# Business Management
## Progress and Trends

Elijah Grant

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# INFLUENCE OF PARTICIPATION IN DECISION MAKING ON JOB SATISFACTION, GROUP LEARNING, AND GROUP COMMITMENT: EMPIRICAL STUDY OF PUBLIC SECTOR UNDERTAKINGS IN INDIA

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**ABSTRACT**

*This study assesses the impact of participation in decision making on job satisfaction, group commitment, and group learning. Data were collected from 397 managerial employees working in public sector undertakings across India. Structural equation modeling as a statistical technique and WarpPLS as a statistical tool was used to verify the proposed relationships. The findings of the study suggest that participation in decision making had a positive and significant relationship with job satisfaction. Further, participation in decision making had significant impact on group learning, but had no impact on group commitment. Job satisfaction had a positive and significant impact on group commitment. Group learning was positively and significantly related to job satisfaction and group commitment. The results suggest that employee participation in decision making process is highly desirable as it elevates employee identification with their respective organisation. The findings of the study are relevant to the people holding key managerial positions in public sector undertakings and they are discussed in detail.*

**Keywords:** participation in decision making, job satisfaction, group commitment, group learning, employees, public sector undertakings

## INTRODUCTION

In the present scenario of high competitiveness, organisations need to have a human resource pool generating high performance that cannot be substituted by its rivals (Barney, 1991). A lot of emphasis is given on performance and result-oriented services due to which participative management is considered as very essential for satisfaction of employees (Kim, 2002). Participation allows individuals to share influence among themselves who are not hierarchially equal, and participative management practices help to maintain a balance on the involvement of managers as well as the subordinates in the daily tasks and activities related to the job (Wagner, 1994). It is believed that participation makes an influence on work practices, recognition, and rewards, and these correlate with job satisfaction and organisational commitment (Appelbaum, Louis, Makarenko, & Saluja, 2013). The highest levels of satisfaction in the work environment are likely to occur when there is high level of involvement by planning processes, generating alternatives, formulating policies, and evaluating results.

A work group is a collection of employees who work together to complete organisational goals (Kukenberger, Mathieu, & Ruddy, 2015). Individual knowledge within a work group is necessary as it is the extent to which a work group member would perceive that his or her work specific knowledge and skills have improved as a result of working with the group. This process is considered as group learning. It is expected to be influenced by relationships between the employee and his co-employees. A positive work environment that is free of dysfunctional conflicts and has good amount of trust would help in learning within work groups. It is stated that satisfaction is positively related to group commitment (Bishop & Scott, 2000). Both group learning and group commitment have been recognised as the main ingredients of a work group (Mathieu & Gilson, 2012; Kukenberger et al., 2015). There is support from past research that employees learn and work as a function of getting attached to their respective work groups (Tannenbaum, Beard, McNall, & Salas, 2010).

Affective form of commitment has a strong relationship with group level outcomes and citizenship behaviours because individuals impart greater effort when they get motivated by high levels of attachment, identification, and internalisation (Giri & Kumar, 2013). Employees exhibit meaningfully distinct levels of affective commitment towards their organisation as well as their work group (Johnson & Yang, 2010). Hence, the present study has focused on individual's affective commitment towards their work group. Affective group commitment has been labelled as simply group commitment in this study following the convention in

past research (Cohen, 2003). Indians have the essence of 'collectivism' or collective culture (Hofstede, 1980). Hence, they prefer to discuss and work together.

We have selected Central Public Sector Enterprises (CPSEs), also known as public sector undertakings, as our empirical setting. The reasons for selecting public sector undertakings as empirical setting are many considering personal and business fronts. Firstly, they are renowned to be people-centric and dynamic (Gupta & Pannu, 2013). Secondly, these organisations continue to attract millions of job seekers mainly because of job security and stability (Ahmad, 2013). Thirdly, these organisations are growing in importance, nationally and internationally. According to SCOPE (2016) in India, "all public sector undertakings collectively accounted for 23.2 percent of the total market capitalisation" and "9 percent of India's total export earnings was contributed by these organisations". Fourthly, government orders for public sector undertakings generally aim at betterment of the society. Finally, public sector undertakings have a direct impact on foreign exchange earnings of the country because their focus is mainly on international trade in goods and services (Public Enterprises Survey, 2016). A recent report highlights that the measures taken by the state for improving performance and commitment of the CPSEs, reflects in their robust growth and development (KPMG, 2012). These above stated reasons only highlight the potential economic significance of the public sector undertakings in determining the Indian business growth.

To address the paucity of research in learning within work groups as well as gaps in the group commitment literature, a model is described and represented that empirically tested the influence of participation in decision making on job satisfaction, group learning and group commitment.

## LITERATURE REVIEW

### Participation in Decision Making

Participation in decision making is defined as sharing the decision making process in order to achieve organisational objectives (Knoop, 1995). Individuals feel a sense of belongingness to the organisation when they are allowed to make suggestions and participate in decision making process. This is due to the fact that employees who make decisions that have their consent in them are more likely to value outcomes (Black & Gregersen, 1997). Participation in decision making offers employees different levels of influence in making policies ranging from consultative committees to developing good relations with managers. When

employees participate in decision making, it helps to build their commitment towards the organisation (Kumar & Giri, 2013).

**Job Satisfaction**

Job satisfaction is widely studied in literature. It is a feeling about a job that is determined by the difference between the amount of valued outcome that an individual receives and the outcome he feels he should receive (Halepota & Shah, 2011). It is an important attribute that is desired by organisations through their employees. This is due to the fact that job satisfaction is an explicit and potential determinant of absenteeism, turnover, in-role job performance, and behaviours within the organisation (Goh, Elliott, & Quon, 2012). In addition, the primary antecedents of job attitudes are within the ability of the management to influence.

**Group Learning**

Learning is a process of change in cognition and behaviour, and it does not necessarily follow that these changes will directly enhance performance (Crossan, Lane, & White, 1999). Group learning is defined as an outcome that represents a new shared understanding among the members of a work group (Wilson, Goodman, & Cronin, 2007). Learning is an inherently dynamic process that unfolds over time. If a group develops a new level of shared understanding, then it suggests the presence of cohesiveness within the work group. Learning takes place when members of a work group have shared understanding (Senge, 1990).

**Group Commitment**

Group commitment is defined as an individual's identification and sense of cohesiveness with other members of the organisation (Randall & Cote, 1991). It is one of the less researched concepts in commitment research (Cohen, 2003). Most of the research on group commitment related it to organisational commitment conceptually or empirically. Randall and Cote (1991) suggested that the importance of work-group commitment is its enhancement of social involvement, and this reinforces the social ties the individual develops with the organisation. They explained that on being hired, one's initial reference group gratifies one's needs for guidance and reassurance and exerts a lasting influence over individual attitudes to the organisation.

## THEORETICAL FRAMEWORK

### Participation in Decision Making and Job Satisfaction

A study conducted in a large manufacturing organisation had concluded that employees having a high desire to participate in decision making are likely to exhibit high levels of job satisfaction (Ornoy, 2010). Similar fact was observed in a large manufacturing firm and a large public utility firm (Schuler, 1983). Thus employees, who view their organisations behaving in their interest experienced greater job satisfaction (Parnell, 2003). Therefore, it is important to understand when and how workplace participation in decision making contributes to gains for both employees and employers. Information flow and decision making are enriched and communications are more open and transparent (Anderson & McDaniel, 1999). Thus, the review of literature led to develop the following hypothesis:

H1: Participation in decision making will be positively related to job satisfaction.

### Job Satisfaction and Group Commitment

Certain tasks in organisations demand working in teams. Team spirit should develop among individuals in such cases. Team spirit is positively related to job satisfaction levels of employees in a developing country (Halepota & Shah, 2011). Randall and Cote (1991) studied that group commitment evolves from social ties of individuals and with job satisfaction in an organisation. When the reference team members provide guidance and support to an individual, his social ties would improve. Further, it generally determines satisfaction with group achievements (Maynard, Mathieu, Marsh, & Ruddy, 2007; Bishop & Scott, 2000). Hence, group commitment of the employee would also increase. Thus, the following hypothesis was developed:

H2: Job satisfaction will be positively related to group commitment.

### Participation in Decision Making and Group Learning

Participation in decision making creates arenas that facilitate ties among individuals and groups with different goals and experiential backgrounds (Chattopadhyay, Glick, Miller, & Huber, 1999). Increase in participation in decision making leads to an increased sharing of existing knowledge among employees of a work group relevant to the functioning of the organisation (Huber, 1991). Organisations that support participation in decision making aide group learning (Kuo, 2011).

Participation in decision making may help employees to work with responsibility. In this way, participation may help them to learn by facilitating interaction between them. This led to proposal of the following hypothesis.

H3: Participation in decision making will be positively related to group learning.

**Group Learning and Group Commitment**

Learning mainly developed in the psychological field over a long evolutionary history (Wang & Ahmed, 2001). Learning occurs with shared understanding and group dynamics of the members in a work group in an organisation (Pantouvakis & Bouranta, 2013). Learning among group members may develop bonding between them (Limpibunterng & Johri, 2009). This may help them to identify themselves with their respective work groups. It is also believed that learning within a work group benefits commitment of the members towards the group (Johnson & Yang, 2010). This led to the formulation of the following hypothesis:

H4: Group learning will be positively related to group commitment.

**Participation in Decision Making and Group Commitment**

Research in general supports a link between participation in decision making and commitment (Appelbaum et al., 2013). Employees often regard participation in decision making as a way to believe that their efforts are being recognised (Giri & Kumar, 2013). Participation in decision making facilitates group performance (Chen, Kirkman, Kanfer, Allen & Rosen, 2007). When employees have the ability to participate in decision making, they perceive it as an organisational support that may facilitate group commitment (Kukenberger et al., 2015). Thus, the following hypothesis was proposed:

H5: Participation in decision making will be positively related to group commitment.

**Job Satisfaction and Group Learning**

Job satisfaction has been widely researched. It is considered necessary for the members of a work group in order to have group learning. It is believed, learning that an employee receives depends on the level of his satisfaction with job (Goh et al., 2012; Alonderiene, 2010; Chiva & Alegre, 2008). Learning within groups,

which is boosted by job satisfaction, is known to facilitate organisational and individual goals (Rowden & Ahmad, 2000). A happy employee often tries to identify with his job and tries to interact and learn from the group members (Wang, 2007). These arguments led to framing of the following hypothesis:

H6: Job satisfaction will be positively related to group learning.

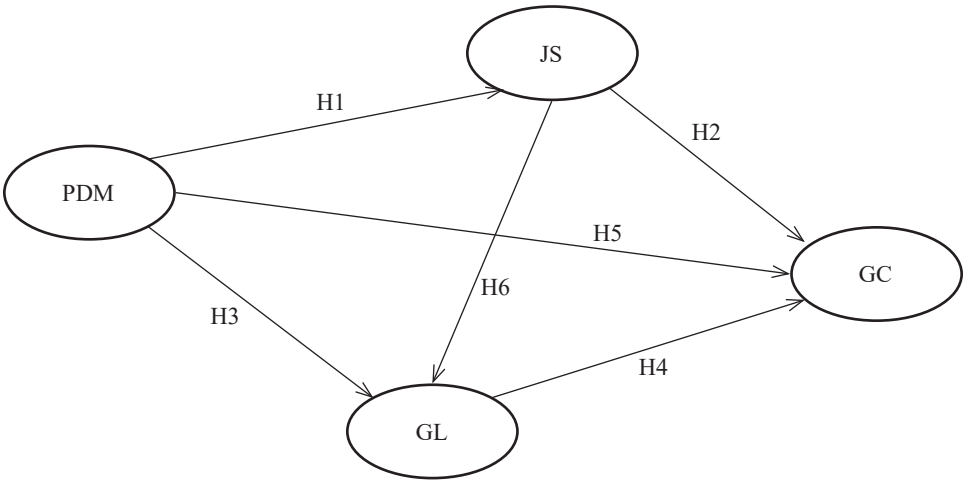


*Figure 1*. Hypothesised model

*Note:* PDM = participation in decision making; JS = job satisfaction; GL = group learning; GC = group commitment; + indicates positive impact

## METHODOLOGY

### The Sample

Convenience sampling technique was adopted to identify organisations. Convenience sampling has been adopted for many studies related to organisational behaviour (Verma & Duggal, 2015). The sample consists of employees from different departments namely, human resource, finance, electrical, instrumentation, civil, environment, tender and contract, sales, production, chemical, lab, research and development, and several other departments. Participation of employees in this study was voluntary. Respondents were asked not to disclose their identities so that the identities are anonymous. They were requested to respond to all the questions.

This procedure entails participation from all regions based on convenience, willingness, interest, and availability of respondents to obtain quality responses (Teddlie & Yu, 2007). The sample includes executives of different departments namely, electrical, mechanical, instrumentation, finance, etc. Participation in the study was voluntary and identities of participants were kept anonymous. Anonymity and confidentiality were preserved in this way leading to more accurate responses. A passive consent approach was adopted. The receipt of a completed questionnaire was left at the discretion of the respondent. The respondents had the liberty of not answering any particular question. However, they were requested to answer leaving out least number of questions.

The target population of the present study consists of employees belonging to managerial cadre. A total data of 397 employees have been collected from different hierarchical levels, that is, junior, middle, and senior levels. The business organisations comprised of public sector undertakings located in various parts of India. These public sector undertakings were selected in such a way that they represented bauxite mining and petroleum products industries. According to IBEF Report (2016), the oil and gas sector is among the core industries in India and plays a major role in influencing decision making for all the other important sections of the economy. In addition, India's economic growth is closely related to energy demand; therefore the need for oil and gas is projected to grow more, thereby making the sector quite conducive for investment (IBEF Report, 2016). Electronics, transportation, packaging, and construction industries from all over the world invest in India for buying bauxite thus leading to exports (Aluminium Industry Report, 2016). We personally visited the organisations for collecting data. Data collected from these diverse organisations helped to obtain high statistical power as well as greater occupational heterogeneity (Langelaan, Bakker, van Doornen, & Schaufeli, 2006). The sample was drawn during the period from May 2015 to December 2015.

Out of the 550 survey questionnaires distributed, 430 (i.e., 78.19%) questionnaires were received. After rejecting the incomplete questionnaires, 397 (i.e., 72.19%) questionnaires were retained for the study. Table 1 shows the different demographic characteristics of the sample.

**Measures**

A scale developed by van Veldhoven and Meijman (1994) measuring participation in decision making consisting of eight items was used (e.g., "Can you discuss work problems with your superior?"). All items were measured using a five-point Likert scale ranging from 'always' to 'never'.

Table 1
*Sample characteristics*

| Demographics | Classification | Results (%) |
|---|---|---|
| Gender | Male | 98 |
| | Female | 2 |
| Age-group | 21–30 years | 20.2 |
| | 31–40 years | 33.2 |
| | 41–50 years | 29.5 |
| | 51–60 years | 17.1 |
| Marital status | Single | 18.4 |
| | Married | 81.6 |
| Qualification | B.E./B.Tech | 39.6 |
| | M.E./M.Tech | 56.4 |
| | Ph.D. | 4 |
| Level of management | Entry | 46.6 |
| | Middle | 39.3 |
| | Senior | 14.1 |
| Maximum tenure | With present employer | 33 years |
| | In total work life of employee | 37 years |

To assess job satisfaction, a scale developed by Warr, Cook & Wall's (1979) was used which has a total of 15 items. It has two dimensions: intrinsic job satisfaction consisting of seven items (e.g., satisfaction with freedom to choose your own method of working) and extrinsic job satisfaction consisting of eight items (e.g., satisfaction with fellow workers). All items were measured on a five-point Likert scale ranging from 'I am extremely satisfied' to 'I am extremely dissatisfied'.

A scale developed by Bontis, Crossan, and Hulland (2002) was used to assess group learning. It has a total of 10 items (e.g., "In meetings, we seek to understand everyone's point of view."). All items were measured on a five-point Likert scale ranging from 'strongly agree' to 'strongly disagree'.

Group commitment was assessed using Ellemers, de Gilder, and van den Heuvel's (1998) scale. It consisted of seven items (e.g., "I am prepared to do additional work when this benefits my work team"). All items were measured on a five-point Likert scale ranging from 'strongly agree' to 'strongly disagree'.

### Statistical Tools and Techniques Used for Data Analysis

The Statistical Package for Social Sciences (SPSS) and WarpPLS were used to analyse the data. The hypothesised structural equation model emerging from the review of literature was subjected to analysis and fit tests. Descriptive statistics, developing the correlation matrix, and calculating Cronbach's alpha values of the various measures used in the study have been analysed using SPSS. Partial least squares (PLS) provides many advantages in terms of measurement scales, sample size, and the complexity of the models to be tested as compared with covariance-based structural equation modeling like Lisrel and AMOS (Chin, 2010). The hypothesised model was tested and the conclusions regarding the model fit and acceptance are reported.

## RESULTS

### Outer Model / Measurement Model Validation

The relationship of observed variables with their respective latent constructs comprises the outer model. Indicator reliability, construct reliability, and construct validity (convergent and discriminant validity) is examined. Convergent validity means all observed variables specified under any particular factor should measure only that factor and not any other factor; whereas, discriminant validity means each factor should be different from other factors measured by a particular set of indicators (Kline, 2015).

All the indicators in Table 2 have factor loadings that are close to or above .50. The indicators JS1, JS3, JS5, and GL14 had factor loadings of .43, .38, .42, and .47 respectively. Indicator loading is preferred to be greater than .50 (Hair, Black, Babin, Anderson, & Tatham, 2010). Hence, it was decided to exclude these four indicators from further analysis. In addition, it is evident from Table 3 that all variance inflation factor (VIF) values are less than 5. A rule of thumb rooted in the use of WarpPLS for many structural equation modeling (SEM) analyses in the past, as well as past methodological research, suggests that VIFs of 3.3 or lower avoid issues of multicollinearity and high inter-associations among latent variables (Kock & Lynn, 2012).

