Impact of Facebook Usage on Firm’s Performances among Malaysian Chinese Retailers

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**ABSTRACT**

Social media including Facebook has been acknowledged to play a vital role in firms achieving superior performance. Malaysia is a multicultural country in which the Malaysian Chinese are considered to be the most successful entrepreneurs. There is, however, a lack of research regarding the influence of Facebook usage on firm performance among Malaysian Chinese retailers. As such, this study had two aims. Firstly, the study investigated the influence of compatibility, cost effectiveness, trust, and interactivity on Facebook usage among Malaysian Chinese retailers. Secondly, the study assessed the impact of these retailers’ Facebook usage on their perceived financial performance, perceived non-financial performance, perceived business growth, and perceived performance relative to competitors under the moderating impact of market turbulence. This study developed a conceptual model based on the Strategic Contingency Theory (SCT) and Diffusion of Innovation (DOI) theory, and used a structured survey instrument to gather data. Using non-probability sampling techniques, 129 Malaysian Chinese retailers from Kuala Lumpur and Selangor were recruited for the study. Data was analysed using PLS-SEM techniques. The results showed that only compatibility, cost effectiveness, and interactivity have a statistically significant positive influence on Facebook usage, which in turn has a statistically significant positive influence on the retailers’ perceived financial performance, perceived non-financial performance, perceived business growth, and perceived performance relative to competitors. Moreover, market turbulence was only found to be a moderator that improves the impact of Facebook usage on perceived financial performance, perceived business growth, and perceived performance relative to competitors, but not perceived non-financial performance. These findings contribute to current literature and provide insights into the role and importance of Facebook usage on firm performance among Malaysian Chinese retailers, possibly encouraging more retailers to deploy social media in their business processes.

**Keywords:** Facebook usage, Compatibility, Cost effectiveness, Interactivity, Trust, Market turbulence.

I. Introduction

SMEs play a very important role in the economic development of every country (Cho & Lee, 2017). With the growth of disruptive technology of online shopping sites like Amazon, Lazada and Alibaba, traditional bricks and mortar, the businesses are facing increasing pressures to maintain competitiveness in the market (Peerayuth & Pakamon, 2017). To remain competitive with superior market performance and
to meet consumers’ perception, entrepreneurs should consider using social media as a marketing communication strategy (Gunwoo et al., 2018). Social media can become a customer relationship management tool that helps entrepreneurs to enhance or achieve higher business performance (Peerayuth & Pakamon, 2017). By utilising tools offered by social media applications, businesses are able to gain invaluable insights regarding users’ information such as demographic, interests, and usage which will allow them to create customised content for these users (He et al., 2015). By using social media like Facebook, businesses can also share, tag, message, comment and notify to promote their products or services (Ainin et al., 2015).

Nowadays, social media such as Facebook or Instagram are gaining popularity as platforms for business promotion. According to a survey in 2013, more than half of small and medium sized enterprises (SMEs) use social media (55.3%) to promote their products or services with particularly through Facebook (Dzisi & Ofosu, 2014). They also found that SMEs are also more likely to use Facebook than a corporate website due to convenience and cost factors. Lastly, social media helps SMEs in obtaining a competitive edge and to grow their business by building strong relationships with customers (Ahmad et al., 2018; Cheng & Shiu, 2018).

In recent years, the retail sector has contributed substantially to Malaysia’s economic growth. Retail sales’ growth contributed to Malaysia’s 3rd place ranking in the 2017 Global Retail Development Index. The retail sector has been acknowledged as one of the most active industries in the Malaysian economy that contributed significantly to Malaysia’s tax income and has also created important and significant employment opportunities (Nair et al., 2014). According to Retail Group Malaysia, the retail sector’s total sales for 2018 was projected to more than double as compared to 2017 (4.7% growth or RM104.4bil in 2018 as compared to 2% growth in 2017 (Cheng & Shiu, 2018). Besides being a major contributor to Gross National Income (GNI), the retail sector is also one of the major contributors to Malaysian Gross Domestic Product (GDP) (14.9% of Malaysian GDP in 2016) (Nathan, 2017). The retail market was expected to grow by 6% in 2018 by depending on election results, the strength of Malaysian Ringgit and external demand for domestic products (Yee, 2017).

Out of Malaysia’s population of 32.049 million, 20.7% are Chinese (Department of Statistics Malaysia, 2017). Malaysian Chinese tend to be more active in business and are more dominated in most industries in Malaysia. Minai et al. (2012) indicated that Malaysian Chinese were most of the SMEs owners in Malaysia. According to Jamil et al. (2014), the Malaysian Business in 1991 reported that Chinese owned businesses made up 82% of the wholesale trade, 50% of the construction sector, 40% of the manufacturing sector and 58% of retail trade. Besides, according to Nonini (2013), even with racial inequalities, Chinese entrepreneurs have managed to find success in doing business in Malaysia. Shi & Au-Yeung (2015) have also noted that Chinese retailers are more entrepreneurial and are more receptive to using innovation to gain a competitive advantage. Therefore, this study focused on the Chinese retailers in Malaysia.

