability = Operating Profit / Total assets (3.3)

3.2.2 Asset tangibility

Asset tangibility is defined as the ratio of net property, plant and equipment (Net PPE) to total assets (Moradi et al, 2019; M'ng et al, 2017). A high ratio of asset tangibility offers a high level of security since creditors can liquidate the collateral assets in the event of bankruptcy. The trade-off theory predicts a positive relationship between the tangibility of assets and leverage (M'ng et al, 2017).

Asset Tangibility = Net Property, Plant and Equipment / Total Assets (3.4)

Table 1: Summary of variables and measurements

Variables	Measurement	Adopted from
Leverage	Total Debt / Total Assets	Moradi and Paulet (2019) Li And Islam (2019) Coelho (2019) Zafar, Wongsurawat and Camino (2019) Hamzah and Marimuthu (2018) Hedau, Singh and Janor (2018) Flor and Petersen (2018) Khemiria and Noubbigh (2018) M'ng, Rahman and Sannacy (2017)
Firm Sizes	Logarithm of Total Assets	Moradi and Paulet (2019) Li And Islam (2019) Coelho (2019) Zafar, Wongsurawat and Camino (2019) Hamzah and Marimuthu (2018) Safuan and Karim (2018) Flor and Petersen (2018) M'ng, Rahman and Sannacy (2017) Vo (2016) Acaravci (2015) Hussain, Hamza and Miras (2015)
Profitability	Operating Profit / Total Assets	Moradi and Paulet (2019) Li And Islam (2019) Coelho (2019) Zafar, Wongsurawat and Camino (2019) Hamzah and Marimuthu (2018) M'ng, Rahman and Sannacy (2017) Wagenvoort (2016) Mallisa and Kusuma (2017)
Asset Tangibility	Net PPE / Total Assets	Moradi and Paulet (2019) Li and Islam (2019) Coelho (2019) Zafar, Wongsurawat and Camino (2019) Hamzah and Marimuthu (2018) M'ng, Rahman and Sannacy (2017) Wagenvoort (2016) Nha, Loan and Nhung (2016) Pratheepan and Banda (2016) Chipeta and Deressa (2016) Vo (2016) Acaravci (2015) Hussain, Hamza and Miras (2015)

On the relationship between determinants of capital structure, some studies documented positive relationship and some scholars argue negative relationship, hence non-directional hypotheses are justified as follows:

Hypothesis 1: To examine the relationship between firm size and leverage

- H0: There is no relationship between firm size and leverage.
H1: There is a positive and significant relationship between firm size and leverage.

Hypothesis 2: To determine the relationship between profitability and leverage

- H0: There is no relationship between profitability and leverage.
H1: There is a positive and significant relationship between profitability and leverage.

Hypothesis3: To investigate the relationship between asset tangibility and leverage

- H0: There is no relationship between asset tangibility and leverage.
H1: There is a positive and significant relationship between asset tangibility and leverage.

To test these hypotheses, the following regression model is adopted from prior studies:

$$Lev_{it} = \beta_0 + \beta_1 Firm\ Size_{it} + \beta_2 Profitability_{it} + \beta_3 Asset\ Tangibility_{it} + \varepsilon_{it} \tag{3.5}$$

Where; Lev_{it} is Leverage, β_0 is Constant, β_1 , β_2 , and β_3 are Regression Coefficients and ε_{it} is Error term.

This study is based on the following research framework:

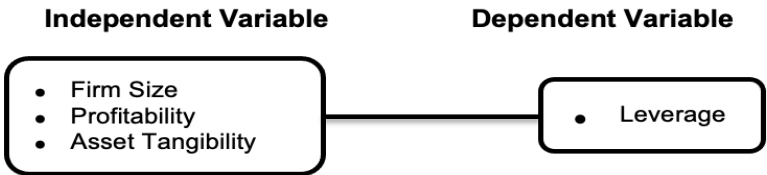


Figure 1: Research Framework

4. FINDINGS AND DISCUSSION

Table 2 shows a summary of descriptive statistics for variables in this study.

Table 2: Descriptive Analysis

Country	Variables	Mean	Min	Max	Std.Dev	Skewness	Kurtosis
Malaysia	Lev	0.3348	0.0078	0.6263	0.1616	-0.2331	2.3125
	LnTA	22.3311	19.7435	25.0366	1.3585	-0.0320	2.4067
	ROA	0.0715	0.0001	0.355	0.0671	2.4830	9.8358
	Asset Tangibility	0.5012	0.2865	0.9819	0.1305	0.3675	3.2635
Number of observations is 100							
Singapore	Lev	0.2629	0.0435	0.5868	0.1132	0.3945	3.0286
	LnTA	20.3724	18.2319	22.9591	0.8971	0.5309	3.9313
	ROA	0.0780	0.0001	0.2946	0.060	1.6147	5.6404
	Asset Tangibility	0.3662	0.0248	0.7213	0.1800	0.0154	1.9095
Number of observations is 100							

The dependent variable which is leverage has a mean of 33.48% for Malaysia and 26.29% for Singapore. These ratios suggest that 33.48% operations and growth activities of construction firms in Malaysia are financed using debt and for Singapore only 26.29%. It shows that Malaysian firms are relatively highly leveraged by 7.19% (33.48% - 26.29%). However, the mean of firm size for Malaysia is 22.33% and Singapore 20.37% suggesting that firms in both countries are not significantly different in terms of size. Meanwhile, the mean of ROA is between 7.15% for Malaysia and 7.80% for Singapore suggesting that firms in both countries are efficient in managing the uses of their assets to generate more earnings. On the asset tangibility, mean of Malaysia firms' is higher at 50.12% and Singapore stands at 36.62% implying the proportion of fixed assets over total assets was higher for Malaysia firms than Singapore.