Construct validity is established by composite reliability (CR) values of the construct. Composite reliability is considered to be a superior alternative to Cronbach's alpha (Chin, 2010). CR measures the sum of a latent variable's factor

Table 2
*Outer loadings and cross loadings of indicators*

| Variable | PDM | JS | GL | GC |
|---|---|---|---|---|
| PDM1 | .50 | .23 | .21 | .19 |
| PDM2 | .54 | .31 | .35 | .24 |
| PDM3 | .55 | .27 | .31 | .27 |
| PDM4 | .53 | .30 | .34 | .29 |
| PDM5 | .73 | .42 | .38 | .24 |
| PDM6 | .77 | .35 | .33 | .26 |
| PDM7 | .72 | .28 | .27 | .21 |
| PDM8 | .70 | .28 | .29 | .30 |
| JS2 | .39 | .67 | .47 | .38 |
| JS4 | .40 | .58 | .43 | .33 |
| JS6 | .18 | .51 | .33 | .31 |
| JS7 | .26 | .57 | .34 | .28 |
| JS8 | .33 | .69 | .47 | .42 |
| JS9 | .34 | .59 | .37 | .34 |
| JS10 | .31 | .70 | .40 | .38 |
| JS11 | .41 | .72 | .52 | .46 |
| JS12 | .38 | .62 | .38 | .28 |
| JS13 | .25 | .68 | .37 | .38 |
| JS14 | .26 | .73 | .42 | .39 |
| JS15 | .17 | .62 | .39 | .36 |
| GL1 | .31 | .36 | .55 | .35 |
| GL2 | .27 | .42 | .59 | .32 |
| GL3 | .32 | .41 | .58 | .39 |
| GL5 | .25 | .43 | .62 | .27 |
| GL6 | .34 | .31 | .55 | .23 |
| GL7 | .27 | .38 | .65 | .33 |
| GL8 | .30 | .42 | .71 | .37 |
| GL9 | .38 | .46 | .73 | .33 |
| GL10 | .30 | .45 | .72 | .37 |
| GC1 | .19 | .29 | .27 | .55 |
| GC2 | .31 | .41 | .42 | .66 |
| GC3 | .20 | .33 | .29 | .67 |
| GC4 | .28 | .41 | .37 | .71 |
| GC5 | .28 | .47 | .40 | .75 |
| GC6 | .37 | .49 | .46 | .81 |
| GC7 | .26 | .37 | .36 | .79 |

*Note:* PDM = participation in decision making; JS = job satisfaction; GL = group learning; GC = group commitment

loadings relative to the sum of the factor loadings plus error variance. This value ranges from 0 to 1. This value should be greater than .60 for the validity of a construct. CR values above the threshold of .70 indicate strong convergent validity (Hair et al., 2010).

From Table 3, the composite reliabilities of all variables range from .84 to .89. Moreover, both composite reliability indicators and Cronbach's alpha values of all the variables are above the threshold value of .70. Hence, measurements have strong convergent validity.

Table 3
*Results of measurement model and reliability*

| Variable | Reliability (Cronbach's alpha) | CR | AVE | VIF |
|---|---|---|---|---|
| PDM | .78 | .84 | .41 | 1.44 |
| JS | .87 | .89 | .41 | 2.04 |
| GL | .81 | .86 | .41 | 1.93 |
| GC | .83 | .87 | .50 | 1.60 |

*Note:* CR = composite reliability; AVE = average variance extracted; VIF = variance inflation factor

As the values for Cronbach's alpha in Table 3 are well above the recommended threshold of .70, hence the reliability of the measurements is considered valid (Chin, 2010).

Table 4
*Results of discriminant validity*

| Variable | PDM | JS | GL | GC |
|---|---|---|---|---|
| PDM | (.64) | .48 | .49 | .39 |
| JS | .48 | (.64) | .64 | .57 |
| GL | .49 | .64 | (.64) | .53 |
| GC | .39 | .57 | .53 | (.71) |

*Notes:* All correlations are significant at $p < .001$; the diagonal elements represented in shaded gradient are square roots of AVEs of the respective latent variables

Table 4 presents the correlations among the latent variables with square roots of average variance extracted (AVEs) shown on diagonals. Correlation analysis was employed to examine the relationship among participation in decision making, job satsifaction, group learning, and group commitment. For assessing discriminant validity, bivariate correlation of a construct or variable with other constructs should

be less than the square root of AVE of the construct (Hair, Hult, Ringle, & Sarstedt, 2016). This is observed for all variables in Table 4. Thus, discriminant validity of the variables PDM, JS, GL, and GC is established.

## Inner Model / Structural Model Validation

Proposed hypothetical model was prepared in a recursive manner to avoid problems associated with statistical identification (Hair et al., 2016). Figure 2 shows the results of a structural equation modeling analysis aimed at testing the hypothesised effects among the latent variables. The β coefficients for each link are shown near the arrows, and they refer to the standardised regression path coefficients associated with statistically significant effects.

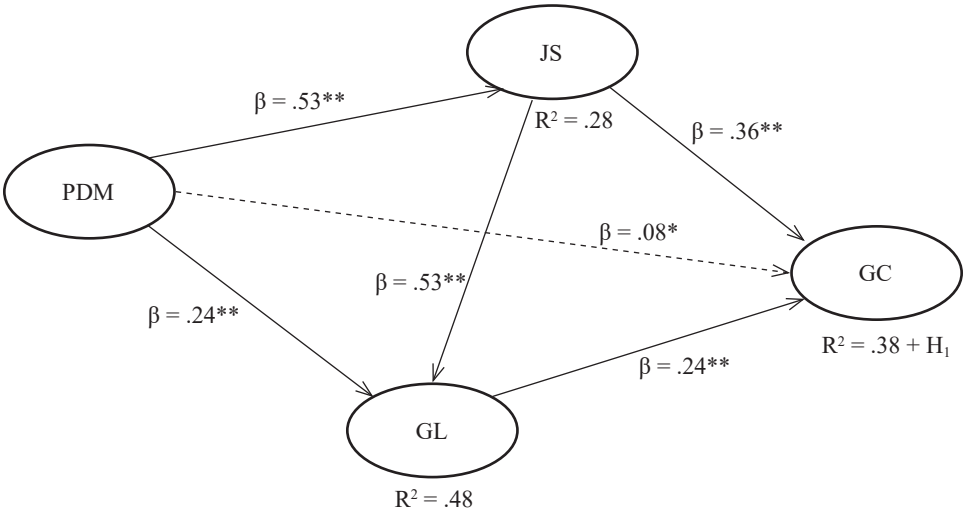


*Figure 2.* Structural equation model with standardised estimated parameters

*Notes:* β = path coefficients associated with a causal link in the model; ** denotes significant at $p < .01$; * and dotted arrow denote not significant; $R^2$ = variance explained by the model for a particular endogenous latent variable

The strength of each path of the structural equation model and the variance ($R^2$ coefficients) of the endogenous constructs should be greater than .1 (Hair et al., 2010). Figure 2 shows that the $R^2$ coefficients of endogenous latent variables are greater than .24 (good amount of variance is explained by the hypothesised variables). PDM is an exogenous variable, so there exists no $R^2$ value. As evident in Figure 2 and Table 5, all the significant path coefficients are above .24 except for one path which is insignificant. The values of t-statistics are shown in Table 5.

The value for t-statistic above 2.57 is considered significant above .01 level. All the t-statistics of the significant paths are above 2.57 (Hair et al., 2010). Hence, the structural model is validated.

### Model Fit of the Structural Model

Table 5 shows the model fit indices. All the values of model fit indices like APC, ARS, AARS, AVIF, AFVIF, SPR, RSCR, and NLBCDR fall within the acceptable fit criteria and this indicates a very good model fit.

Table 5
*Model fit indices*

| Index | Model results | Model fit criteria |
|---|---|---|
| Average path coefficient (APC) | .33, $p < .001$ | $p < .001$ |
| Average R-squared (ARS) | .38, $p < .001$ | $p < .001$ |
| Average adjusted R-squared (AARS) | .37, $p < .001$ | $p < .001$ |
| Average block variance inflation factor (AVIF) | 1.72 | ≤ 3.3 |
| Sympson's paradox ratio (SPR) | 1.00 | ≥ .7, ideally = 1 |
| Average full collinearity VIF (AFVIF) | 1.77 | ≤ 3.3 |
| R-squared contribution ratio (RSCR) | 1.00 | ≥ .9, ideally = 1 |
| Statistical suppression ratio (SSR) | 1.00 | ≥ .7 |
| Nonlinear bivariate causality direction ratio (NLBCDR) | 1.00 | ≥ .7 |

## RESULTS

Table 6 shows the hypotheses testing results. The results of the analysis suggest that participation in decision making has a significant and positive relationship with job satisfaction (β = .53, $p < .01$). Hence, hypothesis 1 was accepted. Job satisfaction has significant relationship with group commitment (β = .36, $p < .01$). Thus, hypothesis 2 was accepted. Participation in decision making has significant relationship with group learning (β = .24, $p < .01$). Hence, hypothesis 3 was accepted. Group learning has significant and positive relationship with group commitment (β = .24, $p < .01$). Hence, hypothesis 4 was accepted. Participation in decision making has no significant relationship with group learning (β = .08, $p = .03$) though there was a significant bivariate correlation between participation in decision making and group commitment (.39) evident in Table 4. Hence, hypothesis 5 was refuted. Group learning has a significant and positive relationship with job satisfaction (β = .53, $p < .01$). Hence, hypothesis 6 was accepted.

Table 6
*Summary of hypothesised relationships*

| Sl. no. of hypothesis | Paths | Path coefficients | t-statistics | Result |
|---|---|---|---|---|
| H1 | PDM → JS | .53** | 12.05 | Accepted |
| H2 | JS → GC | .36** | 8.18 | Accepted |
| H3 | PDM → GL | .24** | 5.45 | Accepted |
| H4 | GL → GC | .24** | 5.45 | Accepted |
| H5 | PDM → GC | .08* | 1.82 | Refuted |
| H6 | JS → GL | .53** | 12.05 | Accepted |

* denotes not significant; ** denotes significant at $p < .01$ level

## DISCUSSION

The positive relationship between participation in decision making and the other constructs like job satisfaction in this study lends credence to previous findings that employees value the opportunity to participate in decision making affecting them (Ornoy, 2010). This might be because of the fact that employees have an increasing desire to take part actively in the internal matters of the organisation. The results suggest that Indian public sector undertakings interested in enhancing employee job satisfaction should consider how effectively the employees participate in decision making which has been supported in previous research.

Job satisfaction is positively related to group learning. This is consistent with previous research findings (Goh et al., 2012). Learning among individuals in an organisation occurs only when there is a supportive work environment. It intends to provide job satisfaction to the employees. When employees are satisfied with their job and co-workers, the social ties of the employees get strengthened. Hence, sharing of existing knowledge within the members or group learning takes place.

Another interesting finding was that participation in decision making has no significant relationship with group commitment. This may be due to the fact that not all employees share the equal amount of participation in decision making in a work group. Employees who are senior may enjoy a slightly higher amount of participation compared to junior employees. Hence, this could lead to demoralisation of the rest of the employees who have lesser right to participate in making decisions. A work group is identified by its group cohesiveness. Unequal distribution of power leads to low group cohesiveness. The performance of a group

is viewed collectively. Group performance and individual performance are viewed from group perspective and individual perspective respectively. Thus, when the group cohesiveness is hindered, it also hinders the level of group commitment of the employees in a work group.

Group learning was found to have a positive and significant relationship with group commitment. The present finding is in accordance with previous research (Limpibunterng & Johri, 2009). This is because group learning increases communication among the group members. This helps to build strong social ties. Thus, guidance and support are exhibited by the group members towards each other. Problem-solving skills are enhanced. The feeling of identification of an employee towards his work group increases gradually. Affective commitment towards the work group also increases. In this way, when all the work group employees share a common level of understanding about different job related issues and they are attached with common organisational goals, their commitment towards their work group is facilitated.

Results indicate that participation in decision making is positively and significantly related to group learning as supported by past research (Chattopadhyay et al., 1999). When employees enjoy participation in decision making, they intend to learn, disseminate knowledge within groups, and help in the effective functioning of the organisation. Learning occurs as a result of working over years, or in other words, experience gathered while working on different work aspects over time. Participation means each individual has been assigned some task or responsibility. Participation makes every group member interact with each other to serve the purpose of work. If any member has to clear a work-related query, he will seek help from fellow group members. In this process, group learning takes place.

It is evident that job satisfaction has a significant and positive relationship with group commitment as studied in the past (Bishop & Scott, 2000). Identification and attachment with the group can be improved by providing supportive work groups and providing recognition within the reference groups for good work. When members of a work group of an individual provide support and guidance in work, the satisfaction obtained by good work will help in observing significant amount of group commitment. Job satisfaction helps members gain a positive feeling about their work. They feel their effort is recognised by management. They feel happy about the fact that their contribution is evident through success of their work group. As this happens, they begin to recognise themselves as important part of their work group. This form of recognising and identifying with the respective work groups leads to building group commitment.

## THEORETICAL IMPLICATIONS

These findings carry many implications for Indian managers. It is important to identify the different ways to increase commitment and develop measures to improve the same. Unlike in Western cultures, Asians often prefer to work in groups. Collectivist tendencies exist among Asians. There are differences not only in cultures, but also in economic systems. These include the extent to which organisations carry out business and the rules and regulations of governance. South Asian countries, like India, have good business potential as it has high economic growth (Pathardikar, Sahu, & Jaiswal, 2016). Indians have the essence of 'collectivism' (Hofstede, 1980). Hence, they prefer to work and take decisions collectively. This fact can be leveraged by managers by putting individuals specialising in a particular area together in a work.

Certain tasks are performed individually and also, certain tasks demand collective work in the CPSEs. Individual responses from respondents were obtained for their extent of participation, learning and commitment for this study. Hence, the findings would be relevant to all organisations which function in a similar manner as that of the CPSEs.

Also, experienced employees can work together for good team productivity. Since learning demands cordial relations among employees, this aspect has to be leveraged by the managers to increase group commitment of employees. In addition, this study demonstrates that job satisfaction is positively related to group commitment and group learning. Managers should ensure that highly skilled employees with long tenures work together so that maximum productivity is achieved and the experience passes on to all employees while they share and discuss work.

## MANAGERIAL IMPLICATIONS

The results of this study have certain important implications for managers in Indian workforce. Managers should emphasise on making every employee share certain task or responsibility so that they feel they are contributing towards the success of the organisation. Through participation in decision making, managers can ensure that employees are satisfied and they learn within work groups.

Because participation in decision making is found to play a significant role in job satisfaction, delegating tasks within a work group to meet deadlines is likely to enhance the level of interaction among members. Alonderiene (2010) stated that

group learning is an important variable found in work groups. Interaction enhances learning within groups. As group learning is found to be responsible for group commitment, managers should ensure that group members have good rapport and cordial relations. Thus, participation in organisations that focuses on enhancing group learning would help to increase group commitment.

With employees experiencing job satisfaction, they will be very happy and content with the kind of work they do. Hence, they will be interested in the type of work they perform. Additionally, they will be able to adapt and learn new changes and techniques in work. Also, group learning has its ability to facilitate group commitment. Hence, managers can focus on making employees satisfied and providing them with certain responsibility so that they learn over the process of working and develop a sense of identification and recognition with the work group.

## CONCLUSION

Participation in decision making is highly desired for managing work groups and individuals working in a work group based environment. Since participation in matters and policies of the organisation makes the employee feel a sense of belongingness towards the organisation, their levels of behavioural outcomes are impacted. Most importantly, effective management of jobs by delegating power throughout all levels of hierarchy would produce positive results to influence group learning and group commitment of employees within a work group.

The managers of public sector undertakings should focus on participation by every potential employee in day-to-day work issues. In this manner, the managers would be able to tap the skills and knowledge of potential employees towards the effective functioning of the organisation. The practice of participative management makes the employee feel empowered to be able to work efficiently and it enhances job satisfaction. Managers should clarify the role and processes of participation and ensure expectations of employees are realistic and equitable. Maintaining a constant dialogue with employees is one way of avoiding misunderstandings and promoting positive outcomes.

## LIMITATIONS AND FUTURE SCOPE OF RESEARCH

Despite its contributions, the present study has certain limitations. This study specifically includes Indian public sector undertakings. Thus, the results of the study should be used carefully while applying to other companies such as

multinational companies (MNCs). The diverse sample from different MNCs could lead to better understanding of the model. The study considers the cross-sectional data only. This generates a future scope of testing causality with longitudinal data. Whereas, participation is a dynamic process and in order to firmly show relationships, the use of longitudinal study is necessary. Gauging the impact of participative management interventions and team learning interventions on various organisational and behavioural outcomes can be a scope for future researchers. Future research can also be carried with larger sample from different locations across different industries, which would improve the generality of the findings. In addition, research can be extended to other sectors like health care, education, services, and communication so that the findings can have larger implications.