However, most of the Malaysian Chinese retailers conduct their business through online platforms. One of the major issues faced by Malaysian Chinese SMEs in pursuing online business is consumer confidence. Statistics from Royal Malaysian Police show that the number of online fraud or cheating cases increased more than twofold between 2014 and 2016 (from 1,026 cases in 2014 to 2,497 cases in 2016 (Vijainaren, 2017). According to Star Online, the Kuala Lumpur Commercial Crime Investigation Department showed there were 139 cases of online loan scams amounting to RM3.7mil of losses for that department alone in 2017 (Letters, 2018). Therefore, in order to reduce fraud and increase online consumers’ confidence, it is necessary for SMEs to adopt the latest information technologies of the digital world (Ghobakhloo et al., 2012). To remain competitive, traditional retailers need to embrace technology. As stated previously, retailers are increasingly using social media to promote their products or services. Retailers are even using Facebook tracking to learn about consumers’
behaviours to keep strong loyalty relationship with them (Siganul et al., 2015). In developed countries like UK, social media is used to analyse consumers’ behaviour that assists the retailers to formulate sustainable businesses’ strategies (Gajewski, 2013).

The main objective of this study is to investigate the impact of compatibility, cost effectiveness, trust, and interactivity on Facebook usage, as well as to demonstrate the impact of Facebook usage on perceived financial performance, perceived non-financial performance, perceived business growth, and perceived performance relative to competitors under the moderating impact of market turbulence among Malaysian Chinese retailers. The main research questions of this study are, 1. What is the impact of compatibility, cost effectiveness, trust, and interactivity on Facebook usage? and 2. How does Facebook usage impact perceived financial performance, perceived non-financial performance, perceived business growth, and perceived performance relative to competitors under the moderating impact of market turbulence?

The remaining sections of this paper are arranged as follow. The next section describes the development of framework and hypotheses based on the underpinning theories and existing literature respectively. After this, there is methodology section followed by discussion and implications, and lastly there are limitations and future recommendations.

II. Underpinning Theories and Development of Theoretical Framework

This study’s theoretical framework has been established by integrating Strategic Contingency Theory (SCT) and Diffusion of Innovation (DOI). SCT is related to the market turbulence to predict the business growth. SCT states that external factors such as market turbulence and other external business environmental conditions also impact the performance of businesses (Pfeffer & Salancik, 1978).

The DOI theory refers to the intention to and the stage of adoption of technology (Doyle et al., 2014). Innovation refers to changes in the adoption of use media or media sites (Parveen et al., 2015). Facebook and Twitter are types of social network sites that can be considered as the parts of the innovation (Archibald & Clark, 2014). The innovation of Facebook can affect a business’ performance by providing an effective competitive advantage through its use (Abbas & ul Hassan, 2017). This research is focused on Malaysian SMEs in the retail industry. Using DOI theory this research examined how SMEs use Facebook to increase their success in the retail industry.

This research has considered factors such as compatibility, cost effectiveness, trust, and interactivity as the antecedents of Facebook usage. Studies have shown that merely examining Facebook usage as other factors such as changing customer perception, advancement in technology, and intense competition will affect a business’ success (Chi, 2015). Therefore, based on SCT, market turbulence needs to be examined as a moderator to facilitate Facebook usage and firms’ performance relationships in this study. Facebook usage is the independent variable (IV) including perceived financial performance, perceived non-financial performance, perceived business growth, and perceived performance relative to competitors are dependent variables (DV). The hypothesized model for this study is shown in Figure 1 as below:

Upon reviewing other relevant studies, several hypotheses have been developed to differentiate the causal links between Facebook usage, market turbulence, and perceived business success which are described as follow:

III. Development of Hypotheses

A. Impact of Compatibility on Facebook Usage

Facebook’s innovation allows the users to post their photos and interests in timelines like an online diary or photo book. Along with the rapid improvement
Figure 1. Hypothesised conceptual model

of the smart phone, Facebook’s innovation identified closely to adopter’s life situation which made its compatibility high (Rogers, 2010). Besides, compatibility in this context refers to how easily a firm is able to adopt social media applications within its existing infrastructure and applications thereby minimizing costs for the firms (Sharif et al., 2015). For example, Facebook’s open graph application allows 3rd party applications and websites to be integrated into its infrastructure such that these 3rd party applications and websites can interact as Facebook content (Hillis et al., 2015). In this manner, firms do not need to spend time to gain resources to create extra content just for Facebook. An innovation which is compatible with sociocultural values and beliefs will increase its chances of adoption while the opposite is true for incompatible innovations (Zolkepli & Kamarulzaman, 2015). The compatibility of social media is a strong factor to its adoption by businesses because it can be easily integrated into a business’ marketing strategy (Barnes & Jacobsen, 2013). Moreover, by integrating social media in its marketing, businesses are able to more accurately target their niche customers through the sharing of their products and services (Derham et al., 2011). Based on the above, the following hypothesis is developed:

**H1:** There is a positive impact of compatibility on Facebook usage among Malaysian Chinese retailers.

B. Impact of Cost Effective on Facebook Usage

Other than implementation of knowledge management, SMEs also use social media to drive innovation (Soto-Acosta et al., 2017). According to He et al. (2015), users tend to post their interests or experience on social media sites. By analysing this data, businesses are able to gain valuable knowledge and insight at a lower cost as compared to collection and analysis of traditional data. The most cost-effective strategies of marketing is using social media (Hassan et al., 2015). Social media as a marketing tool can directly influence customers at relatively low costs (Kaplan & Haenlein, 2010). Therefore, business start-ups do not need a large budget to utilise social media (Michaelidou et al., 2011). Other than cost effectiveness, SMEs can make better strategy decisions through analysis of consumer behaviour on social media (Liu et al., 2013). Based on the above, the following hypothesis is established:

**H2:** There is a positive impact of cost effectiveness on Facebook usage among Malaysian Chinese retailers.
C. Impact of Trust on Facebook Usage

Facebook is a website where users are free to comment and share opinions. Therefore, Facebook is perceived to be a trustworthy medium for the hospitality and tourism industry (Munar & Jacobsen, 2013). As Facebook affects users’ trust, it helps firms to attract social capital and convert into corporate social performance so that firms may use money to allocate and control its social media presence (Paniagua & Sapena, 2014). Trust in an online vendor is an important factor for users when they are assessing risk (McCole et al., 2010). By allowing interaction amongst users, social media is able to increase trust which directly influences a user’s intention to buy (Hajli, 2014). Trust gained through social media has been shown to be robust even through differing cultures with differing backgrounds and history (Pentina et al., 2013). Thus, in order to improve the trust in information of social media, Facebook has taken steps to strengthen its ability to detect and identify fake or disputed news and information (Mosseri, 2016). According to Erkan and Evans (2016), electronic word of mouth in social media increases credibility of a product or service and it has a strong influence on a consumers’ purchase intentions (Erkan & Evans, 2016). Social media’s ability to allow instant messaging between seller and buyer also increases trust in the seller and influences buyers’ purchase intention and satisfaction (Kwahk et al., 2012; Wang et al., 2016). Based on the above, the following hypothesis is created:

H3: There is a positive impact of trust on Facebook usage among Malaysian Chinese retailers.

D. Impact of Interactivity on Facebook Usage

As the name suggests, social media’s role as a communication medium has been increased significantly through its interactive communication like discussions, sharing opinions and information, and asking questions (Cozma & Chen, 2013; Rauniar et al., 2014). Social media has also been found to increase customer satisfaction through its personalised form of targeting and one-to-one customer interaction (Okazaki & Taylor, 2013). Moreover, Social media is able to promote customer engagement because it provides easy access to online content (Valek et al., 2009; Laer et al., 2013), as well as providing ease of interaction between a business and the customer which is a strong and significant influence to social media usage (SNS) (Kaye & Johnson, 2017). Social media contains interactivity factor that offers product and service between buyers and sellers which may build brand image (Hudson et al., 2016). Therefore, social media if used properly allows for faster two-way communication which can create more personalised interactions between buyers and sellers which would usually lead to more “positive” results (Agnihotri et al., 2016). Based on the above, the following hypothesis is established:

H4: There is a positive impact of interactivity on Facebook usage among Malaysian Chinese retailers.

E. Impact of Facebook Usage on Financial Performance

From the viewpoint of management, business success is related to financial performance (Kim et al., 2018; Ganyaupfu, 2013). Social media can impact financial performance by allowing users to gauge the market and anticipate demand through social media likes or follow (Paniagua & Sapena, 2014). Ashley and Tuten (2015) indicated firms use social media (Facebook) as the marketing tool to pursue the higher profit and sales. Moreover, the differentiation or cost effective strategy has an indirect but important impact on the firm’s performance (Teeratansirikool et al., 2013). Businesses which increase their involvement with social media have experienced more sales (Kumar et al., 2016). Similarity, social media is playing an increasing important role especially for small business at present because it creates better awareness of brand and better relations to gain the sales and repeat sales for small business (Jones et al., 2015).
Based on the above, the following hypothesis is created:

**H5:** There is a positive impact of Facebook usage on financial performance among Malaysian Chinese retailers.

**F. Impact of Facebook Use on Non-Financial Performance**

Increased interactivity by using social media will also affect user opinions which have both financial and non-financial impacts (Agostino & Sidorova, 2016). According to Abdallah & Alnamri (2015), firms may improve their non-financial performance by promoting customers’ satisfaction, enthusiasm employees’ productivity and technological innovation. Social media also allows firms to customise branding or promotion to consumers’ needs and wants through opinions and feedbacks about their current products (Paniagua & Sapena, 2014; Parveen et al., 2015). Facebook’s feature allow the users to share content and comment shapes perception regarding a particular product (Hassan et al., 2015). Besides, customer satisfaction will be positively impacted by timely online management responses (Gu & Ye, 2014; Mucan & Özeltürkay, 2014). Social media has also been shown to increase brand loyalty as well as perception of brand quality (De Cristofaro et al., 2014). Another study in hospitality industry demonstrated that there was an important impact of Facebook usage on strengthening customer engagement (Virginia et al., 2013). Facebook users’ purchase intentions were also found to be more easily influenced by user-generated and firm-created social media information which increased their perception on the brand (Gulati & Williams, 2013; Schivinski & Dabrowski, 2016). Based on the above, the following hypothesis is created:

**H6:** There is a positive impact of Facebook usage on non-financial performance among Malaysian Chinese retailers.

**G. Impact of Facebook Usage on Business Growth**

The SMEs involving in tracking innovations will gain more growth and success compare to non-innovating firms (Love & Roper, 2015). A firm’s innovation capability can have a positive impact on its business growth performance (Al-Ansari, 2014). Facebook is a technology tool that can enhance learning environment (Manca & Ranieri, 2013). Many businesses (e.g. hospitality firms and beauty companies etc) use social media such as Facebook to market product or service to grow their business (Kwok & Yu, 2013; Shen & Bissell, 2013). Besides, social media based on referrals also result towards a positive outcome as electronic word of mouth (Hudson et al., 2015; Ramsaran-Fowdar & Fowdar, 2013). For example, electronic word of mouth can have a positive impact on customer engagement or motivation for customers’ purchase (Baker et al., 2016; Chu et al., 2018). Moreover, firms are also able to recruit more suitable employees through social media to promote their business growth (Paniagua & Sapena, 2014). Based on the above, the following hypothesis is established:

**H7:** There is a positive impact of Facebook usage on business growth among Malaysian Chinese retailers.

**H. Impact of on Facebook Usage on Perceived Performance Relative to Competitors**

With the advancement of technology, the market is increasingly competitive (Sainaghi et al., 2013). Business needs and strategy will formulate the measurements for performance and these measurements should provide important information about processes, outputs, results, outcomes, competitors, and industry’s performances (Evans, 2015). It is important to identify appropriate performance measures because accurate competitive strategy will affect the firm’s performance (Teeratansirikool et al., 2013). Parveen et al. (2015) indicated that firms using social media technology have a distinct competitive advantage to their competitors.
A firm can achieve competitive advantage by creating unique and special value to avail all possible business opportunities to make profits (Pham, 2019).

Competitors’ intensity requires the firms to adopt innovation to achieve the successful performances, and also can reduce the harm of market turbulence (Wang & Ke, 2016). By analysing a competitor’s social media activity, a business is able to capture a competitor’s strategies and find counters to it (Kumar et al., 2017). Based on the above, the following hypothesis is developed:

**H8:** There is a positive impact of Facebook usage on perceived performance relative to competitors among Malaysian Chinese retailers.

### I. Moderating Impact of Market Turbulence on Facebook Usage-Firm’s Performance Relationship

Previous studies have examined the impact of market turbulence on firm’s performance (Abbas & ul Hassan, 2017; Pratono & Mahmood, 2014). Pratono and Mahmood (2014) found a positive moderating impact of market turbulence on entrepreneurial management to achieve a superior firm’s performance. Guo and Wang (2014) had also concluded that high levels of external turbulence forced firms to increase knowledge on innovation. Thus, market turbulence can moderate the impact of Facebook usage on firms’ performance. On the other hand, Zhang et al. (2015) indicated market turbulence as antecedent rather than as a moderator. Whilst other show that market turbulence can bring opportunities by minimizing challenges through effective ways (Pratono & Mahmood, 2014). Additionally by examining the combined moderating influence of market turbulence and competitive intensity we are able to gain helpful insight of when a firm’s innovative capability affects business performance (Tsai & Yang, 2013). Based on the above, the following hypotheses are established:

**H9:** Market turbulence positively moderates the relationship between Facebook usage and perceived financial performance among Malaysian Chinese retailers.

**H10:** Market turbulence positively moderates the relationship between Facebook usage and perceived non-financial performance among Malaysian Chinese retailers.

**H11:** Market turbulence positively moderates the relationship between Facebook usage and perceived business growth among Malaysian Chinese retailers.

**H12:** Market turbulence positively moderates the relationship between Facebook usage and perceived performance relative to competitors among Malaysian Chinese retailers.

### IV. Methodology

This research was a co-relational study to determine the relationship among variables (Marczyk et al., 2017). The survey strategy was used to collect data. It was a cross-sectional study which examined the relationships of variables, as data were collected over the same period (Cooper & Schindler, 2014).

#### A. Population, Survey Instrument, Sampling Technique, and Sample Size

Malaysian Chinese retailers were the population of this study and data were collected from Selangor and Kuala Lumpur. A standard questionnaire was used to collect data from target respondents. All the measures of constructs were adapted from existing studies. For instance, Compatibility, Cost Effectiveness, and Interactivity each measured with 3 items, Trust with 5 items, and Facebook Usage measured with 9 items, were adapted from Parveen et al. (2015). Likewise, 7 items to measure Market Turbulence were adapted from Peters et al. (2019). And the dependent variables namely financial performance measured with 4 items, non-financial performance with 3 items, business growth and performance relative
to competitors each measured with 4 items were adopted from Ahmad (2007).

The snowball sampling technique of non-probability sampling was used, whereby questionnaires were passed to close networks such as family or friends and they then passed the questionnaires to their close contacts (Valerio et al., 2016).