Table 3 shows the result of probability tests. Three regression models for each country are presented in the following table.

Table 3: Regression Analysis

Country	Malaysia			Singapore		
	FE	RE	Pooled OLS	FE	RE	Pooled OLS
Constant						
β	0.0452	-0.5141	-0.4822	-1.9286	-1.5161	-1.4098
t-value	0.07	-1.69	-1.94	-4.07	-4.81	-6.73
p-value	0.9440	0.0920*	0.0550*	0.0000***	0.0000***	0.0000***
Firm Size						
β	0.0104	0.0272	0.0212	0.1091	0.0871	0.0806
t-value	0.36	1.94	1.84	4.56	5.63	8.07
p-value	0.717	0.052*	0.068*	0.000***	0.000***	0.000***
Profitability						
β	0.2609	0.265	0.3001	-0.2354	-0.1904	-0.0909
t-value	1.12	1.17	1.36	-1.48	-1.26	-0.61
p-value	0.2670	0.2440	0.1770	0.1430	0.2080	0.5430
Asset Tangibility						
β	0.0762	0.4443	0.6407	-0.0363	0.0510	0.1042
t-value	0.56	3.58	5.49	-0.40	0.77	2.14
p-value	0.5770	0.0000***	0.0000***	0.688	0.4410	0.0350**
R-Square	0.1771	0.3292	0.3383	0.3967	0.4291	0.4383
F-statistic	0.51	N/A	16.36	11.73	N/A	24.97
Sig F-statistic	0.6781	N/A	0.0000***	0.0000***	N/A	0.0000***
Wald Chi-Sq	N/A	23.18	N/A	N/A	45.18	N/A
p-value	N/A	0.0000***	N/A	N/A	0.0000***	N/A
BPLM Test						
Chi-Sq						
p-value	9.29 0.0012***			17.59 0.0000***		
Hausman Test						
Chi-Sq	55.03			2.39		
p-value	0.0000***			0.4961		

Notes: ***, ** and * denote statistical significance at the 1, 5 and 10 percent levels respectively. FE is Fixed Effect model, RE is Random Effect model.

The p-value of BPLM test for Malaysia is significant, therefore proceed to Hausman test. The p-value of Hausman test is significant, fixed effect is used as the model estimator. The p-value of BPLM test for Singapore is significant, proceed to Hausman test. The p-value of Hausman test is greater than 0.1 ($p=0.4961$), not significant, random effect is used as the model estimator.

The regression result for Malaysia shows an R-square of 18% suggesting that the independent variables can explain only 18% of the changes in the dependent variable. The F value is 0.51 and statistically insignificant at the 5% level implying the model is not fit for prediction. The result of the model shows insignificant but positive association between all independent variables and leverage. The findings fail to reject all the null hypotheses of the study. Meanwhile, the regression result for Singapore shows an R-square of 43% suggesting that the independent variables can explain approximately 43% of the changes in dependent variable. The Wald

Chi-square is 45.18 and statistically significant at the 5% level implying the model is fit for prediction. The result of the model shows significant and positive association between firm size and leverage. The findings suggest that bigger construction firms in Singapore resort to leverage to finance their operation and growth opportunities. In contrast, the results document negative and insignificant association between profitability and leverage. The findings suggest that financing pattern is in line with pecking order theory. However, the result of the model shows insignificant but positive association between asset tangibility and leverage. To sum up, the findings support the alternate hypothesis for firm size and leverage confirming that firms with greater size tend to have higher leverage. However, the findings fail to reject the null hypotheses for the association of profitability, asset tangibility and leverage.

5. CONCLUSIONS

Capital structure theories, such as trade-off theory, pecking order theory and agency theory suggest various determinants of capital structure. This study examines the determinants of capital structure on construction firms in Malaysia and Singapore. Three determinants of capital structure namely firm size, profitability and asset tangibility are examined in this study. The findings suggest that firm size is positive and significant with leverage for Singapore firms which are consistent with the literature. Meanwhile, profitability correlates negatively with leverage, while asset tangibility correlates positively but insignificant with leverage. As for Malaysian firms, the three determinants exhibit insignificant association with leverage. In addition, the findings of the study for both countries, Malaysia and Singapore, failed to reject the null hypothesis for H2 and H3. However, the result for Singapore accepted the H1 which is there is a positive relationship between firm size and leverage and Malaysia firms fail to reject the null hypothesis which is there is a negative relationship between firm size and leverage. Furthermore, the research findings support pecking order theory, the profitable firms will have more retained earnings, thus are becoming less leveraged, while unprofitable firms will have higher leverage ratios.

The study examines 10 construction firms in Malaysia and 10 construction firms in Singapore, the small sample size becomes the limitation of the study. Future study may consider taking all the firms in the construction industry in both countries as it will increase the number of observations and the findings generated would be more accurate and efficient in exploring the parameter of coefficient in the empirical models. Future research may also consider investigating manager/owner specific variables, such as age, race, education and their relations to leverage.

ACKNOWLEDGMENT

This study is the final year project paper of Siti Zulaikha Binti Uphilin for Bachelor of Business Administration (Hons.) Finance, UiTM Sabah Branch, Kota Kinabalu Campus. We would like to thank all parties who were involved directly or indirectly in the completion of this study.

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