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# 2

# AN EMPIRICAL INVESTIGATION OF FACTORS AFFECTING ENTREPRENEURIAL CAPABILITY (EC) ENVIRONMENT IN ASEAN-5 ECONOMIES

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**ABSTRACT**

*The entrepreneurial capability (EC) environment of a given local or regional system refers to a set of social and economic factors that exert influence on entrepreneurial processes occurring within said system. To this end, the goal of the currently presented work is to determine and empirically validate the said EC factors in relation to the entrepreneurial environments of the Association of South East Asian Nations (ASEAN)-5, namely Indonesia, Thailand, Singapore, Malaysia, and the Philippines, both at the regional and national levels. For this purpose, the presented research adapted the entrepreneurial perceived capabilities framework to first investigate the key determinants of EC that affect key entrepreneurial processes, such as the seeking of new opportunities and the decision to venture into new commercial opportunities, within the context of ASEAN-5 economies. Next, the identified variables were empirically tested via an examination of their coefficients in relation to their impact on entrepreneurial perceived capabilities. Succinctly, the current work applied recent consistent estimation of panel bootstrap random-effects model to determine time variant changes with respect to the studied variables in the panel sample. The data used in the current work was obtained from the Global Entrepreneurship*

*Monitor (GEM) and World Competitiveness Yearbook (WCY) databases for the years 2010–2016. The results of the current work suggest that factors such as beliefs regarding entrepreneurship as a good career choice (EnGC) and perceived opportunities (PO) yield significant positive impact on the efficiency of EC in ASEAN-5, and can be nurtured to further improve EC environments both at the regional and national levels. Conversely, the fear of failure (FefRa) variable was shown to exert considerable negative impact on the efficiency of ASEAN-5 EC environments. Variables such as intellectual property rights (IPR), university education (UE), and knowledge transfer rate (KT) were also shown to have a positive impact on both national and regional ASEAN-5 EC environments. The current work thus makes a valuable contribution to the associated literature by presenting a robust empirical analysis of EC factors of ASEAN-5 economies, the results of which can be used to inform policies aimed at strengthening the EC settings of ASEAN-5 with respect to their pursuit of an innovation-driven region.*

**Keywords:** ASEAN-5, entrepreneurial capability, Panel Bootstrap (PB) analysis, random effect model, entrepreneurial environment

## INTRODUCTION

Incontestably, sufficient understanding of antecedent factors influencing the entrepreneurial process, whereupon potential entrepreneurs deem themselves equipped with sufficient entrepreneurial capabilities so as to make the leap from intention to entrepreneurship, can largely contribute to the development of efficient prediction models regarding entrepreneurship, as well as help inform policies aimed at increased entrepreneurship. To this end, entrepreneurial research to date has mainly focused on unveiling the direct effects of perceived capability, perceived opportunity, and fear of failure on entrepreneurial intention (Noguera, Alvarez, & Urbano, 2013; Walker, Jeger, & Kopecki, 2013), largely overlooking significant antecedents such as existing entrepreneurship opportunities, knowledge transfer rate, and the quality of the national tertiary education system. Using a bootstrap panel model to better explicate the relationships among these factors, the current work attempts to better elucidate the impact of the above understudied factors on entrepreneurial capability (EC), namely entrepreneurship opportunities, knowledge transfer rate, and quality of tertiary education, while also broadening our current understanding of the roles of perceived opportunity, fear of failure, and entrepreneurship opportunities on entrepreneurial capabilities. Likewise, as past literature has largely focused on unveiling entrepreneurial intention differences with respect to entrepreneurial self-efficacy and perceived opportunities (Haus, Steinmetz, Isidor, & Kabst, 2013; Wilson, Kickul, & Marlino, 2007), the current study enriches the existing entrepreneurial cognition literature by examining the moderating role of knowledge, innovation, and quality of national university

education systems in the development of regional/national innovation systems using entrepreneurial capabilities. In the current work, we argue that entrepreneurial environment factors such as perceived capability, entrepreneurial opportunities, and fear of failure rate are contingent on the quality of national innovation strategies aimed at addressing knowledge transfer rates and the standard of tertiary education system. The main objective of the current research is thus to empirically investigate the impact of the above listed factors on the capacity of entrepreneurs to identify and exploit entrepreneurial opportunities for the greater mass of ASEAN-5 (namely Indonesia, Thailand, Singapore, Malaysia, and the Philippines) economies. To do so, the current work uses a moderated panel data approach that utilises bootstrap procedures to investigate the impact of the above listed factors, yielding robust results with respect to our objective. Further, the current work tests the empirically identified factors via the consistent estimation of Panel Bootstrap (PB) technique with respect to their significance as variables in the Perceived Entrepreneurial Capability Framework (Chen, Schmidt, & Wang, 2014).

The development of the concept of EC has been recently supported by studies which have endeavoured to apply EC in a theoretical setting (Cantu-Ortiz, Galeano, Mora-Castro, & Fangmeyer, 2017; Tofighi, Teymourzadeh, & Ghanizadeh, 2017). In this regard, a great number of studies have aimed to elucidate the existent relationships among various EC factors at the individual level through investigations that consider the perspective of potential entrepreneurs who are part of the tertiary education system, such as students, staff, and faculty (Miranda, Chamorro-Mera, & Rubio, 2017). Yet, most of these studies have investigated entrepreneurial intention, rather than the factors that affect the perceived capabilities of entrepreneurship (Siegel & Wright, 2015). Succinctly, EC denotes the various capabilities that are necessary for potential entrepreneurs to use their skill and knowledge to identify, categorise, and exploit entrepreneurial opportunities in the university-industry-government domain (Nazaryeva, 2015; Šebjan, Tominc, & Boršič, 2016; Nyström, 2008). Indeed, such studies, aimed at identifying and elucidating entrepreneurial capabilities with respect to the university-industry-government domain, have predominated the associated literature in recent years (Afzal, Mansur, & Sulong, 2017; Antonioli, Nicolli, Ramaciotti, & Rizzo, 2016).

Yet, cross-country and regional perspectives with respect to this topic remain largely understudied (Šebjan et al., 2016); indeed, as most work has been focused on the micro or individual level, there is an evident gap in the literature with respect to EC factors at the regional and cross-country levels. To date, little attention has been paid to the identification and empirical testing of key attributes of EC skill and the start-up dimension at the cross-country level (Hallam, Novick, Gilbert, Frankwick, & Zanella, 2017), with very limited research carried out to account for EC at the

national level (D'este, Mahdi, & Neely, 2009). The present study endeavours to advance our current understanding of EC at the cross-country and regional levels by investigating EC factors pertaining to five countries in the Association of South East Asian Nations (ASEAN) region, namely Indonesia, Malaysia, the Philippines, Singapore, and Thailand, or, as they are commonly referred to, ASEAN-5. While quite different in terms of culture, history, and income per capita, these five countries have joined together in the pursuit of an innovation-driven ASEAN region, which necessitates the establishment of common regional economic policies aimed at this goal (Scippacercola, & D'Ambra, 2014; Rashed, Deluyi, & Daud, 2015).

As part of their economic development missions, many countries, including ASEAN-5, have focused on the development and implementation of strategies aimed at the growth and sustainability of national and regional EC environments. However, as emphasised by many entrepreneurship researchers, further theoretical and empirical research on EC is needed to help guide future research, as well as improve the consistency and relevance of regional and national economic strategies aimed at EC environment development (Bergmann, Mueller, & Schrettle, 2014). To this end, use of global entrepreneurship data can help further our understanding of the existing relationships between EC and its determinants. As a practical implication, the findings of the current work can help inform future policies aimed at stimulating regional and national EC environments in the ASEAN region by delineating the most significant factors impacting the EC of individual countries as well as the region as a whole. The implementation of such policies, in turn, is expected to strengthen university-industry-government linkages, and aid in the creation of new employment opportunities for a new generation of entrepreneurs.

## EC WORKING FRAMEWORK

While other frameworks, such as the resource-based framework and the entrepreneurial intention framework (Giuri, Grimaldi, & Villani, 2014) have been proposed to explicate the entrepreneurial process, the current study followed the entrepreneurship perceived capability-based framework. Resources and capabilities represent two distinct sets of factors that may affect entrepreneurship. In this regard, the resource-based opinion emphasises the supply and access to resources, whilst the capability-based framework has as its focal point the skill and agency of the entrepreneur (Audu, Otitolaiye, & Ibitoye, 2013).

While only few studies to date have adopted the capability-based framework, many researchers have suggested that the factors emphasised in the capability-based framework can better predict and explicate the processes that lead to innovation

and the establishment of global business start-ups (Bergmann et al., 2014). Indeed, while the entrepreneurial perceived capability-based framework takes into account the supply of resources as well as the capabilities of the entrepreneur, it emphasises the procurement of opportunities to formulate start-ups via entrepreneur skill and knowledge (Siegel & Wright, 2015). To this end, the capability-based framework is composed of three capability dimensions said to ease organisational spin-off, namely "opening new paths of action," "balancing organisational and commercial interests," and "integrating new resources" (Afzal, Mansur, & Sulong, 2017). Opening new paths of action, in which the entrepreneur seeks to explore new business ideas within the entrepreneurship ecosystem, constitutes the first capability dimension of the framework. For example, patenting and licensing of new discoveries stemming from the university domain may reveal a new path of action towards entrepreneurship. In this regard, the likelihood of this process occurring is mostly dependent on the status of the university education system, the knowledge transfer rate between university and industry, and finally, the strength of a country's intellectual property rights (IPR) law (Woo, Jang, & Kim, 2015). The capability dimension that concerns the balancing of organisational and commercial interests, in turn, pertains to the legitimisation of both organisational and commercial activities. For instance, the presence of active entrepreneurial incubation facilities may strike this balance, and thus foster spin offs. Finally, the third dimension, namely the capability to integrate new resources, relies on the entrepreneur's personal networking as well as the availability of entrepreneurship opportunities in the country. Moreover, past research has suggested that the degree to which potential entrepreneurs look for new entrepreneurial opportunities is related to individual and commonly-held national beliefs concerning entrepreneurship as a good career choice with respect to the national economic environment. The presence of positive attitudes regarding entrepreneurship certainly pushes forward potential entrepreneurs to capitalise on networks and resources globally (Light & Dana, 2013). Thus, in this study, we have taken the aforementioned variables of the capability-based entrepreneurship framework into account for empirical analysis.

## SELECTION OF COUNTRIES

ASEAN was formed in 1967 by Indonesia, Malaysia, the Philippines, Singapore, and Thailand to promote intergovernmental cooperation and facilitate economic, educational, military, political, and cultural integration amongst the member countries and Asian nations. Subsequently, the membership of the organisation has been expanded by the inclusion of Brunei, Cambodia, Laos, Myanmar, and Vietnam. The major aim of ASEAN concerns on acceleration of economic growth in the region. In 2015, the combined nominal gross domestic product (GDP) of

ASEAN was more than US$2,432 billion (ASEAN Secretariat, 2014; IMF, April 2016) after the USA, China, Japan, France, and Germany; ASEAN would thus represent the sixth largest economy in the world if it were a country. In this regard, with respect to their endeavours to uplift from efficiency- to technology-driven economies (Afzal & Lawrey, 2014), ASEAN-5, namely the founder nations of ASEAN, possess a number of common economic and social attributes. For instance, the ASEAN Free Trade Area (AFTA) has been in operation since 1992 as a means to bring down intra-regional tariff charges. Likewise, with the exception of the Philippines, the governmental education expenditure of ASEAN-5 countries is around 20% of their total expenditure (ASEAN Secretariat, 2014). Similarly, apart from Indonesia, the primary export of ASEAN-5 countries is that of high-tech products (Capannelli, 2014), with the vast majority of such exports (in percentage) being integrated circuits (ICs) and computer data storage units (Simoes, Landry, Hidalgo, & Teng, 2016). This ongoing trend certainly provides evidence of the strong technological advancement of the ASEAN-5 region. Indeed, the ASEAN Economic Community (AEC) aims to regionally establish technology-driven production advantages. However, in order to establish an economic region with a high level of competition, AEC measures will require the inclusion of competition-based policies that advance national and regional innovation systems by nurturing their entrepreneurship capability environments.

As part of the larger 2025 ASEAN blueprint, the 2025 AEC blueprint aims to reduce economic gaps among ASEAN countries through the establishment of a highly integrated and cohesive economic region that is competitive, dynamic, and innovative. Uncontestably, the nurturing and sustainment of entrepreneurial activities in the region is necessary to accomplish this vision. Thus, as a means to achieve sustainable economic growth, AEC measures should accordingly seek to address the factors highlighted in the entrepreneurship capability-based model, as such factors play a vital role in the establishment and sustainment of the entrepreneurship process. Further, such policies should customise their focus to account for specific factors impacting EC frameworks at both national and regional levels.

## THEORETICAL BACKGROUND

According to Schumpeter's (1942) entrepreneurship theory, within a given period, an entrepreneur has the opportunity to attempt an innovation using their skill and knowledge. If the entrepreneur succeeds, the innovation will create a more productive version of the product or process than previous versions. Specifically,

the production of the intermediate good in use will increase last period's value, $A_{t-1}$, up to $A_t = gA_{t-1}$, where $g > 1$. If the entrepreneur fails, then there will be no innovation at *t,* and the intermediate product will be the same one that was used in $t - 1$; that is, $A_t = A_{t-1}$. In order to innovate, the entrepreneur must conduct research, a costly activity that uses the final good as its only input. However, as indicated above, the outcome of research is often uncertain, and may fail to generate any innovation. Generally speaking, however, the higher the expenditure on research, the more likely it is that it will lead to an innovation. Specifically, the probability $\mu_t$ that an innovation occurs in any period *t* depends positively on the amount $R_t$ of final good spent on research, according to the innovation function $\mu_t = \Omega\ (R_t / A_t^*)$, where $A_t^* = \Upsilon A_{t-1}$ is the productivity of the new intermediate product that will result if the undertaken research succeeds. The probability of innovation is here represented as inversely dependent on $A_t^*$ since it is commonly established that as technology advances, it becomes more complex, and thus harder to improve upon. As such, it is not the absolute amount of research expenditure $R_t$ that predicts the likelihood of successful innovation, but the productivity-adjusted expenditure $R_t/A_t^*$, which we denote by $n_t$. Here, $n_t$ consists of factors that improve the productivity of innovation from the entrepreneur's perspective. In this paper, we have classified these as factors affecting the environment that enhances entrepreneurs' capabilities, productivity, and efficiency.

## LITERATURE REVIEW

A significant amount of research has been carried out to better elucidate the various factors that compose the entrepreneurship capabilities domain. To this end, a series of approaches have been adopted to explicate entrepreneurship capabilities, encompassing for instance analyses of territorial aspects of entrepreneurship (Wright, 2007), comparative approaches aimed at determining geographical differences with respect to the entrepreneurial process (Klofsten & Jones-Evans, 2000), and even assessments of the impact of individual and social factors on academic entrepreneurship (Clarysse, Tartari, & Salter, 2011).

For instance, aiming to investigate the academic entrepreneurial environment of Iran, Tofighi et al. (2017) adopted a dynamic systems approach that utilised a non-probability version of cross-impact analysis (CIA) to investigate the behaviour of the entrepreneurial system within a medical university. In this study, researchers asserted that while the national entrepreneurial ecosystem continues to grow, structural measures are still needed to improve the current academic entrepreneurship environment. To this end, the authors recommended changes and

improvements to a series of policy variables aimed at nurturing and sustaining the Iranian academic entrepreneurship environment, and further, presented a forecast of their potential impact on the proposed model.

In work by Rashed et al. (2015), the impact of transformational leadership behaviour on entrepreneurship was assessed via the developed two-step structural equation model (SEM) of entrepreneurship. This work, which adopted as research population among the staff of a public university in Iran, highlighted the enormous influence of the transformational leadership quality over entrepreneurial orientation.

Hallam et al. (2017), in turn, assessed the entrepreneurial ecosystem within the university domain via a multi-methodological study of the UT TRANSFORM Project (Translational Research Advancement Network to Support, Fund, Organize, Roll Out, and Motivate UT Innovations), a joint process carried out by four distinct University of Texas institutions. This study, which included application of the "Awareness Survey" to a statistically significant segment of the student, faculty, and staff of the university, revealed that a progressive entrepreneurial milieu plays a critical fostering role in the commercialisation of university-based technology.

In this regard, the capability-based entrepreneurship framework adapted in this study has been previously discussed and empirically studied through two distinct perspectives: one that seeks to analyse entrepreneurial capabilities at the institutional level, and one that has focus on the skill and knowledge of entrepreneurs at the individual level. In the context of cross-country and regional analyses, a few notable EC studies have been carried out to date. For instance, entrepreneurial intention has been studied at the cross-country level by Šebjan et al. (2016). This study, which included an analysis of entrepreneurial intention in eight countries in the Danube region, focused on assessing the impact of individual personality factors as well as demographic and human capital factors on entrepreneurial intention.

However, to the best of our knowledge, a macro-level empirical analysis of the capability-based entrepreneurship framework has yet to be reported in the literature. Indeed, very few studies have used econometric methods to explicate EC at the regional level, and fewer even have adopted the PB model in this effort. As such, the current study seeks to fulfill this existing gap in the literature, while further unveiling the impact of two main factors on EC that have gained much focus in recent years, namely entrepreneurial skills and opportunity-seeking abilities. To this end, the aforementioned studies have concluded that entrepreneurs have higher self-efficacy (Šebjan et al., 2016), risk tolerance, and willingness (Hallam et al., 2017) to establish start-ups, all qualities that are certainly related to the above factors.

## DATA AND VARIABLE SELECTION

This study considers one dependent variable and several independent variables. Empirical analysis of initial-stage entrepreneurship is often based on data available in the Global Entrepreneurship Monitor (GEM) research database. In addition to GEM 2016 data, the World Competitiveness Yearbook (WCY) 2016 research database is also utilised in the present study. Here, a PB data estimation method is utilised in the current work to test the relationship between entrepreneurial perceived capabilities, entrepreneurial internal skill factors, and external conditions on entrepreneurship. Our sample includes ASEAN-5 emerging market economies for the period of 2010–2016. The countries included in the sample are Indonesia, Malaysia, the Philippines, Singapore, and Thailand. As argued by Venkataraman (1997), entrepreneurs should possess the necessary skills and knowledge in the development of a new venture. To this end, Shane (2000) proposed that entrepreneurial skill is comprised of technological embodied knowledge. Thus, as the only dependent variable of the existing study, perceived capabilities of the entrepreneur (PerCa)[1] is taken into account in the current study. Fear of failure (FefRa),[2] as an independent variable in this study, has been shown to exert great influence, generally negative, on entrepreneurial venture creation, and may indeed hinder entrepreneurs from fulfilling their potential (Arenius & Minniti, 2005; Politis & Gabrielsson, 2009). This study further considers as a variable the state of entrepreneurship as a good career choice (EnGC),[3] a factor which is supported by several studies as an important explanatory variable in the entrepreneurial process (Davidsson, 1995; Krueger, 1993; Autio, Keeley, Klofsten, Parker, & Hay, 2001). Perceived opportunity (PO),[4] also accounted for in this study, comprises social and cultural comprehensions with respect to economic opportunities that enable a prediction of the productive chances of a firm (Druilhe, & Garnsey, 2004; Penrose, 1959). Likewise, as the transformation of knowledge paves the way for innovation and consequently, entrepreneurial activities stemming from the innovation process (Afzal, 2013; Etzkowitz, Webster, Gebhardt, & Terra, 2000), knowledge transfer (KT)[5] is considered as another independent variable in this study. Thomas and Carl (2001) argue that property rights play a critical role in the entrepreneurial process, as such laws provide support to entrepreneurs with regard to protecting their inventions, and thus aid in sustaining knowledge-based practices. As such, this study included Intellectual Property Rights (IPR)[6] as an independent variable. Considering that the educational quality and standard of its universities and related tertiary institutions directly influence entrepreneurial activities in a given country, another independent variable, university education (UE),[7] is introduced as a measurement of entrepreneurs' educational levels. This activity also helps to promote a competitive economy by fostering the development of young entrepreneurs at the tertiary level (Lockett & Wright, 2005; Siegel, Waldman, Atwater, & Link, 2003).