We followed the recommendation of Hair et al. (2017) and used G*Power analysis to determine the sample size. This study used G*Power 3 software to determine the sample size. G*Power 3 software is the major extension and enhancement of the last versions (Faul et al., 2007). For this study's framework with four predictors, the minimum sample size of 85 was required to generate a power of 0.80 with the medium size $f^2$ effect (Hair et al., 2017), however, the researcher aimed to get maximum power of 95%, so the target sample size was set at 129 for this study.

B. Data Analysis Techniques

Statistical Package for the Social Sciences (SPSS) version 20 was used to analyse demographic profiles of respondents and their firms. On the other hand, PLS-SEM was used to do inferential data analysis that refers to testing the hypotheses.

C. Descriptive Statistics

The respondents' demographics profiles and their firm's demographic profiles were analysed by using SPSS. There are more than 55% male respondents. The majority of respondents (43.4%) are between 31 to 40 years old, whereas 35.7% of the respondents were in the 21 to 30 age bracket and this shows that younger retailers are more likely to adopt technology to improve their businesses. The demographic profiles of respondents and their firms are shown in Table 1 and Table 2 respectively.

### Table 1. Demographics profiles of the respondents

| Categories          | Frequency | Percentages |
|---------------------|-----------|-------------|
| **Age**             |           |             |
| 21 - 30             | 46        | 35.7%       |
| 31 - 40             | 56        | 43.4%       |
| 41 - 50             | 17        | 13.2%       |
| 51 - 60             | 10        | 7.8%        |
| **Gender**          |           |             |
| Male                | 77        | 59.7%       |
| Female              | 52        | 40.3%       |
| **Marital**         |           |             |
| Single              | 53        | 41.1%       |
| Married             | 55        | 42.6%       |
| Divorced            | 20        | 15.5%       |
| Widowed             | 1         | 0.8%        |
| **Religious**       |           |             |
| Buddhist            | 76        | 58.9%       |
| Christian           | 52        | 40.3%       |
| **Education**       |           |             |
| Certificate         | 35        | 27.1%       |
| Diploma             | 46        | 35.7%       |
| Bachelor Degree     | 31        | 24.0%       |
| **Family Background**|      |             |
| Middle class        | 71        | 55.0%       |
| Upper middle class  | 14        | 10.9%       |
| Lower middle class  | 43        | 33.3%       |
Table 2. Firms’ demographic profiles

| Categories               | Frequency | Percentages |
|--------------------------|-----------|-------------|
| **Firm Location**        |           |             |
| Selangor                 | 65        | 50.3%       |
| Kuala Lumpur             | 64        | 49.6%       |
| **Position**             |           |             |
| Business Owner           | 75        | 58.1%       |
| Business Partner         | 49        | 38.0%       |
| Others                   | 5         | 3.9%        |
| **Year of Company**      |           |             |
| 2 years or less          | 21        | 16.3%       |
| 3 - 5 years              | 43        | 33.3%       |
| 6 - 10 years             | 33        | 25.6%       |
| 11 - 20 years            | 15        | 11.6%       |
| 21 years or more         | 17        | 13.2%       |
| **Number of Employees**  |           |             |
| 3 - 5                    | 42        | 32.6%       |
| 5 - 30                   | 74        | 57.4%       |
| 30 - 75                  | 13        | 10.1%       |
| **Annual Sales**         |           |             |
| Less than RM300,000      | 42        | 32.6%       |
| RM300,000 to less than RM3 million | 74 | 57.4% |
| RM3 million to not exceeding RM20 million | 13 | 10.1% |
| **Nature of Business**   |           |             |
| Pharmaceutical, medical, and orthopaedic goods | 5 | 3.9% |
| Textile and clothing     | 24        | 18.6%       |
| Footwear and leather goods | 9   | 7.0%      |
| Household appliances and equipment | 17 | 13.2% |
| Hardware, paint and glass | 13 | 10.1% |
| Sports and recreational goods | 4   | 3.1%      |
| Boutique, Salon, and Spa | 12       | 9.3%        |
| Gifts and crafts         | 14        | 10.9%       |
| Watches                  | 6         | 4.7%        |
| Carpets                  | 3         | 2.3%        |
| Perfumes                 | 5         | 3.9%        |
| Furniture                | 2         | 1.6%        |
| Toys                     | 6         | 4.7%        |
| Books                    | 1         | 0.8%        |
| Interior decorators      | 4         | 3.1%        |
| Towel and bed sheets     | 3         | 2.3%        |
| Gold and diamond         | 1         | 0.8%        |