## METHODOLOGY

In the current work, model estimations are specified as follows:

$$\begin{aligned} \text{PerCa}it &= \alpha 0 + \alpha 1\text{PO}it + \alpha 2\text{FefRa}it + \alpha 3\text{EnGC}it + \alpha 4\text{KT}it \\ &\quad + \alpha 5\text{IPR}it + \alpha 6\text{UE}it + \end{aligned} \tag{1}$$

$$uit = \mu i + \lambda t + vit \tag{2}$$

where $i$ denotes each emerging market economy studied in this work ($i$ = 1, 2, 3, …, 5), and $t$ represents the time period assessed ($t$ = 2010–2016). Here, $\mu i$ represents the unobservable individual effect in Equation 2, $\lambda t$ corresponds to the unobservable time effect, and $vit$ denotes the error term in Equation 2. Different from regular time-series or cross-section regressions, panel data regression offers a two-dimensional analysis approach: by combining both cross-section and time-series regressions, panel data methodology enables enriched economic assessments via the enlargement of sample sizes and by allowing for data heterogeneity, which is supported via considerations of individual-specific variables. The random effect model operates under the assumptions that each individual unit intercept is random, and that constant intercepts and slopes of units and time, as well as those of individual differences, arise from the error term. Conversely, fixed-effect models assume constant errors and slopes in the units and time, thus allowing for investigations of intercept coefficients corresponding to unit and time. To this end, the Hausman specification test is often used as a tool to aid in the selection of the most suitable appropriate model for a given set of data between fixed-effect or random-effect models by comparing estimation coefficient vectors of said models. In this test, the fixed effect estimator is consistent under the null and alternative hypotheses, while the random effect estimator is efficient and consistent under the null hypothesis, but inconsistent under the alternative hypothesis. Thus, if the null hypothesis is accepted, then it can be assumed that individual specific effects are uncorrelated to any of the explanatory variables, thus implying that the random-effect model provides a more appropriate model for a given application. In the current research, a Hausman test was carried out over the data, and a $p$-value below 0.05 was attained, indicating the random-effect model is a better fit for the data under analysis. In our study, the Hausman test followed the following format:

$$\begin{aligned} &\text{Test: Ho: difference in coefficients not systematic} \\ &\text{chi2(0)} = \text{(b–B)'[(V\_b–V\_B)^(–1)](b–B)} \\ &\qquad = 0.00 \end{aligned} \tag{3}$$

In recent years, panel data analysis has been widely used in a variety of fields, including statistics and econometrics (Xu & Tian, 2017). Within this context, PB error component regression models are often used to analyse data from panel studies with random effects. For the sake of simplicity, the current work adapted a one-way error component regression model. Nevertheless, the main results reported in this article are also applicable in multiway error component regression models with complete panels.

Regarding the statistical method used in this work, the PB test was demonstrated as a flexible procedure capable of yielding satisfactory results irrespective of sample sizes or the values of the variance components. Indeed, practically speaking, the performance of the PB method can be said to be equivalent to that of the generalised inference model. Thus, the PB method is introduced in the current work as an alternative analysis method that affords a simple computation procedure and an easier-to-understand derivation workflow.

## RESULTS AND DISCUSSION

As can be seen from the figures listed in Table 1, with the notable exception of FefRa, all studied variables yielded positive coefficients. Succinctly, the attained results suggest that the studied variables, namely the influence of role models, prior entrepreneurial experience, the perception of social support factors, as well as government policies related to IPR, are not being significantly nurtured so as to provide sufficient support to the EC in ASEAN-5 economies. For instance, the IPR variable, which yielded a positive yet insignificant coefficient, denotes that while IPR policies can yield a positive influence in EC, these are currently insufficiently implemented so as to significantly positively impact the studied EC environments. On the other hand, the results attained for the fear of failure variable, which yielded a negative coefficient, would indicate that EC performance and fear of failure hold an inverse relationship; as entrepreneurs feel increasingly burdened by a fear of failure, the less likely they are to apply their skills and knowledge in seeking new ventures in the economy. Such a finding certainly should be taken into account with respect to the development of policies directed at fostering the EC environment of ASEAN-5, which should certainly include measures to address this dimension of the entrepreneurial process.

As seen in Table 1, the impact of PO on output is positive and significant in the model. The results clearly show that factors affecting EC environments, such

Table 1
*Consistent PB estimation of random-effects model results*

| | Observed bootstrap | | | | Normal based | |
|---|---|---|---|---|---|---|
| PerCa | Coef. | Std. Err. | z | $p > \|z\|$ | [95% conf. | interval] |
| PO | 0.2415374 | 0.3024083 | 0.80 | 0.424 | –0.351172 | 0.8342468 |
| FefRa | –0.7036952 | 0.3994804 | –1.76 | 0.078 | –1.486662 | 0.079272 |
| EnGC | 0.8360712 | 0.2715683 | 3.08 | 0.002 | 0.3038071 | 1.368335 |
| KT | 0.3318705 | 2.283505 | 0.15 | 0.884 | –4.143717 | 4.807458 |
| IPR | 3.07452 | 2.447704 | 1.26 | 0.209 | –7.871931 | 1.722891 |
| UE | 0.4271289 | 1.961961 | 0.22 | 0.828 | –3.418245 | 4.272503 |
| _cons | 23.71474 | 30.96358 | 0.77 | 0.444 | –36.97276 | 84.40224 |

as EnGC, have a positive and significant impact on the determination of the production frontier. On the other hand, while positive, the coefficients for KT and UE are not significant in the PB model. This would imply that universities in ASEAN-5 are not sufficiently concentrating on promoting EC-based outcomes such as technology transfer, registration of new patents, the commercialisation of scientific inventions, and the establishment of licensing facilities. Such activities are vital for entrepreneurial capability development, as these constitute key external factors that influence the outcomes of EC activity, and that can thus improve the efficiency frontier of nations.

Our empirical findings certainly corroborate recent EC literature on ASEAN-5. For instance, a study on the relationship between an individual researcher's work environment and their engagement with entrepreneurship activity in Thailand shows that the commercialisation of academic entrepreneurs' research outputs plays an important role on social changes (Sooampon & Igel, 2014). In that study, EC was defined as the experience of transforming scientific expertise into a commercial product or service to be sold in the market. While university-industry-government linkages were not shown as favourable to the EC environment in Thailand, public universities were shown to encourage entrepreneurial activities (Intarakumnerd & Schiller, 2009).

On the other hand, the economy of Singapore is majorly dependent on industry and service entrepreneurship. To this end, measures taken by Singapore universities, as well as the implementation of appropriate government policies, have majorly contributed towards knowledge generation and commercialisation through entrepreneurship (Sohn & Kenney, 2007). Indeed, the National University of

Singapore has played a large entrepreneurial role in the national economy, fostering economic development through its various entrepreneurial activities (Wong, Ho, & Singh, 2007).

Only three years into the Entrepreneurial University project, Malaysia's knowledge output has largely increased, as evidenced by the observed increases in the total numbers of scientific and technological publications as well as registered patents of Malaysian origin. Not only has there been an evidenced growth in the number of scientific publications, an increase in the total number of citations of works stemming from Malaysia has also been noted (Wong & Goh, 2010; Razak & Saad, 2007).

Indonesia and the Philippines, in turn, are catching up to their frontiers slowly but surely. At the moment, however, it can be asserted that ASEAN-5 countries are still burdened by a lack of sufficient government policies to support IPR laws, as well as the absence of regulation policies aimed at easing concerns related to taking entrepreneurial risks, and abating concerns regarding entrepreneurship as a good career choice. The results of the current study thus can be used to help guide ASEAN-5 policy makers in nurturing proper environments within individual countries, as well as within the region as a whole through increased efforts to further develop the capabilities listed above. Overall, the results of this work would seem to suggest that the panel estimates derived from the application of the PB model are relatively robust to the distributional assumptions that we made and have produced expected outcomes.

**Cross-Country Efficiency Differences**

A comparison of our findings with recent EC literature yields theoretical evidence to support our empirical results, particularly as it pertains to the importance of university education standards and knowledge transfer between the university-industry domain as a means to develop skilled entrepreneurs. For example, taking into account the theory proposed by Aghion, Howitt, and Mayer-Foulkes (2005), let us assume two countries, namely Malaysia and Indonesia, have identical resource endowments. However, skilled entrepreneurs are found to be scarcer in Indonesia as opposed to Malaysia, an observation which we can denote as:

$$H^I/L^I < H^M/L^M$$

where $L$ and $H$ stand for the amounts of unskilled and skilled entrepreneurs employed in the technology-enhancing sector, respectively; and $I$ and $M$ represent the short form of Indonesia and Malaysia, respectively. Now, we assume that IPR

law is not enforced in *I*, and that there is no trade between *I* and *M*. Such would also imply that intermediate producers in *M* cannot sell any goods which would need copyright protection to *I*. Thus, *M* can only collect copyright rents from domestic innovators, while on the other hand, entrepreneurs in *I* can imitate new technologies invented in *M* at a small cost. This also discourages entrepreneurs in *I* to innovate on their own. At one point, both countries will end up using the same technologies, and thus arrive at a steady-state of productivity in that region (assuming a two-country case). Entrepreneurs and inventors in either countries will have no incentive to further invent or commercialise inventions.

Therefore, numerically speaking,

$$\frac{A_H}{A_L} = \frac{H}{L}$$

where $A$ is the productivity parameter. Therefore, the establishment and implementation of appropriate government policies to support IPR laws are a crucial incentive for the region to innovate and remain competitive. The absence of such variables not only creates disincentive to entrepreneurs, it also contributes in creating cross-country efficiency differences. Thus, it can be concluded that in addition to university education standard and knowledge transfer rate, IPR laws comprise a significant external factor, that if sufficiently supported, can significantly enhance EC at the national or regional level.

## CONCLUSION AND CONTRIBUTION

The current work introduced the PB model to estimate perceived EC assumed to affect the entrepreneurial environment of ASEAN-5 countries. To this end, accurate estimations of variables influencing the efficiency of EC at the national and regional levels can provide policy makers with feedback regarding current measures, as well as aid in the development and implementation of further measures aimed at improving the entrepreneurial ecosystem, thus contributing to the development of stronger innovation-driven economies.

The results of the current work have shown that the studied factors, namely perceived opportunities at the national level, attitudes regarding entrepreneurship as a good career choice, fear of failure, intellectual property rights, knowledge transfer rate, and national tertiary education standards, all exert significant influence on the entrepreneurial environment, and by extension, on national and regional production frontiers. Among the studied variables, perceived opportunities for entrepreneurship at the national level and attitudes regarding entrepreneurship as

a good career choice were shown to be more influential variables on the quality of the EC environment in comparison to the degree of fear of failure experienced by entrepreneurs.

The results of our work have also demonstrated that variables such as knowledge transfer rate between the university-industry domain, as well as the standard of the tertiary education system in the country exert a positive influence on the EC of ASEAN-5 countries. Indeed, our findings indicate that these two factors may be the most important for future considerations regarding perfection of the production frontier. Overall, the methodology adapted in this work has been shown to provide an appropriate framework for evaluations of efficiency and determinations of coefficients of variables impacting EC environments at the national and regional levels.

Regarding the practical applications of the current research in view of strategic priorities for the ASEAN-5 region, several policy implications can be drawn out. In this regard, future changes to policies must take into account the key determinants affecting entrepreneurial decision-making processes, and thus include measures aimed at enhancing knowledge transfer rates, improving the quality of national tertiary education systems, as well as lessening the degree of fear experienced by potential entrepreneurs with respect to failure to successfully establish entrepreneurial businesses.

While past studies have contributed to the literature by examining differences in entrepreneurial intentions from cross-cultural and cross-country perspectives (e.g., Liñán & Chen, 2009; Šebjan et al., 2016), delineating various factors affecting the EC of countries such as Taiwan, various countries in the Danube region, and Spain, the current study poses a reinstated definition of entrepreneurial capabilities. Further, the current work also demonstrates how the highlighted factors have contributed to shape the entrepreneurial processes in ASEAN-5 at both the regional and national levels via a stable PB analysis. Within this context, the current work extends our knowledge of EC environments of ASEAN-5 economies by filling gaps previously not addressed by notable entrepreneurial research carried out by Ramli and Senin (2015), Ismail, Nor, and Sidek (2015), Hamidon, Suhaimie, Mat Yunoh, and Hashim (2017), and Othman and Othman (2017).

As a future perspective, researchers should consider further work at the micro or individual level as a means to elucidate further sociocultural factors that shape the academic entrepreneurial environments of ASEAN-5 countries. Insufficient time series data and the application of non-parametric statistical tools for comparison constitute the main limitations of the current study. However, irrespective of our

limited data, the employed methodology, namely the use of the panel model and the bootstrap process, has been demonstrated as a useful tool to interpret and evaluate EC performance at the national and regional level. Lastly, the findings of this work corroborate that the entrepreneurial process is not only a function of individual skill, knowledge, and opportunity-seeking abilities, but also highly dependent on the entrepreneurial environment fostered within the university-industry-government complex, the knowledge transfer rate between universities and industry, as well as the state of government policies to support IPR laws, which can contribute to protect and incentivise the entrepreneurial process.

## NOTES

1. PerCa = Perceived capabilities of the entrepreneur (percentage of 18–64 population who believe they have the required skills and knowledge to start a business).
2. FefRa = Fear of failure (percentage of 18–64 population perceiving good opportunities to start a business who indicate that fear of failure would prevent them from setting up a business).
3. EnGC = Entrepreneurship as a good career choice (percentage of 18–64 population who agree with the statement that in their country, most people consider starting a business as a desirable career choice).
4. PO = Perceived opportunity (percentage of 18–64 population who see good opportunities to start a firm in the area where they live).
5. KT = Knowledge transfer (knowledge transfer is highly developed between companies and universities; updated: MAY 2012, IMD WCY executive survey based on an index from 0 to 10).
6. IPR = Intellectual property rights (intellectual property rights are adequately enforced; updated: MAY 2012, IMD WCY executive survey based on an index from 0 to 10).
7. UE = University education of the entrepreneurs (university education meets the needs of a competitive economy; updated: MAY 2012, IMD WCY executive survey based on an index from 0 to 10).

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# 3

# ANTECEDENTS OF CONSUMER-BASED ELECTRONIC RETAIL BRAND EQUITY: AN INTEGRATED MODEL

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**ABSTRACT**

*The purpose of this study is to test and compare multiple conceptual models that examine the relationships among electronic retail (e-retail) service quality, trust, satisfaction, and consumer-based e-retail brand equity. A quantitative survey was conducted among Chinese online shoppers. The survey used established scales to measure constructs in the proposed models. Structural equation modelling (SEM) procedure was applied to test alternate models. The results confirmed that web design and customer service positively influence satisfaction, while fulfilment and security dimension of e-retail quality influence consumer trust. Both trust and satisfaction were found to be significant influencers of consumer-based e-retail brand equity. E-retailers can use this model to measure, monitor, and improve their consumer's perceptions towards their brand. This study contributes to the existing literature that deals with antecedents of online consumer-based retail brand*

*equity. It adds value by proposing and testing multiple models of online consumer-based brand equity which is rare in e-brand equity research.*

**Keywords:** online retail brand equity, e-trust, e-satisfaction, e-retail service quality, brand equity

## INTRODUCTION

Online retailer brand equity is the differential effect of consumers' knowledge of an online store brand based on their personal experience, word of mouth and/or exposure to the marketing activities of a brand (Hartman & Spiro, 2005). For online retailers, the management of their retail brand equity is essential to maintain a sustainable competitive advantage (Christodoulides, de Chernatony, Furrer, Shiu, & Abimbola, 2006; Kim, Sharma, & Setzekorn, 2002; Kotha, Rajgopal, & Rindova, 2001). Past studies suggest that online retailers can build stronger consumer-based brand equity by providing excellent service quality, building consumer trust on their brands, and meeting their expectations (Loureiro, 2013; McKinney, Yoon, & Zahedi, 2002; Porter, 1980).

Despite the strategic importance for e-retailers to create, nurture, and manage their consumer-based retail brand equity, research in this area focus more on the electronic retail or e-retail quality rather than e-retail brand equity. Furthermore, limited attempts were made when it comes to connecting e-retail quality dimensions with consumer online relationship preferences in shape of trust, value, satisfaction, and brand equity (Esch, Langner, Schmitt, & Geus, 2006; He & Li, 2010; Kim, Jin, & Swinney, 2009; Rios & Riquelme, 2010; Subramanian, Gunasekaran, Yu, Cheng, & Ning, 2014). For example, a meta-analytic literature review of online service quality did not identify overall brand equity or any of its dimensions as one of the significant outcome variable (Blut, Chowdhry, Mittal, & Brock, 2015). Similarly, a recent review of the sources of online brand equity suggest that there are few studies which explicitly conceptualised and empirically tested the antecedents of consumer-based brand equity in an online context (Rana, Bhat, & Rani, 2015).

As the online branding is still in its formative stage, studies investigating the antecedents or consequences of online brand equity are riddled with widely different conceptualisations and measurement (Anselmsson, Burt, & Tunca, 2017; Bilgihan, 2016; Kao & Lin, 2016; Keller, 2016; Londoño, Elms, & Davies, 2016; Rowley, 2009; Yadav & Pavlou, 2014). For example, Rios and Riquelme (2008)

initially proposed awareness, trust, value, and loyalty as the antecedents of online brand equity. In their subsequent research they offered a much wider conceptual model by incorporating the multidimensional e-service quality construct as the antecedent of trust, value, and loyalty (Rios & Riquelme, 2010). Kao and Lin (2016) tested the influence of online delivery and outcome service quality dimensions on e-brand equity mediated through trust, satisfaction, and loyalty. Others have used a first order/overall service quality construct to explore the direct or indirect relationship between e-service quality and e-brand equity (Chang & Wang, 2011; Londoño et al., 2016). Some opted to relate e-service quality with consumer online loyalty which is considered as one of the dimension of brand equity (Çifci et al., 2016; Cristobal, Flavián, & Guinaliu, 2007; Kim et al., 2009; Park & Kim, 2003), while others considered overall service quality as the direct antecedent and loyalty as the outcome of e-retail brand equity (Bilgihan, 2016; Londoño et al., 2016; Swoboda, Weindel, & Hälsig, 2016).

These wide and distinct conceptualisations in existing online brand equity research highlight the need to synthesise and summarise the existing research into a brief, more logical, theory driven, and integrated model. Therefore, the key objective of this research is to propose a model of consumer-based brand equity by synthesising and summarising the existing research on consumer-based e-retail brand equity. Based on the existing limited research, one can infer that e-retail service quality, trust, satisfaction, value, and loyalty are some of the most important predictors of overall consumer-based online brand equity (Rana et al., 2015).

Based on prior research, our model proposes (see Figure 1) that security and reliability/fulfilment dimension of e-retail quality influence consumer-based e-retail brand equity through trust. Similarly, website design and customer service indirectly influence e-retail brand equity through customer satisfaction (Alam & Yasin, 2010; Cai & Xu, 2006; Cyr, 2008; He & Li, 2010; Kim et al., 2009; Reichheld, Markey, & Hopton, 2000; Rios & Riquelme, 2010; Singh & Sirdeshmukh, 2000). Furthermore, we tested two additional models. The first alternative model tests the direct relationship between individual dimensions of e-retail quality and overall brand equity (Yoo, Donthu, & Lee, 2000); this approach is rarely used in the e-retail brand equity literature (Londoño et al., 2016). The second alternative model uses each dimension of the e-retailing quality scale as an observed variable to create the first order overall service quality construct, which influence e-retail brand equity through consumers' online trust and satisfaction.

From a contextual point of view, this research investigates consumers' perceptions towards e-retail brands. Recent literature reports that e-channels are growing at an exceptional rate in emerging as well as in developed economies (Blut et al., 2015).

This study centres on China as it has the fastest growing and largest e-commerce sector in the world (Atsmon, Dixit, Magni, & St-Maurice, 2010). It is growing at a phenomenal rate of 75% annually as compared to the global average growth rate of 15% to 20%. E-commerce roughly contributes around USD1 trillion to the Chinese retail sector and is around 17.3% of its total retail sector (Goodman Report, 2012; FinancialBuzz.com, 2018; Subramanian et al., 2014). However, despite its strategic importance, there has been negligible research looking at the perceptions and preferences of Chinese consumers towards e-retail brands.

This paper is organised as follows. First, it starts with a review of the extant literature, followed by hypotheses development. Sampling, data collection techniques, and measurement of variables are discussed in the methodology and measurement section. Then, the results of the structural equation modelling (SEM) are presented, along with a brief commentary. Finally, conclusions, limitations, and implications are discussed.

## LITERATURE REVIEW AND CONCEPTUAL MODEL

### Electronic Service Quality

Past studies have investigated electronic service quality from multiple perspectives. Some linked it to the quality of a website (Sun, Cárdenas, & Harrill, 2016; Yoo & Donthu, 2001), while others were more focused on customer overall perceptions and experience of using a website (Barnes & Vidgen, 2002; Nguyen, de Leeuw, & Dullaert, 2018; Zeithaml, Parasuraman, & Malhotra, 2002). E-service quality is defined as the consumers' overall evaluation and judgement of the excellence of service offerings in an online context (Santos, 2003). In contrast, Zeithaml et al. (2002) suggest that the term "e-service quality" refers to the extent to which a website provides its customer an efficient and effective mechanism to have an excellent shopping experience. This view was further supported by Piercy (2014), who defined online service quality as a process that encompasses "pre purchase, purchase and post purchase activities involving evaluation, selection, purchase and fulfilment of products and services through a website" (Shi et al., 2018, p. 748).

As the context of this research is focused on online retail branding, the definition developed by Wolfinbarger and Gilly (2003) is most suitable. They conceptualised that internet shopping experiences encompass the entire process, starting from information search, website navigation, ordering, customer services interaction, payment procedure, delivery, and after sales support. They proposed a four-

dimensional e-retail quality scale to measure shoppers' perception of online retail quality, which consisted of (1) website design, (2) fulfilment and reliability, (3) security and privacy, and (4) customer service.

Website design deals with the consumer's interaction with the website, such as navigation, information search, ordering processing, and product selection (Wolfinbarger & Gilly, 2003). Website design is an important source of creating a favourable first impression in the consumer's mind (Kim et al., 2009). This first impression serves as a building block for customer's satisfaction with the online retailer. Past research defined consumer online satisfaction as "the contentment of the customer with respect to his or her prior purchasing experience with a given electronic commerce firm" (Anderson & Srinivasan, 2003, p. 125). An effective website design helps and facilitates a seamless consumer experience to navigate, search, select, and order their desired product and enhance their overall satisfaction (Devaraj, Fan, & Kohli, 2002; Kim et al., 2009; Shankar, Urban, & Sultan, 2002; Szymanski & Hise, 2000; Zeithaml et al., 2002). On the other hand, a poor web design can create irritation resulting into consumer dissatisfaction (Hasan, 2016).

Several past studies provide empirical evidence that effective and efficient website design facilitates the speed of ordering and transaction, and enhances customer satisfaction towards a website (Alam & Yasin, 2010; Cai & Xu, 2006; Cyr, 2008; Park & Kim, 2003). Therefore, the following hypothesis is postulated:

H1: Website design has a positive impact on consumers' online satisfaction.

In context of online retailing, customer service (also referred to as responsiveness) is a dimension of e-retail quality reflecting an online retailer's willingness and ability to respond and help towards customer enquiries and complaints (Wolfinbarger & Gilly, 2003). Online customers usually expect a prompt response to their inquiries and concerns (Liao & Cheung, 2002; Gummerus, Liljander, Pura, & van Riel, 2004; Liu, He, Gao, & Xie, 2008). Organisational abilities and efforts to promptly respond to customers inquiries/complaints result into more satisfied customers (Cao, Ajjan, & Hong, 2018; Devaraj et al., 2002; Jain, Gajjar, Shah, & Sadh, 2017; Kim & Stoel, 2004). Others have found no significant effect of quality of customer service on customer satisfaction (Kim et al., 2009; Kassim & Abdullah, 2010). These contradicting results merit further investigations. Therefore, this study proposes the following hypothesis:

H2: Customer service has a positive impact on consumers' online satisfaction.

Online shoppers are most concerned about the privacy and security of their personal and financial information (Devaraj et al., 2002; Liu & Arnett, 2000; Wolfinbarger & Gilly, 2003). The security and privacy dimension of e-retail service quality includes the security of customer credit/debit card details and protection of personal information that a customer needs to share to complete his/her online purchasing (Agag, El-Masry, Alharbi, & Ahmed Almamy, 2016; Wolfinbarger & Gilly, 2003). Security and privacy are regarded as one of the key criteria on which a consumer assesses the trustworthiness of an online organisation (Aiken & Bousch, 2006; Hoffman, Novak, & Peralta, 1999). Several previous studies reported a strong relationship between consumer perception of organisational ability to maintain security and privacy of their data and their trust in that organisation (Kim et al., 2009; Park & Kim, 2003; Ribbink, van Riel, Liljander, & Streukens, 2004; Szymanski & Hise, 2000). Past research also reported negative relationships between consumer perceptions of lack of integrity, security, and reliability of website and his/her perceptions of trustworthiness of a website (Oliveira, Alhinho, Rita, & Dhillon, 2017). Furthermore, a recent meta-analysis study conducted by Kim and Peterson (2017) report that perceived security as well as privacy are some of the strongest predictors of consumer online trust with a website. In line with the conceptualisation by Kim et al. (2009), we also propose that security and privacy dimension of e-retail quality will directly influence consumer e-trust and indirectly influence consumer online satisfaction through e-trust.

H3: Security/privacy has a positive impact on consumers' trust towards the online business.

Past research defined fulfilment as a multidimensional construct reflected by timeliness, availability, conditions, and billing accuracy (Koufteros, Droge, Heim, Massad, & Vickery, 2014; Mentzer, Gomes, & Krapfel, 1989). The fulfilment and reliability aspect of e-retail quality deals with firms' ability to provide accurate product and process specific information followed by delivery of purchased items within the promised time frame (Wolfinbarger & Gilly, 2003). Any breach of promise from the e-retailer, such as wrong product delivery or a complete/partial failure to deliver products on time, usually results in consumer distrust towards that retailer. Several past studies reported a positive relationship between accurate order fulfilment and consumer trust towards online retailer (Reichheld et al., 2000; Singh & Sirdeshmukh, 2000; Kim et al., 2009). Hence, this paper hypothesises that fulfilment will positively influence trust in the online retailing context:

H4: Accurate fulfilment/reliability has a positive impact on consumers' trust towards the online business.

## Online Trust and Customer Online Satisfaction

Trust is "the willingness of the party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the former, irrespective of his ability to monitor or control the later" (Mayer, Davis, & Schoorman, 1995, p. 712). In an online context, trust reflects an individual/organisation's attitude of confidence towards a retailer that it will not exploit their vulnerabilities (Corritore, Kracher, & Wiedenbeck, 2003). Online trust can be distinguished from offline trust on the ground that the object of trust moves from employees and product brand to the e-retailing brand (Beldad, de Jong, & Steehouder, 2010; Shankar et al., 2002). In other words, trust in the online context is fundamentally different from offline context due to the fact that it is built on a person-to-website basis rather than a person-to-person basis (Hongyoun Hahn & Kim, 2009; Winch & Joyce, 2006).

In an online environment, it is not surprising to note that online trust or e-trust continues to be one of the main concerns for customers (Tamimi, Rajan, & Sebastianelli, 2003). E-trust is important for consumers due to several reasons. First, they are not able to personally scrutinise the vendor, second, they cannot physically experience the product, and finally they will not be able to immediately collect their merchandise upon payment (Fang, Chiu, & Wang, 2011). Consumers' scepticism towards online brand stems from the common perception of high risk associated with online shopping and their inability to gather sufficient information to make a credibility judgement about an online vendor (Anderson & Srinivasan, 2003; Grabner-Kraeuter, 2002; Kim et al., 2002). As a result, a substantial number of studies found that lack of trust is the biggest barrier for consumers' willingness to shop online (Hoffman et al., 1999; Lee & Turban, 2001; McKnight, Choudhury, & Kacmar, 2002; Pavlou, Liang, & Xue, 2007). Furthermore, trustworthiness of the intermediary brand plays a critical role in determining the extent to which consumers trust the online marketplace (Hong & Cho, 2011; Reichheld et al., 2000).

Customers perceive a higher level of risk with online retailers in terms of delivery, payment, and information disclosure. Hence, online customers prefer to transact with the online vendors they trust (Chiu, Huang, & Yen, 2010; Pavlou & Gefen, 2005; Singh & Sirdeshmukh, 2000). The direction of relationship between satisfaction and trust is conceptualised both ways in the past literature. Some proposed satisfaction as a predictor of trust (e.g., Chung & Shin, 2010; Kassim & Abdullah, 2010), while most of the scholars consider trust as the predictor of customer satisfaction in online settings (Gummerus et al., 2004; Harris & Goode,

2004; Lin & Wang, 2006; López-Miguens & Vázquez, 2017; Jin & Park, 2006). Finally, a recent meta-analysis on antecedents and consequences of trust in an online context report that online trust is the strongest predictor of customer online satisfaction with a website (Kim & Peterson, 2017). Based on the above arguments and justifications, we propose that customer perception of trust is directly related to satisfaction in the online context.

H5: Trust has a positive impact on customers' satisfaction towards the online business.

**Relationship between Online Trust, Satisfaction, and Retail Brand Equity**

In the last three decades, offline brand equity has attracted a great deal of research interest. Aaker (1991) defined brand equity as a "set of brand assets and liabilities associated with a brand, its name and symbol that add to or subtract from the value provided by a product or service to a company and/or to that company's customer" (p. 15). Thus, brand equity offers both a financial as well as a psychological value for a brand (Christodoulides et al., 2006; Schultz, 2003).

There appears to be a consensus of opinion among scholars that brand equity is important for offline businesses (Page & Lepkowska-White, 2002; Yoo et al., 2000). Interestingly, several researchers are of the view that it is even more important in the online business environment for firms to build their brand equity (Hilton, 2002; Mazur, 2001; Sealey, 1999). Online brand equity is different in the way it is created rather than its outcome. Unlike offline brand equity, online brand equity is co-created through the interaction between customer and a retailer; second, it is not forced upon consumer through associations; and thirdly, it is the outcome of both online and offline experience of customer with the brand (Christodoulides & De Chernatony, 2010).

Although brand equity has been extensively investigated in offline contexts, the topic is generally ignored in the online context apart from a few exceptions. More importantly, both in the online and offline service contexts, the role of satisfaction in generating brand equity rarely receive proper research attention. Thus, it is not surprising to find very few studies have investigated the direct or indirect relationship between customer satisfaction and brand equity in a service context (Ha, Janda, & Muthaly, 2010; Kao & Lin, 2016; Kim, Zhao, & Yang, 2008; Pappu & Quester, 2006). Those who did investigate the relationship between customer satisfaction and brand equity generally find a positive relationship. For example, in offline context, past research did find a positive relationship between student satisfaction and university brand equity (Dennis, Papagiannidis, Alamanos, &

Bourlakis, 2016), customer satisfaction with green brands on green brand equity (Chen, 2010), and customer satisfaction with a banking service and its impact on brand equity of a bank (Iglesias, Markovic, & Rialp, 2018). In the online context both Kao and Lin (2016) and Kim et al. (2008) found a positive relationship between customer online satisfaction and e-brand equity. Based on the above discussion, there is a great need to further investigate and validate the positive relationship between customer satisfaction and brand equity in an online context. This study also proposes a positive relationship between customer satisfaction and brand equity in online environment:

H6: Customers' satisfaction has a positive impact on the brand equity of the online business.

The role of brand trust in building the brand equity has failed to receive much attention in the branding literature (Chaudhuri & Holbrook, 2001). As the consumer-based brand equity is primarily a relational based asset, its maintenance depends on managing consumer trust with the organisation (Delgado-Ballester & Munuera-Alemán, 2005; Morgan & Hunt, 1994). This idea is further supported by the argument that the unique value of a brand perceived by consumers is largely due to the fact that the focal brand is in a superior position to offer trustworthiness as compared to other brands (Chaudhuri & Holbrook, 2001; Delgado-Ballester & Munuera-Alemán, 2005). As the risk factor is considered much higher in the online retailing context, we assume that existing consumer trust in an online brand will positively influence the e-brand equity of that retailer. Therefore, we propose the following hypothesis:

H7: Consumers' trust has a positive impact on the brand equity of the online business.

Based on the above hypotheses and relevant literature, we propose an integrated model of consumer-based e-retail equity (Figure 1). Apart from our proposed model, the past literature suggests multiple alternative models explaining the relationship between service quality and brand equity. For example, some researchers explore the direct relationship between overall service quality and overall brand equity (Çifci et al., 2016; Swoboda et al., 2016; Yoo & Donthu, 2001). Others have used the parcelling method to convert SERVQUAL dimension as first order indicators of service quality construct and test its direct or indirect relationship with brand equity (Kassim & Abdullah, 2010). Furthermore, many researchers have used a combination of mediating variables such as perceived value, trust, satisfaction, corporate credibility, and loyalty to explain the relationship between service quality dimensions and brand equity (Kao & Lin 2016; Rios & Riquelme, 2010).

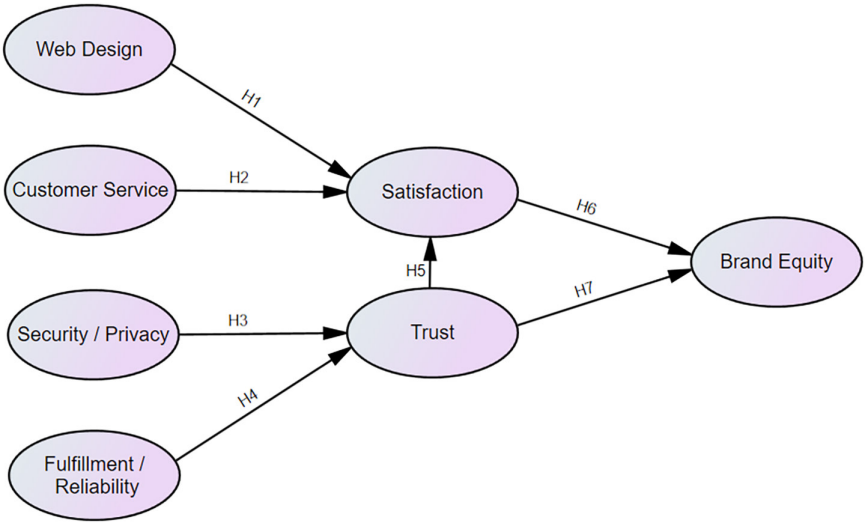


*Figure 1.* Conceptual model

We tested two alternative models (Figure 2), which in our view might help to further enhance our understanding. First, we did not find any research that explores the direct relationship between each dimension of e-retail service quality and brand equity. Thus, we tested a model that proposes a direct relationship between each e-retail service quality dimensions and overall e-retail brand equity (model 2). Second, using the parcelling technique, we created composite variables for each e-retail service quality dimension and used them as indicators to reflect the first order service quality construct. Using this first order e-retailing service quality construct, we tested its relationship with e-retail brand equity through trust and satisfaction (model 3).