D. Measurement Model Analysis

The assessment of measurement model evaluates the relationship between the indicators and their corresponding constructs (Hair et al., 2017). The measurement model assessment consists of the assessment of reliability, indicators’ outer loading and composite reliability, testing of validity via Average Variance Extracted (AVE). The measurement model also consists of the assessment of discriminant validity though HTMT criterion (Hair et al., 2017). All the values of reliabilities and AVE were found above their cut off values as shown in Table 3. Henseler et al. (2015) also suggested the heterotrait-monotrait ratio (HTMT) to assess the discriminant validity. According to them, a maximum value of 0.9 indicates
Table 3. Scores of reliabilities and convergent validity (evaluation of measurement model)

| Constructs | Items   | Factor Loadings | Cronbach's Alpha | rho_A | Composite Reliability | Average Variance Extracted (AVE) |
|------------|---------|-----------------|------------------|-------|-----------------------|---------------------------------|
| BG         | BG1     | 0.928           | 0.937            | 0.937 | 0.955                 | 0.840                           |
|            | BG2     | 0.907           |                  |       |                       |                                 |
|            | BG3     | 0.916           |                  |       |                       |                                 |
|            | BG4     | 0.915           |                  |       |                       |                                 |
| CEF        | CEF1    | 0.728           | 0.805            | 0.848 | 0.885                 | 0.721                           |
|            | CEF2    | 0.919           |                  |       |                       |                                 |
|            | CEF3    | 0.887           |                  |       |                       |                                 |
| COM        | COM1    | 0.862           | 0.878            | 0.896 | 0.924                 | 0.803                           |
|            | COM2    | 0.921           |                  |       |                       |                                 |
|            | COM3    | 0.905           |                  |       |                       |                                 |
| CP         | CP1     | 0.937           | 0.951            | 0.955 | 0.964                 | 0.871                           |
|            | CP2     | 0.936           |                  |       |                       |                                 |
|            | CP3     | 0.931           |                  |       |                       |                                 |
|            | CP4     | 0.930           |                  |       |                       |                                 |
| FB USAGE   | USAGE1  | 0.799           | 0.922            | 0.940 | 0.937                 | 0.568                           |
|            | USAGE10 | 0.829           |                  |       |                       |                                 |
|            | USAGE11 | 0.677           |                  |       |                       |                                 |
|            | USAGE12 | 0.790           |                  |       |                       |                                 |
|            | USAGE13 | 0.713           |                  |       |                       |                                 |
|            | USAGE14 | 0.774           |                  |       |                       |                                 |
|            | USAGE15 | 0.748           |                  |       |                       |                                 |
|            | USAGE16 | 0.801           |                  |       |                       |                                 |
|            | USAGE17 | 0.152           |                  |       |                       |                                 |
|            | USAGE18 | 0.828           |                  |       |                       |                                 |
|            | USAGE19 | 0.849           |                  |       |                       |                                 |
|            | USAGE20 | 0.849           |                  |       |                       |                                 |
| FP         | FP1     | 0.926           |                  |       |                       |                                 |
|            | FP2     | 0.914           |                  |       |                       |                                 |
|            | FP3     | 0.938           |                  |       |                       |                                 |
|            | FP4     | 0.915           |                  |       |                       |                                 |
| INT        | INT1    | 0.921           | 0.907            | 0.917 | 0.941                 | 0.843                           |
|            | INT2    | 0.949           |                  |       |                       |                                 |
|            | INT3    | 0.882           |                  |       |                       |                                 |
| MT         | MT1     | 0.831           | 0.854            | 0.888 | 0.884                 | 0.523                           |
|            | MT2     | 0.700           |                  |       |                       |                                 |
|            | MT3     | 0.686           |                  |       |                       |                                 |
|            | MT4     | 0.620           |                  |       |                       |                                 |
|            | MT5     | 0.799           |                  |       |                       |                                 |
|            | MT6     | 0.662           |                  |       |                       |                                 |
|            | MT7     | 0.744           |                  |       |                       |                                 |
| NFP        | NFP1    | 0.902           | 0.866            | 0.870 | 0.918                 | 0.789                           |
|            | NFP2    | 0.901           |                  |       |                       |                                 |
|            | NFP3    | 0.861           |                  |       |                       |                                 |
| TRUST      | TRUST1  | 0.797           | 0.902            | 0.922 | 0.927                 | 0.717                           |
|            | TRUST2  | 0.816           |                  |       |                       |                                 |
|            | TRUST3  | 0.863           |                  |       |                       |                                 |
|            | TRUST4  | 0.879           |                  |       |                       |                                 |
|            | TRUST5  | 0.874           |                  |       |                       |                                 |
Table 4. HTMT

|       | BG     | CEF    | COM    | CP     | FB USAGE | FP     | INT    | MT     | NFP     | TRUST   |
|-------|--------|--------|--------|--------|----------|--------|--------|--------|---------|---------|
| BG    | 0.537  | 0.666  | 0.529  | 0.761  | 0.560    | 0.878  | 0.449  | 0.211  | 0.878   | 0.502   |
|       | (0.349,| (0.486,| (0.345,| (0.636,| (0.421,  | (0.779,| (0.274,| (0.102,| (0.778,  | (0.307,  |
|       | 0.694) | (0.710) | (0.345, | (0.858) | (0.550,  | (0.346,| (0.339,| (0.091,| (0.275,  | (0.307,  |
|       |        |        | (0.170,|        | (0.376,  | (0.311,| (0.138,| (0.092,| (0.197,  | (0.175,  |
|       |        |        | (0.677)|        | (0.360,  | (0.531,| (0.244,| (0.355)| (0.566,  | (0.276,  |
|       |        |        |        |        | (0.662)  | (0.798) | (0.560)| (0.179)| (0.566,  | (0.654)  |
|       |        |        |        |        | (0.689)  |        | (0.788)|        | (0.287)  |        |
|       |        |        |        |        |          |        |        |        | (0.460)  |        |
|       |        |        |        |        |          |        |        |        | (0.175)  |        |
|       |        |        |        |        |          |        |        |        | (0.460)  |        |
|       |        |        |        |        |          |        |        |        | (0.877)  |        |
|       |        |        |        |        |          |        |        |        |        |        |

discriminant validity through HTMT whereby values over 0.9 shows a lack of discriminant validity. Table 4 revealed the discriminant validity established due to HTMT where values were below 0.90.