## METHODOLOGY

### Participants and Procedure

A survey-based approach using a structured questionnaire was applied to collect data from the consumers who have the recent experience of purchasing online from Taobao, the largest e-retailing website of China (Gao, Chan, Chi, & Deng, 2016). In the first section, consumers were asked to respond to questions related to their online shopping experience. The questions were used to find out whether they have used the Taobao shopping platform, the frequency of their visit to the Taobao website in last three months, and the average amount of money they spend

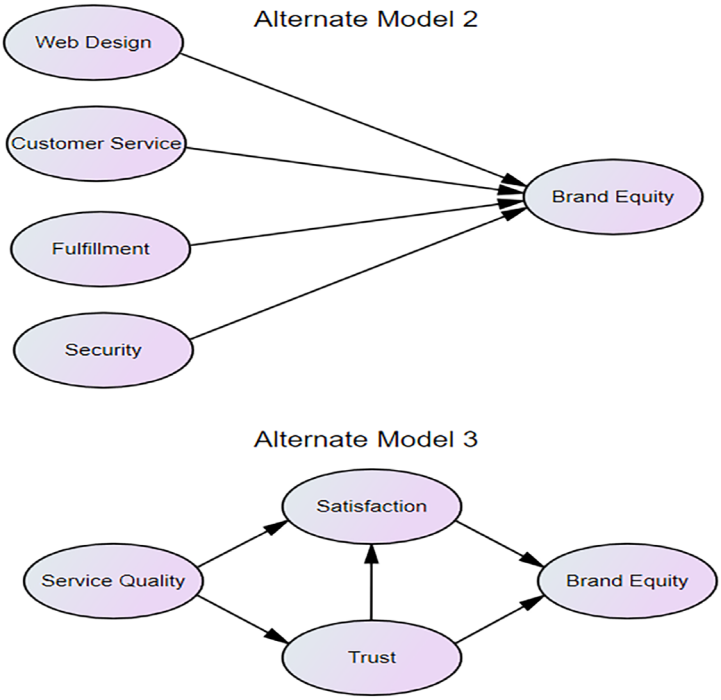


*Figure 2.* Alternative models

on each visit. In the second section, consumers were asked to record their opinions and perception towards Taobao's online retail quality, trust, satisfaction, and brand equity. The third section collected information about respondents' demographic and socio-economic characteristics such as gender, age, education, occupation, and income. A purposive sampling method was used in this research as it is practically appropriate in studying the e-retailing service quality dimensions, trust, satisfaction, and brand equity of China's e-retailing website, i.e. Taobao (Bernard, 2002; Tongco, 2007). The data collection process was conducted in the city of Shanghai where respondents, who have purchased from Taobao, were invited to participate in an online survey. Five hundred respondents were approached, from which 317 responses were obtained, yielding a 63% response rate.

**Measures**

Although several researchers have developed scales to measure e-service quality (Liu & Arnett, 2000; Loiacono, Watson, & Goodhue, 2002; Yoo & Donthu, 2001), some have gained more acceptance than others (for a detailed review please refer to Blut et al., 2015). However, in the e-retailing context, the scale developed by

Wolfinbarger and Gilly (2003) is considered as more robust, relevant, and context specific. Therefore, this study has adopted their four-dimensional, 14 items scale to measure e-retail quality. Online trust and satisfaction was measured using scales from Ribbink et al. (2004) study of consumer online behaviour. Yoo and Donthu's (2001) four items scale was used to measure overall brand equity.

## RESULTS AND DISCUSSION

### Descriptive

In the first step of data analysis, the data were examined for missing values. Past research suggests that a random omission of less than 5% per construct is acceptable and these missing values can be replaced using the mean substitution procedure (Tabachnick & Fidell, 1983). In the first stage of dealing with the problem, all the missing values were initially coded with "0" in SPSS. This was followed by calculating the percentage of missing values in the data. A total of 42 missing values were identified in the data set and were replaced using the mean substitution procedure (Meyers, Gamst, & Guarino, 2006). Subsequently, we used G*Power v3.1 to assess the minimum sample size for this study (Faul, Erdfelder, Lang, & Buchner, 2007; Balaji, Khong, & Chong, 2016). Given the main hypothesised model in Figure 1, with a medium effect size of $f^2 = 0.15$ and 24 predictors, the minimum sample size required is 238. Consequently, the 317 responses from the survey was deemed adequate. SEM was then used to establish the proposed relationship between the constructs. Table 1 provides the demographic details of the respondents.

### Measurement Model Validation

The SmartPLS2.0 software, a variance-based SEM approach, was used to simultaneously estimate the measurement and structural models (Hair, Hult, Ringle, & Sarstedt, 2016). We began our analysis by evaluating the measurement model. Based on Hair et al. (2016) recommendations, internal consistency of the measurement model was assessed using composite reliability (CR), indicator reliability (IR), and average variance extracted (AVE). For discriminant validity, the Fornell-Larcker criterion was used (Fornell & Larcker, 1981). As shown in Table 2, all the CR estimates and AVE values were above their respective cut-offs; however, this was not the case for indicator reliability. Following Hair et al. (2016) recommendations, we removed one item from the fulfilment and one from the web design constructs due to their poor indicator reliabilities.

Table 1
*Respondent profile*

| Variable | Frequency | Percentage |
|---|---|---|
| **Gender** | | |
| Male | 164 | 51.7 |
| Female | 153 | 48.3 |
| **Age in years** | | |
| < 20 | 33 | 10.4 |
| 20–30 | 262 | 82.6 |
| 31–40 | 19 | 6.0 |
| 41–50 | 3 | 1.0 |
| **Education** | | |
| Below secondary | 4 | 1.3 |
| Secondary | 7 | 2.2 |
| Polytechnic/diploma | 72 | 22.7 |
| University/bachelor degree | 199 | 62.8 |
| Master's degree | 33 | 10.4 |
| Others | 2 | 0.6 |
| **Occupation** | | |
| Professional | 93 | 29.3 |
| Executive/manager | 4 | 1.3 |
| Administrative | 34 | 10.7 |
| Self-employed/own business | 21 | 6.6 |
| Unemployed | 10 | 3.2 |
| Housewife | 4 | 1.3 |
| Retiree | 2 | 0.6 |
| Student | 104 | 32.8 |
| Others | 45 | 14.2 |
| **Monthly income in Yuan** | | |
| < 153000 | 65 | 20.5 |
| 153000–200000 | 54 | 17.0 |
| 200001–300000 | 96 | 30.3 |
| 300001–400000 | 49 | 15.5 |
| 400001–500000 | 22 | 6.9 |
| > 500000 | 31 | 9.8 |

Table 2
*Construct validity*

| Latent variable | Indicators | Loadings | IR | CR | AVE | $R^2$ | Note |
|---|---|---|---|---|---|---|---|
| **Website design** | | | | | | | WD2 removed |
| Taobao.com provides in-depth information | WD1 | 0.70 | 0.49 | 0.82 | 0.53 | | |
| It is quick and easy to complete a transaction at Taobao.com | WD3 | 0.71 | 0.50 | | | | |
| The level of personalisation at Taobao.com is about right, not too much or too little | WD4 | 0.71 | 0.51 | | | | |
| Taobao.com has good selection | WD5 | 0.79 | 0.63 | | | | |
| **Customer service** | | | | | | | |
| Taobao.com is willing and ready to respond to customer needs | CSER1 | 0.86 | 0.75 | 0.89 | 0.73 | | |
| When you have a problem, Taobao.com shows a sincere interest in solving it | CSER2 | 0.88 | 0.78 | | | | |
| Inquiries are answered promptly at Taobao.com | CSER3 | 0.81 | 0.65 | | | | |
| **Fulfilment/reliability** | | | | | | | |
| Product that came was represented accurately by Taobao.com | FUL1 | 0.87 | 0.77 | 0.83 | 0.71 | | FUL3 removed |
| You get what you ordered from Taobao.com | FUL2 | 0.81 | 0.66 | | | | |
| **Security/privacy** | | | | | | | |
| I feel like my privacy is protected at Taobao.com | SEC1 | 0.77 | 0.60 | 0.88 | 0.71 | | |
| I feel safe in my transactions with Taobao.com | SEC2 | 0.87 | 0.76 | | | | |
| Taobao.com has adequate security features | SEC3 | 0.88 | 0.78 | | | | |
| **Trust** | | | | | | | |
| I am prepared to give private information to Taobao.com | TRU1 | 0.80 | 0.64 | 0.86 | 0.60 | 0.31 | |
| I am willing to give my credit card number to Taobao.com | TRU2 | 0.79 | 0.62 | | | | |
| It is not a problem to pay in advance for purchased products over Taobao.com | TRU3 | 0.74 | 0.54 | | | | |
| Taobao.com intends to fulfil their promises | TRU4 | 0.78 | 0.61 | | | | |

(*continued on next page*)

Table 2 (*continued*)

| Latent variable | Indicators | Loadings | IR | CR | AVE | $R^2$ | Note |
|---|---|---|---|---|---|---|---|
| **Customer satisfaction** | | | | | | | |
| I am generally pleased with Taobao.com' s online services | SAT1 | 0.75 | 0.57 | 0.89 | 0.67 | 0.44 | |
| Taobao.com is enjoyable | SAT2 | 0.81 | 0.66 | | | | |
| I am very satisfied with Taobao.com' s online services | SAT3 | 0.83 | 0.70 | | | | |
| I am happy with Taobao.com | SAT4 | 0.86 | 0.75 | | | | |
| **Brand equity** | | | | | | | |
| It makes sense to buy on Taobao.com instead of any other site even if they are same | BE1 | 0.84 | 0.71 | 0.91 | 0.73 | 0.31 | |
| Even if another site has the same features as Taobao.com, I would prefer to buy on this site | BE2 | 0.89 | 0.80 | | | | |
| If there is another site as good as Taobao.com, I prefer to buy from Taobao.com | BE3 | 0.86 | 0.74 | | | | |
| If another site is not different from Taobao.com in any way, it seems smarter to purchase from Taobao.com | BE4 | 0.83 | 0.68 | | | | |

*Note:* WD = web design, SAT = customer satisfaction, CSER = customer service, SEC = security, TRU = trust, BE = brand equity, FUL= fulfilment

Discriminant validity was assessed using Fornell-Larcker criterion (Table 3). The bold numbers on the diagonal are the square root of each construct's AVE while the off-diagonal values in the matrix are the correlations between the latent constructs. Evidently, the results indicate that discriminant validity was not an issue in this study, since the square root of AVE values were substantially higher than any correlation with a respective construct (Fornell & Larcker, 1981).

Table 3
*Discriminant validity*

| | WD | CSER | FUL | SEC | TRU | SAT | BE |
|---|---|---|---|---|---|---|---|
| Web design | **0.73** | | | | | | |
| Customer service | 0.34 | **0.85** | | | | | |
| Fulfilment/reliability | 0.59 | 0.34 | **0.84** | | | | |
| Security/privacy | 0.49 | 0.43 | 0.43 | **0.84** | | | |
| Trust | 0.39 | 0.39 | 0.41 | 0.51 | **0.77** | | |
| Satisfaction | 0.52 | 0.52 | 0.48 | 0.45 | 0.46 | **0.82** | |
| Brand equity | 0.37 | 0.35 | 0.29 | 0.20 | 0.34 | 0.55 | **0.85** |

## Structural Model and Hypotheses Testing

Having performed the reliability and validity assessments of the constructs, we moved to the next step of evaluating the structural model. This involves examining the predictive capabilities of the proposed model and the relationships between the constructs (Hair et al., 2016). We followed Hair et al. (2016) five-step approach for assessing the structural model in PLS-SEM. Firstly, the model was tested for multi collinearity. The variance inflation factor (VIF) values for each of the constructs were lower than the cut of value of 3.3 (Diamantopoulos & Siguaw, 2006). Hence, there is no issue of collinearity in this study.

Secondly, we performed PLS-SEM algorithms to obtain the path estimates in the structural model. Then, a bootstrapping re-sampling procedure (5,000 samples) was executed to obtain the standard error, which in turns allows the computation of statistical significance of these path coefficients. Table 4 presents the results of the hypotheses testing. Our results indicate that all coefficients were statistically significant and in line with the proposed direction (H1 to H7).

Thirdly, using the rule of thumb, $R^2$ values of 0.75, 0.50, and 0.25 can be described as substantial, moderate, and weak, respectively (Hair et al., 2016). In addition to $R^2$, Hair et al. (2016) suggested additional two steps for evaluating a structural model in PLS-SEM. The first is assessing the effect size ($f^2$) and second is measuring the predictive relevance ($Q^2$). In accordance with their guidelines for assessing $f^2$, values of 0.02, 0.15, and 0.35 represent small, medium, and large effects of the exogenous latent variables, respectively (Hair et al., 2016). Finally, we also examined the $Q^2$ value, which is an indicator of the model's predictive relevance (Hair et al., 2016). $Q^2$ values larger than zero for a reflective endogenous latent variable indicate the path model's predictive relevance for a particular construct (Hair et al., 2014).

Table 4
*Results of hypothesis testing*

| | Path | Path coefficients, $\beta$ | Sample mean (M) | Std. error | *t*-statistics | Decision |
|---|---|---|---|---|---|---|
| H1 | WD to SAT | 0.33 | 0.34 | 0.05 | 5.82** | Supported |
| H2 | CSER to SAT | 0.33 | 0.32 | 0.05 | 5.99** | Supported |
| H3 | SEC/PRV to TUS | 0.40 | 0.40 | 0.05 | 7.37** | Supported |
| H4 | FUL/REL to TUS | 0.23 | 0.24 | 0.05 | 4.26** | Supported |
| H5 | TRU to SAT | 0.19 | 0.19 | 0.05 | 3.59** | Supported |
| H6 | SAT to BE | 0.49 | 0.49 | 0.05 | 9.25** | Supported |
| H7 | TRU to BE | 0.11 | 0.11 | 0.05 | 1.97* | Supported |

*Note:* *t*-values for two-tailed tests $^{*}p < 0.05$ (*t*-value 1.96), $^{**}p < 0.01$ (*t*-value 2.57)

Table 5 presents the assessment of co-efficient of determination ($R^2$), effect size ($f^2$), and predictive relevance ($Q^2$) of exogenous variables on endogenous variable in this study. The value for $R^2$ is 0.312 for brand equity, 0.441 for customer satisfaction, and 0.310 for trust. The findings of $Q^2$ again show that there is predictive relevance for the endogenous variables (Hair et al., 2016). The findings of $f^2$ for exogenous variables are vary. Although the effect of trust on brand equity is significant, the exogenous variable does not carry much effect. We run blindfolding procedure to obtain the cross-validated redundancy as a measure of $Q^2$ for reflective endogenous constructs. As a result, all $Q^2$ values were significantly above zero, indicating that the model has predictive relevance.

Table 5
*Determination of $R^2$, $f^2$, and $Q^2$ for model 1*

| Construct | $R^2$ | $Q^2$ | | $f^2$ |
|---|---|---|---|---|
| | | | WD to SAT | 0.16 (medium) |
| | | | CSR to SAT | 0.15 (medium) |
| SAT | 0.44 | 0.28 | FUL to TRU | 0.06 (small) |
| TRU | 0.31 | 0.18 | SEC to TRU | 0.19 (medium) |
| BE | 0.31 | 0.22 | TRU to SAT | 0.05 (none) |
| | | | SAT to BE | 0.28 (medium) |
| | | | TRU to BE | 0.01 (none) |

## Customer Online Satisfaction as a Mediator between Trust and E-Retail Brand Equity

Mediation analysis was performed following the guidelines of Hair et al. (2016) and Preacher and Hayes (2004). Using the bootstrapping procedure, we first assessed the significance of the direct effect without including the mediator variable in the PLS path model. If the direct effect is not significant, there is no mediating effect. Our results showed that there was significant direct effect of trust on brand equity without satisfaction as mediator, thus we proceed by including satisfaction as mediator to assess the significance of the indirect effect. The results suggest a significant indirect effect. We moved to the final step by assessing the variance accounted for (VAF) value. VAF values that are less than 20% indicates no mediation, VAF larger than 20% and less than 80% is categorised as partial mediation, and VAF value above 80% represent full mediation (Hair et al., 2016). The result showed a VAF value of 0.46 which means customer satisfaction partially mediates trust and brand equity as shown in Table 6.

Table 6
*Mediating effects*

| | Direct effect | Indirect effect | Total effect | VAF | Results |
|---|---|---|---|---|---|
| Trust to satisfaction to brand equity | 0.11* | 0.09** | 0.21* | 0.46 | Partial mediation |

*Note:* **significant at $p < 0.01$; *significant at $p < 0.05$

## Alternative Models Testing and Measurement Model Validation

Table 7 provides the assessment of construct reliability as well as convergent validity for the variables of two alternative models. All the constructs have construct reliability score above 0.70 thus establishing internal consistency. Similarly, these constructs demonstrate good convergent validity as they achieve minimum threshold value of 0.5 for AVE (Hair et al., 2016).