E. Structural Model Analysis

The structural model is related to evaluating the predictive capabilities of the relationships from one construct to another (Hair et.al, 2017). Following the suggestions of Hair et al. (2017), VIF values, values of $R^2$, $f^2$, and $Q^2$, as well as significance and relevance of the structural model relationships were assessed. The VIF values for all indicators were found below 5 which indicates that collinearity is not any issue between the indicators in collected data (Hair et al., 2017). The R2 values of endogenous constructs were found in range of 0.292 to 0.546 which indicate moderate to substantial predictive power. The results of $f^2$ effect sizes’ values were found in the range of 0.001 and 0.305 where Trust had the least effect and Interactivity had the highest effect on Facebook usage. Whereas, all the $f^2$ values were above 0.15 for the Facebook usage on firms’ performances, therefore, it has either medium to high importance for achieving the firm’s performances. In addition, all the Q2 values were found above 0 with range between 0.171 to 0.276 that revealed the medium predictive relevance of Facebook usage for all endogenous constructs.

The significance and relevance of the constructs were assessed by PLS-SEM through bootstrapping by using 1000 re-samples. The results of all hypotheses
are shown as below in Table 5.

Table 5 represents the direct impact of COM on FB. The results of H1 is supported as t-value is more than 1.645 (β = 0.182, t = 2.029). This means the positive impact of COM on FB is significant. The results of H2 is supported due to high t value (β = 0.287, t = 3.719). This means the positive impact of CEF on FB is significant. However, the result of H3 is not supported due to non-significant value of t (β = 0.022, t = 0.269). This means that positive impact of Trust on FB is not significant. The results of H4 is supported (β = 0.433, t = 6.814) which shows the positive and significant impact of INT on FB. The result of H5 is also supported (β = 0.437, t = 6.664) which reveals that the positive influence of FB on FP is significant. The finding of H6 is also supported (β = 0.460, t = 6.597) showing that positive impact of FB on NFP is significant. The result of H7 is supported (β = 0.515, t = 7.927) which reveals that the positive influence of FB on BG is significant. The result of H8 is supported as well (β = 0.530, t = 8.075) indicating that the positive influence of FB on CP is significant.

Among the four hypotheses regarding the moderating influence of MT on the relationship between Facebook usage and firm’s performances, only three hypotheses are supported. For instance, the finding of H9 reveals that β = 0.203 and t = 2.257 which shows that MT positively as well as significantly moderates the impact of Facebook usage on FP, means that the Facebook usage on FP relationship could be enhanced only when the MT is high.

On the other hand, the result of H10 shows that β = 0. 150 and t = 1.545 which shows that MT does not moderate the influence of Facebook usage on NFP. The result of H11 (β = 0.139, t = 1.67) and H12 (β = 0.211, t = 1.880) show that MT positively and significantly moderates the influence of Facebook usage on BG and CP, means that the Facebook usage on BG and CP relationships could be enhanced only when the MT is high.

V. Discussion and Implications

The hypotheses from H1 to H4 were related to research question 1 regarding the impact of compatibility, cost effectiveness, trust, and interactivity on Facebook usage. This study has found that the factor of compatibility has significant positive effect on Facebook usage (H1) which is consistent with findings of some other studies as well (Ainin et al., 2015;
Firms (SMEs) should adopt social media compatible with existing goals, infrastructure and applications, values, goals, beliefs of organization and even innovation. The compatibility of the social media (Facebook) can utilize the marketing strategies with minimum cost to target the customers. Likewise, results revealed that cost-effective factor has positive impact on Facebook usage (H2) which is in line with other studies (Ainin et al., 2015; Chong & Chan, 2012; Alam & Noor, 2009). Compared with larger organisations, SMEs have smaller budgets, so they require a cost-effective approach for their business. Social media is the most cost-effective approach for SMEs because they can use it as a marketing tool to offer customer service to reach big audiences as well as analyse the behaviour of customers.

Some scholars indicated that sharing reliable, credible, and accurate information could be beneficial for businesses. However, increasing online fraud or cheating cases creates uncertainty and risk and resulted in lower trust. By using social media as marketing medium tool, businesses in our study might not have considered security or privacy factors for customers that could result in loss of trust. In addition, the method of information delivery in social media where users are not able to allocate and control social media content which resulted in unreliable, incredible and inaccurate information. Thus, based on above reasons, trust does not lead towards Facebook usage (H3) because people have a lack of trust on online and social media platforms that is consistent with some other researchers’ studies (Ainin et al., 2015; Wu & Liu, 2007). On the other hand, interactivity factor was found to have its positive impact on Facebook usage (H4) which is consistent with other studies such as Ainin et al. (2015) and Lee & Kozar (2012). This is because interactivity fosters two-ways communication to allow businesses to engage with customers (Van Laer et al., 2013), but also builds image of products by offering products and services through social media (Hudson et al., 2016).