Table 7
*Internal consistency and convergent validity*

| Model | Construct | Item | Loading | CR | AVE |
|---|---|---|---|---|---|
| Model 2 | WD | WD 1 | 0.74 | 0.82 | 0.53 |
| | | WD 3 | 0.68 | | |
| | | WD 4 | 0.72 | | |
| | | WD 5 | 0.77 | | |
| | CSER | CSR1 | 0.87 | 0.88 | 0.72 |
| | | CSR2 | 0.89 | | |
| | | CSR3 | 0.78 | | |
| | SEC | SEC1 | 0.83 | 0.88 | 0.71 |
| | | SEC2 | 0.86 | | |
| | | SEC3 | 0.83 | | |
| | FUL | FUL1 | 0.77 | 0.79 | 0.57 |
| | | FUL2 | 0.77 | | |
| | | FUL3 | 0.72 | | |
| | BE | BE1 | 0.85 | 0.91 | 0.73 |
| | | BE2 | 0.90 | | |
| | | BE3 | 0.85 | | |
| | | BE4 | 0.81 | | |

(*continued on next page*)

Table 7 (*continued*)

| Model | Construct | Item | Loading | CR | AVE |
|---|---|---|---|---|---|
| Model 3 | SQ | WD | 0.77 | 0.85 | 0.60 |
| | | CSR | 0.79 | | |
| | | FUL | 0.82 | | |
| | | SEC | 0.70 | | |
| | SAT | SAT1 | 0.75 | 0.89 | 0.67 |
| | | SAT2 | 0.81 | | |
| | | SAT3 | 0.84 | | |
| | | SAT4 | 0.86 | | |
| | TRU | TRU1 | 0.79 | 0.86 | 0.60 |
| | | TRU2 | 0.79 | | |
| | | TRU3 | 0.73 | | |
| | | TRU4 | 0.78 | | |
| | BE | BE1 | 0.84 | 0.91 | 0.73 |
| | | BE2 | 0.89 | | |
| | | BE3 | 0.86 | | |
| | | BE4 | 0.83 | | |

Table 8 presents the results of discriminant validity test using the Fornell-Larcker (1981) criterion for models 2 and 3. As illustrated, the square root of AVE of each construct is larger than the correlation estimates of the constructs. This establishes the discriminant validity of our measurement model.

Table 8
*Discriminant validity*

| Model 2 | | WD | CSER | FUL | SEC | BE |
|---|---|---|---|---|---|---|
| | WD | 0.73 | | | | |
| | CSER | 0.34 | 0.85 | | | |
| | FUL | 0.63 | 0.42 | 0.75 | | |
| | SEC | 0.49 | 0.44 | 0.51 | 0.84 | |
| | BE | 0.38 | 0.35 | 0.33 | 0.21 | 0.85 |
| Model 3 | | SQ | SAT | TRU | BE | |
| | SQ | 0.77 | | | | |
| | SAT | 0.64 | 0.82 | | | |
| | TRU | 0.54 | 0.46 | 0.77 | | |
| | BE | 0.39 | 0.55 | 0.34 | 0.85 | |

Finally, it is important to ensure that there is no collinearity in the structural model. The VIF values for all exogenous constructs is lower than the offending value of 3.3 (Diamantopoulos & Siguaw, 2006), thus, suggesting that there is no issue of collinearity in this study.

**Structural Model Estimations**

We proposed in model 2 that web design, customer service, fulfilment/reliability, and security were direct predictors of consumer-based e-brand equity. The results of structural model suggest that only customer service and web design are direct predictors of consumer-based e-brand equity (see Table 9). Results of structural model proposed in model 3 suggest that all the relationships were significant (Table 9).

Table 9
*Path co-efficient assessment*

| Model | Relationship | Direct effect ($\beta$) | Standard error | *t*-statistic | *p*-value |
|---|---|---|---|---|---|
| Model 2 | WD→BE | 0.27 | 0.07 | 3.86** | 0.00 |
| | CSER→BE | 0.25 | 0.05 | 4.57** | 0.00 |
| | FUL→BE | 0.10 | 0.07 | 1.40 | 0.16 |
| | SEC→BE | –0.08 | 0.05 | 1.50 | 0.13 |
| Model 3 | SQ→SAT | 0.55 | 0.05 | 9.78** | 0.00 |
| | SQ→TRU | 0.54 | 0.04 | 12.92** | 0.00 |
| | TRU→SAT | 0.16 | 0.06 | 2.59** | 0.01 |
| | SAT→BE | 0.49 | 0.05 | 8.86** | 0.00 |
| | TRU→BE | 0.11 | 0.06 | 1.85* | 0.03 |

*Note: t*-values for two-tailed tests $^{*}p < 0.05$ (*t*-value 1.96), $^{**}p < 0.01$ (*t*-value 2.57)

Table 10 presents the assessment of $R^2$, $f^2$ as well as $Q^2$ of exogenous variable on endogenous variable for the two alternative models. In model 2, the value for $R^2$ is 0.211. Comparatively, the variance explained in this model (21.1%) is lowest as compared to original model (model 1, 31.0%). $Q^2$ value for brand equity is also larger than zero (Hair et al., 2016), assuring predictive relevance of endogenous variables. The effect sizes of customer service and fulfilment on brand equity are found to be small. In model 3, the value for $R^2$ is 0.313, 0.429, and 0.293 for brand equity, customer satisfaction, and trust, respectively, meaning that they explain 31.3%, 42.9%, and 29.3% of variances in their respective models. Overall, all $Q^2$ values are larger than zero (Hair et al., 2016), hence, indicating predictive quality of the endogenous variables. Service quality is found to have large effect size on customer satisfaction and trust (SQ, $f^2 = 0.378$; $f^2 = 0.414$). Model 3 has a slightly higher $R^2$ as compared to original model.

Table 10
*Determination of $R^2$, $f^2$, and $Q^2$ for models 2 and 3*

| Constructs | $R^2$ | $Q^2$ | | $f^2$ |
|---|---|---|---|---|
| | | | WD to BE | 0.053 (small) |
| | | | CSR to BE | 0.063 (small) |
| | | | FUL to BE | 0.007 (none) |
| BE | 0.21 | 0.140 | SEC to BE | 0.006 (none) |
| | | | SQ to SAT | 0.370 (large) |
| | | | SQ to TRU | 0.410 (large) |
| SAT | 0.42 | 0.280 | TRU to SAT | 0.030 (small) |
| BE | 0.31 | 0.226 | SAT to BE | 0.240 (large) |
| TRU | 0.29 | 0.170 | TRU to BE | 0.010 (small) |

## CONCLUSION, IMPLICATIONS, AND LIMITATIONS

Research on e-retailing is now focused on understanding the impact of firms' branding initiatives on consumer perceptions and preferences. Therefore, this study contributes to the existing literature by identifying the important antecedents of e-retail brand equity and their interrelationships. One of the important contributions of this study is to provide some evidence that how different conceptualisations of the relationship between e-retail quality and online brand equity can lead managers towards slightly different conclusions. Model 1 perhaps has the strongest theoretical foundations. If a manager is using this model as a lens to understand relationships among several constructs in our model, he/she will conclude that satisfaction is the strongest direct antecedents that also plays a mediating role between online trust and online brand equity of a retailer. The second thing a manager will notice is the strong relationship between privacy and trust on an online retailer. Thus, he will assume that ensuring customer data privacy and security will help in generating customer trust, which has positive relationship with both satisfaction and retailer online brand equity.

These results are also in line with the past studies suggesting that security/privacy concerns are significant in the online context and strongly influence trustworthiness of a website (Aiken & Bousch, 2006; Hoffman et al., 1999; Kim et al., 2009; Ribbink et al., 2004). Thus, it is logical to assume that online retail brands with sophisticated privacy and security procedures in place are more likely to build long-term customer relationships. In addition, our results also support earlier studies which showed that trust is one of the strongest predictor of customer satisfaction in the online context (Harris & Goode, 2004; Lin & Wang, 2006; Jin & Park, 2006).

The results of model 1 also showed that website design and customer service have a positive impact on customers' online satisfaction with the e-retail brand. These two antecedents of online satisfaction approximately explain 45% of the variance. Thus, in the online retailing context, creating a web design that provide seamless shopping experience supplemented by effective customer service mechanisms can significantly contribute to customer satisfaction in a meaningful way. These results are in line with past studies exploring the relationship between website design and customer service on consumers' online satisfaction (Devaraj et al., 2002; Kim et al., 2009; Shankar et al., 2002; Szymanski & Hise, 2000; Zeithaml et al., 2002).

Thirdly, in model 1, trust and satisfaction were proposed as the direct antecedents of e-retail brand equity. In line with some recent studies, we found a positive relationship between satisfaction and e-brand equity, as well as between trust and e-brand equity (Kao & Lin, 2016). Although one can notice that satisfaction appears to be a much stronger predictor of e-retail brand equity as compared to trust. However, this might be due to the fact that satisfaction is mediating the relationship between trust and retailer online brand equity.

The testing of alternative models suggests that the direct model (model 2) explain least amount of variance as compared to other two models. Nonetheless, the direct model provides some interesting insights. For example, it suggests that security and fulfilment are not the direct significant predictors of e-retail brand equity. On the other hand, website design and customer service dimensions have a direct significant influence on e-retail brand equity. These results indicate that how testing models based on weak conceptualisation can generate confusing results and the least predictive relevance. A manager using model 2 may assume that privacy/security and fulfilment have no role in predicting an online retailer brand equity. This conclusion will not only be superficial but could become extremely costly for an online retailer. Model 3 presents marginally better results as compared to model 1. In our view, model 3 provide quite similar results. One can notice that by using service quality as a uni-dimension construct, we are able to see how overall service quality strongly influence customer satisfaction and trust with an online retail brand. The second thing one can notice is that the beta value for the path between satisfaction and brand equity remain the same.

Online retailers can use our proposed model of e-brand equity not only to measure the perceptions of their own customers but also the customers of their competitors. This will allow the brand to establish a benchmark for improving its own e-retail quality and to identify its point of parity and point of difference in order to build sustainable competitive advantage. Unlike previous studies, this research

expands our understanding by investigating the role of specific dimensions of e-retail quality on e-brand equity through trust and satisfaction. Thus, managers can use our conceptual model to capture perceptions of their existing customers towards their e-retail brand. For example, by using our main conceptual model (model 1), managers can collect data from their own customers to understand which relationships are weak in the model and therefore needs further attention. For example, if an e-retail brand finds out that the linkage between consumer perceptions of their website design and satisfaction is weak/poor, this should raise concerns. E-retailing firms could conduct a focus group study to validate quantitative results and further enhance their understanding about the reasons for their customers' poor perceptions towards their website design.

Online trust appears to be the strongest predictor of e-retail brand equity. Therefore, managers should consider investing in the processes that can further build their consumer brand trust. The privacy and security dimension of e-retail quality was the second strongest predictor of consumer trust on e-shopping in our model. This highlights the fact that online consumers are extremely concerned about the privacy and security of their personal information. The recent lapse in protecting consumer data by large corporations suggests that the consumer concern is genuine. Thus, building online brand preference based on fool-proof security of consumer personal information and transactional data can provide a stronger and long-term competitive advantage.

This research investigated the B2C aspect of online retail branding; however, many online retailing platforms also provide C2C opportunities. Thus, future research can test this model for brands which provide C2C as well as the brands which offer both B2C and C2C transactions on their platforms. Online consumers often prefer these sites due to heavy discounts and other promotional campaigns. Therefore, future research can incorporate the impact of large scale promotional activities on consumer-based e-retail brand equity. It is also highly likely that online reviews, either from customer-generated ratings or experts, may have an influence on online purchase behaviour and we recommend that future studies should examine this new development. It is also highly likely that the mechanisms through which consumers formulate brand equity would vary across different demographics and future studies should take this into account. Finally, this research was conducted in China, and thus explores the issue based on the perceptions of these consumers; therefore, it is important to explore the issues in other countries to further validate the model.

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4

# THE IMPACT OF GOVERNMENT SUPPORT ON FIRM PERFORMANCE IN VIETNAM: NEW EVIDENCE FROM A DYNAMIC APPROACH

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**ABSTRACT**

*Using a sample of private manufacturing small- and medium-sized enterprises (SMEs) in the period 2007–2015, this paper examines the effect of government support on firms' financial performance in Vietnam. Contrary to many previous studies, the study finds that government assistance affects firms' financial performance after controlling for heterogeneity, unobservable factors, and dynamic endogeneity. The finding supports the viewpoint of institutional theory. The study also reveals that assistance measures, such as tax exemptions, soft loans, and investment incentives to promote financial performance, are vital for the development of Vietnamese private SMEs.*

**Keywords:** government support, innovation, firm financial performance, SMEs, Vietnam

## INTRODUCTION

Theoretically, the linkage between government support and firms' financial performance cannot be predicted directly by any single theory. Institutional theory emphasises the effectiveness of government subsidies as a catalyst for external investments, and Takalo and Tanayama (2010) show that firms receiving

government support may give a positive signal to market-based financiers. As a result, they may receive higher external investment than their counterparts without such support. Also, government support can result in additional funding sources to provide firms with more resources where sources are limited. Furthermore, private enterprises may overcome institutional and other barriers on an uneven playing field through the efficiency of government support (Hansen, Rand, & Tarp, 2009). Consequently, firms with government support will increase research and development (R&D) input and thus improve their performance (Wu, 2017).

On the other hand, rent-seeking viewpoints indicate that government subsidies will not necessarily be distributed effectively because the granting of subsidies is not based on a firm's promising prospects or social contribution. As a result, subsidies based on social networks or political connections are not beneficial to company performance. Such biases in government support tend to increase distortion in the efficient allocation of resources among companies, and hence may result in slow profit growth or the reduction of returns on asset and financial performance (Zhang, Li, Zhou, & Zhou, 2014).

In light of these theoretical perspectives, many empirical studies have been conducted in various countries. However, few studies have focused on the role of government support on the development of small- and medium-sized enterprises (SMEs) in developing countries. In addition, the findings are inconclusive, making it hard to draw general inferences. For example, Fajnzylber, Maloney, and Montes-Rojas (2009) found that government support did not significantly affect profitability in Mexico. However, Hansen et al. (2009) show that government assistance helps firms improve their performance and survival.

The current study differs significantly from previous ones in three ways. First, whereas most studies focus on analysis of the US and other developed countries, this study provides the first evidence of the role of government support on firms' financial performance in Vietnam. Furthermore, different types of government support can have varying effects on firms' financial performance. In our study, we go beyond the extant literature by examining the effect of various types of government support on firms' financial performance. Finally, in methodology, the majority of previous studies (e.g., Zhang et al., 2014) often consider the linkage between government support and firms' financial performance using ordinary least squares (OLS) for pooled or panel data regression. However, such approaches cannot overcome several empirical challenges, such as the endogeneity of explanatory variables. More importantly, the presence of potential dynamic endogeneity can be understood as a firm's past financial performance affecting

current performance. Following Wintoki, Linck, and Netter (2012), we overcome these problems by using a two-step system dynamic panel, the generalised method of moments (GMM) model.

This paper is structured as follows. The next section provides the background and literature for the research. The following section discusses data sources and analysis framework. Empirical results are presented in the following section. The final section offers a summary and conclusions.

## THE BACKGROUND OF GOVERNMENT SUPPORT AND ITS ROLE IN SME PERFORMANCE

Recognising that SMEs, especially private firms, are the critical engine for Vietnamese economic growth, the government of Vietnam has set up supporting measures and issued various decrees. Table 1 lists a series of policy measures, including financial access, human resource development, technical support, and trade and export promotion for SMEs in Vietnam.

Although these policies cover all the various aspects of support for SMEs, difficulties in their implementation still exist because of unclear and unrealistic requirements (Le, 2010). For example, a recent decree (56/2009/ND-CP) lists types of support that SMEs can receive from the government. In practice, however, the guidelines are not clear or lack sufficient detail (Anh, Mai, Nhat, & Chuc, 2011). Consequently, it takes much time and effort for SMEs to receive the support offered. In addition, although the leading role of the state sector has been removed**,** discrimination against non-state SMEs still exists. In addition, corruption remains widespread (Nguyen & Van Dijk, 2012; Vu, Tran, Nguyen, & Lim, 2018). According to the Central Institute for Economic Management (CIEM, 2010), Vietnamese SMEs are likely to make informal payments for receiving support from the government. Hence, when assessing financial performance, it is not clear whether the benefits of government support outweigh the costs or vice versa. The context motivates us to evaluate whether government assistance is beneficial to the financial performance of firms and if so, how?

The literature has documented many studies considering the linkage between government support and firm performance (Cowling, 2010; Lerner, 1999; Rotger, Gørtz, & Storey, 2012). However, the linkage between government assistance and the performance of SMEs has attracted little empirical attention. On the one hand, some studies show that government support has little effect on SME performance.

For example, using a panel dataset on SMEs in the Japanese manufacturing industry, Honjo and Harada (2006) reveal that government initiatives played an inconsequential role in SME sales, employment, and revenues.

On the other hand, Doh and Kim (2014) explore the effects of governmental policies on SME innovation in regional strategic industries in South Korea using technological development assistance funds as a proxy. Results from empirical models indicate that a positive relationship exists between technological support and innovation performance. The study suggests that governmental financial aid is important for SME innovation.

Table 1
*Overview of government support for SMEs through various period of time*

**2001**

Decision No. 193/2001/QD/-TTg, issued on 20 December 2001 by the Prime Minister, on the promoting for the establishment and operation as well as credit guarantees for SMEs.

**2002**

Circular No. 86/2002/TT-BTC, issued on 27 September 2002 by the Ministry of Finance, on guiding the utilisation of the budget in support of trade and export promotion activities.

**2003**

Decision No. 12/2003/QD-TTg, issued on 17 January 2003 by the Prime Minister, on the functions, responsibility and membership of the Small and Medium Enterprises Development Promotion Council.

Decision No. 104/203/QD-BTM, issued on 24 January 2003 by the Ministry of Trade, on promulgating the regulations for the formulation and management of national key trade promotion programmes.

Decision No. 185/QD-BKH, issued on 24 March 2003 by the Chairman of the Small and Medium Enterprises Development Promotion Council, on the promulgation of an operational statute for the Small and Medium Enterprises Development Promotion Council.

Decision No. 290/QD-BKH, issued on 29 July 2003 by the Ministry of Planning and Investment, on the establishment of technical assistance centres for SMEs in Hanoi, Da Nang, and Ho Chi Minh City.

Decision No. 504/QD-BKH, issued on 29 July 2003 by the Ministry of Planning and Investment, on the functions, responsibility, and organisational structure of the Agency for the Development of Small and Medium Enterprises.

Directive No. 27/2003/CT-TTg, issued on 11 December 2003 by the Prime Minister, on continuing to step up the implementation of the enterprise law and encouraging SME development.