The hypotheses from H5 to H12 were related to research question 2 regarding the impact of Facebook usage on perceived financial performance, perceived non-financial performance, perceived business growth, and perceived performance relative to competitors under the moderating impact of market turbulence. Results also revealed the positive and significant influence of Facebook usage on firm’s financial (H5) and non-financial performances (H6) as well as on business growth (H7) and performance relative to competitors (H8) as well. Businesses use social media (Facebook) as a marketing medium to attain superior performances. These results are also consistent with some other studies that have also found the positive impacts of Facebook usage on firms’ performances (Ainin et al., 2015; Shuai & Wu, 2011; Stone et al., 2007; Apigian et al., 2005).

Furthermore, this study has also found the positive and significant moderating influence of market turbulence on the relationship between Facebook usage and financial performance (H9), Facebook usage and business growth (H11), as well as Facebook usage and performance relative to competitors (H12) as well. This means that turbulence in the existing market improves the influence of Facebook usage on financial performance, business growth, and performance relative to competitors. In other words, the businesses can show improvements in their financial performances, business growth, and performance relative to competitors only when the turbulence is higher in markets. The positive and significant moderating impacts of market turbulence are consistent with many other studies that also reported positive and significant moderating influence of market turbulence (e.g., Peters et al., 2019), however, the non-significant or weak moderating influence of market turbulence with non-financial performance (H10) is also consistent with other researchers who also did not find the moderating impacts of market turbulence under different contexts (e.g., Wardi et al., 2018; Feng et al., 2017).

This study’s results have important practical implications for retailers because they provide very useful insights to retailers to achieve superior firms’ performances by using Facebook in the turbulent market conditions. Retailers can use Facebook as

El-Gohary, 2012; Wang et al., 2010).
a marketing tool due to low contact costs, customized and targeted ads, instant customers’ feedback, referrals through word-of-mouth, and positive effect on buyers’ behaviour (Ramsaran-Fowdar & Fowdar, 2013). However, Facebook users may ignore Facebook ads and be sick of overwhelming their walls with advertisements and breaches of privacy and misuse of data by third parties. In order to achieve maximum return on investment in Facebook marketing, the firms need to invest effort, staff costs, and time in Facebook marketing. This is because the loyal customers are more likely to connect with businesses through social media, thus, it depends on retailers how they can foster greater customers’ loyalty as well as possibility to buy their products in future. Since the customers use Facebook for product information and to find out special promotions, thus, retailers have to make sure to provide updated information to the customers regarding their products required by the customers. The Facebook marketing strategy can work very well if the retail firms join the target community and engage themselves as friends to customers and build trust-based relationships with customers. Therefore, retail firms must have to ensure that they strictly follow the laws related to privacy and that private information is not misused by third parties to damage individuals.

Since Facebook is emerging as a new marketing tool for firms to create the awareness regarding their brands, therefore, retailers have to introduce new marketing approaches and tactics that should be different from traditional ones. Thus, the retailers are required to learn new strategies of communication to maintain and enhance long-term relationships with the existing customers and need to plan strategy to target new customers through Facebook. Retailers should use Facebook as a marketing strategy because it enables the dissemination of information between firms and customers as well as between networks of customers too (Mangold & Faulds, 2009). This social platform is not only useful for retailers to promote their products but is also important to develop and maintain long-term relationships with target customers.

In summary, following are some of the advantages for retailers from their Facebook business pages.
1. Retailers can create the brand awareness through Facebook and their businesses’ presence can assist them in gaining exposure to potential customers.
2. By posting the links of Facebook business pages on websites, retailers can drive website traffic by increasing the online visits.
3. Retailers can target the specific demographics based on age, location, interests, and gender advertising.
4. Retailers can build their marketing lists by gathering email addresses of Facebook users through their Facebook business pages.
5. Retailers can use Facebook pages as a mechanism to provide good customer service and to get feedbacks from their customers because Facebook permits two-way communication between them and customers. They can even use the messaging service to directly deal with their customers. The comments and reviews are the best ways to collect customers’ feedbacks and to look for areas for making further improvements.
6. Retailers can monitor as well as improve their products and services by using data from their “Facebook Insights” of pages to plan for future.

VI. Limitations and Future Recommendations

Some of the limitations of this study include the specific target sample (Malaysian Chinese retailers), sampling method (i.e, snowball sampling technique), subjective measures of firm’s performances, and collecting data from similar type of respondents. To overcome these limitations, the future studies should be conducted among all Malaysian ethnic groups including Malaysian Chinese, Malay, and Malaysian Indian entrepreneurs. Also in future studies, researchers should strive to get list of SMEs to employ random
sampling technique. Future studies are also suggested using objective data to measure firm’s performances and collecting data from different types of respondents.

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