**2004**

Decision No. 115/2004/QD-TTg, issued on 25 June 2004 by the Prime Minister, on revision and amendment to the statute for the establishment, organisation, and operation of the credit guarantee fund for SMEs promulgated in decision No. 193/2001/QD-TTg, issued on 20 December 2001 by the Prime Minister.

(*continued on next page*)

Table 1 (*continued*)

| |
|---|
| **2004** |
| Decision No. 143/2004/QD-TTg, issued on 10 August by the Prime Minister, on approval for the Human Resources Development Assistance Program for SMEs. |
| Circular No. 93/2004/TT-BTC, issued on 29 September 2004 by the Ministry of Finance. |
| Circular on regulations for the Credit Guarantee Fund for SMEs. |
| Guidelines of the Ministry of Planning and Investment for implementation of the SME Human Resource Development Program, 24 November 2004. |
| **2005** |
| Resolution No. 144/2005/TB-BKH, issued on 07 October 2005 by the SME Council, on the SME Development Plan 2006–2010. |
| Directive No. 40/2005/CT-TTg, issued on 16 December 2005 by the Prime Minister, on the enhancement of support for the development of SMEs. |
| **2006** |
| Circular No. 01/2006, issued on 20 February 2006 by the State Bank of Vietnam, on the contribution of capital to guarantee credit for SMEs. |
| Decision No. 236/2006/QD-TTg, issued on 23 October 2006 by the Prime Minister, on approval of the SME Development Plan 2006–2010. |
| Decision No. 48/2006/QD-BTC, issued on 14 September 2006 by the Ministry of Finance, on the new accounting system for SMEs. |
| **2007** |
| Directive No. 22/2007/CT-TTg, issued on 26 October 2007 by the Prime Minister, on the development of non-state enterprises. |
| **2009** |
| Decree No. 90/2001/ND-CP on support for the development of SMEs was replaced by Decree No. 56/2009/NĐ-CP, issued on 30 June 2009 by the government. |
| **2012** |
| Decision No. 1231/2012/QD-TTg, issued on 07 September 2012 by the Prime Minister, concerning approval of the development plan for SMEs 2011–2015. |
| **2016** |
| Decision No. 89/2015/QH13, issued by the Parliament, showing strong commitment and willingness on the part of the government to support and develop SMEs. |

*Source*: Authors' synthesis from documents of the Agency for Small and Medium Enterprise Development, Ministry of Planning and Investment

The objective of another study was to analyse the impact of public support on Spanish SME performance, considering technological and economic results. Empirical evidence corroborates the direct, positive influence of support on the technological assets of participants. From the economic performance point of view, economic indicators are positively influenced by the improvement in technological background (Barajas, Huergo, & Moreno, 2017).

In some cases, mixed results are found in each study. For example, Morris and Stevens (2010) evaluated the impact of a New Zealand government support programme on participating firms, using a new firm-level panel dataset for 2000 to 2006. They found that the programme achieved significant positive results for sales, although the effect on added value and productivity was less conclusive. Maggioni, Sorrentino, and Williams (1999) examined how the most important government programme to encourage entrepreneurship in Italy affected several aspects of the early performance of new firms. Results showed that the public programme produced mixed effects. Government aid allowed firms to acquire a higher level of technology, but government funding gave rise to entrepreneurial start-ups, which are not always fully efficient.

Few contributions deal with the influence of government support on SME performance in developing countries and these still reach different conclusions. Fajnzylber et al. (2009) consider the role of diverse types of government support on firm performance in Mexico. Their research found that the significant intra-country differences in firm productivity observed in developing economies were due in part to market and government failures that limit the ability of micro-firms to reach their optimal sizes. However, in another article, Wei and Liu (2015) examine the effect of government support in the Chinese context and consider a different type of effect on the innovation performance of firms. They divided government support into what they term "vertical and horizontal support," and adopted an empirical research approach in their study. In their results, the authors highlighted that vertical support, in the form of direct R&D subsidies, horizontal support, and regional innovation policy, have a positive effect on the innovation performance of firms.

In Vietnam, a growing literature examines the role of government support in firm performance. Several studies show that government support is an effective tool to improve firm growth and survival (e.g., Hansen et al., 2009). Other research reveals that the effect of government support on firm performance is negligible or insignificant (Vu, Holmes, Tran, & Lim, 2016). However, the evidence about the linkage between government support and firms' financial performance is little known, especially for private SMEs. In addition, there is limited understanding of the effect of government support on firms' financial performance. Investigating subsidies as a whole instead of types of subsidy may obscure the real effect of government support on firms' performance. More precisely, few studies have examined the relationship between government support and SMEs' financial performance with reference to developing countries, particularly Vietnam, considering the effect of government assistance and types of support on SMEs' financial performance. Hence, the contribution of this study will be to fill the

gap in the literature by using a dynamic GMM approach to consider the role of government support on firms' financial performance in the Vietnamese domestic SME manufacturing context.

## DATA AND ECONOMETRIC MODELS

### Data

This study utilises the Small and Medium Enterprise (SME) Survey – Enterprise Development in Vietnam (Copenhagen Centre of Development Research – University of Copenhagen). The surveys were conducted in collaboration with two central Vietnamese partners, i.e., CIEM and the Institute of Labour, Science and Social Affairs (ILSSA).[1]

The surveys focused on manufacturing SMEs in Vietnam and were conducted every two years, in 2005, 2007, 2009, 2011, 2013, and 2015. The surveys covered 10 provinces (Ho Chi Minh City, Hanoi, Hai Phong, Long An, Ha Tay, Quang Nam, Phu Tho, Nghe An, Khanh Hoa, and Lam Dong) and 3 regions (South, Central, and North). However, this study uses an unbalanced panel dataset in 19 manufacturing sectors from 2007 to 2015 because information concerning types of government support is not available for 2005.

To provide a comprehensive analysis of different types of SMEs, the surveys followed a stratified random sampling method according to ownership structures. The surveys provide a wide range of indicators of firm characteristics, including ownership, industry, enterprise history, government support, types of government support, financial performance, and other information. This dataset made it possible to analyse the impact of government support on the financial performance of Vietnamese SMEs. A common problem with time-variant data is that they are often expressed in current prices. Therefore, our data on current variables are deflated to 1994 prices using GDP deflators to avoid biases that might arise because of inflation. A statistical description of the main variables in our regression estimations is given in Table 2.[2]

### Econometric models

To quantify the role of government support in firms' financial performance, we apply a dynamic model approach. Such approaches have become increasingly important in recent years to deal with the dynamic nature of economic processes (Flannery & Hankins, 2013). It is this dynamic nature which renders problematic

Table 2
*Summary statistics for the main variables in the model*

| Variable | 2007 | | 2009 | | 2011 | | 2013 | | 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| ROA | 0.22 | 1.73 | 0.266 | 0.58 | 0.241 | 0.65 | 0.307 | 1.72 | 0.35 | 0.94 |
| ROE | 0.21 | 2.27 | 0.37 | 3.32 | 0.34 | 3.08 | 0.31 | 1.88 | 0.42 | 1.49 |
| Government assistance | 0.23 | 0.42 | 0.32 | 0.46 | 0.143 | 0.35 | 0.115 | 0.31 | 0.084 | 0.27 |
| Financial support | 0.196 | 0.39 | 0.292 | 0.45 | 0.101 | 0.302 | 0.097 | 0.29 | 0.052 | 0.22 |
| Technical support | 0.04 | 0.198 | 0.027 | 0.164 | 0.028 | 0.167 | 0.022 | 0.14 | 0.006 | 0.08 |
| Innovation | 0.48 | 0.49 | 0.45 | 0.49 | 0.44 | 0.49 | 0.197 | 0.39 | 0.33 | 0.47 |
| Bribes | 0.267 | 0.44 | 0.342 | 0.47 | 0.38 | 0.486 | 0.445 | 0.49 | 0.42 | 0.495 |
| Export | 0.058 | 0.23 | 0.057 | 0.23 | 0.06 | 0.23 | 0.062 | 0.24 | 0.07 | 0.255 |
| Firm size in log | 2.08 | 1.17 | 2.06 | 1.16 | 1.81 | 1.15 | 1.73 | 1.15 | 1.78 | 1.15 |
| Firm age in log | 2.35 | 0.71 | 2.42 | 0.73 | 2.38 | 0.67 | 2.55 | 0.63 | 2.62 | 0.63 |
| Leverage | 0.11 | 0.273 | 0.10 | 0.23 | 0.079 | 0.19 | 0.07 | 0.24 | 0.087 | 0.235 |
| Observations | 2518 | | 2527 | | 2417 | | 2424 | | 2486 | |

*Source*: Authors' calculation from the SME survey, 2007–2015
*Note:* ROA = return on assets; ROE = return on equity

traditional estimation techniques, including OLS and fixed-effects (FE) (Flannery & Hankins, 2013; Wintoki et al., 2012). As shown in many previous studies (e.g., Wintoki et al., 2012), empirical models using firms' financial performance as a dependent variable must be examined in a dynamic framework in which lagged dependent variable(s) are considered as explanatory variable(s).

Technically, the inclusion of lagged dependent variable(s) as independent variables of the empirical models allows researchers to control for unobserved historical factors which have potential influence on current firm performance, in this way reducing omitted variable bias (Wooldridge, 2009). Thus, guided by previous studies (Wintoki et al., 2012), the empirical approach taken in this study is specified below:

$$Y_{it} = \alpha_0 + \sum_{s=1}^{k} a_s Y_{it-s} + \delta_m Government\ support_{it} + \beta_k Z_{k,it} + year\ dummies + industry\ dummies + \mu_i + \vartheta_{it} \quad (1)$$

where $Y_{it}$ is the financial performance (as measured by ROA or ROE) of firm $i$ in year $t$; $\alpha_1$ is the estimated coefficient on a one-year lagged dependent variable; government support is widely defined as a dummy variable to reduce measurement errors. This is the main interest variable in the model. In this study, we measure

government support as a set of variables. First, it is measured as a dummy, based on the question whether firms have received assistance. In addition, the type of government support is measured on the basis of the question about what assistance firms have received.

*Z* is a vector of firm-level explanatory variables used in the model as guided by previous studies (e.g., firm size, firm age, innovation, and leverage). We also control for potential influences arising from differences across industries, using dummy variables for industry classification. $\mu_i$ represents time-invariant unobserved firm characteristics; $\omega_t$ denotes time-specific effects which are time-variant and common to all firms. These time-specific effects are captured by year dummy variables; $\varepsilon_{it}$ is the classical error term.

The information from the past can be captured sufficiently by two lags of the dependent variable (e.g., Adams & Ferreira, 2009). However, when we ran a specification in which current financial performance is a dependent variable regressed on two lags of past performance and using other covariates as in Equation 1, an insignificant effect of $Y_{it\text{-}2}$ on current firm financial performance was found. This result implies that a one-year lagged dependent variable as an explanatory variable in a first-order autoregressive [AR(1)] structure is enough to control for potential dynamic endogeneity. The specification with AR(1) structure is consistent with the arguments of previous studies (Zhou, Faff, & Alpert, 2014), which show that an AR(1) structure appears to be unavoidable when almost all panel datasets used in corporate finance research are short. Hence, the panel specification model (1) with an AR(1) structure can be written as follow:

$$Y_{it} = \alpha_0 + \alpha_1 Y_{i,t-1} + \delta_m Government\ support_{it} + \beta_k Z_{k,it} + year\ dummies + industry\ dummies + \mu_i + \vartheta_{it} \quad (2)$$

For the estimation approach, the pooled OLS and the OLS with FE methods will provide inconsistent estimations in the presence of the AR(1) structure and endogenous explanatory variables (Flannery & Hankins, 2013). Some studies use a traditional instrumental variable (IV) approach. However, findings from a set of external instrumental variables seem infeasible when almost no independent variables are considered to be exogenous. Consequently, we use the system generalised method of moments (System GMM) estimator proposed by Blundell and Bond (1998) to correct for this inconsistency and these challenges. This estimator is superior to OLS or fixed effects in controlling for time-invariant unobserved heterogeneity across firms, simultaneity, and dynamic endogeneity (Blundell & Bond, 1998; Wintoki et al., 2012).

## EMPIRICAL RESULTS AND DISCUSSION

This section describes the results of the empirical analysis. Table 3 column 1 shows the effect of government support on firms' financial performance when using the OLS approach for pooled data, while Table 3 column 2 shows estimated results after controlling for unobservable time-invariant factors. Table 3 column 3 provides dynamic two-step GMM regressions with basic estimation, while columns 4 to 6 report the results from the estimation of extended specifications.

Table 3
*The impact of government support on firms' financial performance*

| Variables | ROA | ROA | ROA | ROA | ROA | ROA |
|---|---|---|---|---|---|---|
| | Pooled | FE | Dynamic GMM | Pooled | FE | Dynamic GMM |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| lagROA | | | 0.1541** | 0.3199*** | –0.2378** | 0.1449** |
| | | | (0.078) | (0.083) | (0.117) | (0.072) |
| Government support | –0.0069 | 0.0071 | 0.0393** | –0.0100 | –0.0110 | 0.0360* |
| | (0.020) | (0.030) | (0.018) | (0.023) | (0.042) | (0.022) |
| Firm size in log | –0.0386*** | –0.0356 | 0.0093 | –0.0273 | –0.0460 | 0.0076 |
| | (0.014) | (0.025) | (0.021) | (0.020) | (0.081) | (0.019) |
| Firm age in log | –0.0575*** | –0.0094 | –0.0260 | –0.0106 | –0.0106 | –0.0319 |
| | (0.019) | (0.032) | (0.033) | (0.017) | (0.032) | (0.030) |
| Innovation | | | | –0.0186 | 0.0226 | –0.0100 |
| | | | | (0.017) | (0.039) | (0.016) |
| Bribes | | | | –0.0593*** | –0.0606 | –0.0219 |
| | | | | (0.018) | (0.048) | (0.014) |
| Export | | | | 0.1035** | –0.0667 | 0.0590 |
| | | | | (0.043) | (0.078) | (0.065) |
| Leverage | | | | 0.1633** | 0.0268 | 0.0543 |
| | | | | (0.083) | (0.063) | (0.065) |
| Tobacco sector | –0.2869*** | –1.9228*** | –0.5671 | –0.2346*** | –4.8737 | –0.5766* |
| | (0.042) | (0.438) | (0.392) | (0.048) | (4.634) | (0.343) |
| Textiles sector | –0.1932*** | –1.6025*** | –0.3966** | –0.1083** | –4.0579 | –0.3794** |
| | (0.041) | (0.241) | (0.180) | (0.055) | (4.043) | (0.148) |
| Apparel sector | –0.0622 | –1.7300*** | –0.4956*** | –0.0655 | –4.3637 | –0.4900*** |
| | (0.050) | (0.250) | (0.183) | (0.047) | (4.049) | (0.159) |
| Leather sector | –0.1386*** | –1.8842*** | –0.3414* | –0.1470*** | –4.2218 | –0.3512* |
| | (0.049) | (0.239) | (0.180) | (0.045) | (4.044) | (0.180) |
| Wood sector | –0.1612*** | –1.8002*** | –0.3577*** | –0.1294*** | –4.1454 | –0.3619*** |
| | (0.032) | (0.193) | (0.127) | (0.037) | (3.978) | (0.108) |

*(continued on next page)*

Table 3 (*continued*)

| Variables | ROA | ROA | ROA | ROA | ROA | ROA |
|---|---|---|---|---|---|---|
| | Pooled | FE | Dynamic GMM | Pooled | FE | Dynamic GMM |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Paper sector | –0.1764*** | –1.4617*** | –0.5449** | –0.1298*** | –3.1901 | –0.5147** |
| | (0.033) | (0.199) | (0.228) | (0.033) | (3.054) | (0.222) |
| Publishing and printing sector | –0.1455*** | –1.6363*** | –0.3952* | –0.1236** | –4.0945 | –0.4513** |
| | (0.046) | (0.253) | (0.208) | (0.054) | (3.921) | (0.223) |
| Refined petroleum sector | –0.2538*** | –1.6566*** | –0.3372* | –0.1868*** | 0.0806 | –0.3111* |
| | (0.042) | (0.415) | (0.178) | (0.057) | (0.055) | (0.161) |
| Chemical products sector | –0.2057*** | -1.8033*** | –0.4449 | –0.1170** | –3.9307 | –0.4395* |
| | (0.041) | (0.246) | (0.271) | (0.050) | (3.880) | (0.240) |
| Rubber sector | –0.1551*** | –1.8992*** | –0.5570*** | –0.0849 | –4.2615 | –0.5382*** |
| | (0.042) | (0.199) | (0.191) | (0.052) | (4.054) | (0.175) |
| Non-metallic mineral products sector | –0.1447*** | –2.0073*** | –0.4248* | –0.0805** | –4.6997 | –0.4424*** |
| | (0.035) | (0.225) | (0.170) | (0.036) | (4.587) | (0.149) |
| Basic metals sector | –0.0932 | –2.4409*** | –0.7329** | 0.0441 | –5.5722 | –0.6767** |
| | (0.105) | (0.235) | (0.329) | (0.161) | (5.247) | (0.317) |
| Manufactured metal products sector | –0.1373*** | –2.4779*** | –0.6075** | –0.0910** | –5.5478 | –0.5443** |
| | (0.036) | (0.197) | (0.280) | (0.039) | (5.306) | (0.251) |
| Electronic machinery, computers, radio sector | –0.1599*** | –2.3480*** | –0.6179** | –0.0702 | –5.3180 | –0.6699** |
| | (0.040) | (0.228) | (0.274) | (0.047) | (5.004) | (0.303) |
| Motor vehicles sector | –0.2290*** | –2.4262*** | –0.5500 | –0.1435*** | –4.9746 | –0.4145 |
| | (0.045) | (0.278) | (0.359) | (0.050) | (4.682) | (0.267) |
| Other transport equipment sector | –0.1718** | –2.4131*** | –0.4621** | –0.2107** | –5.5234 | –0.4966** |
| | (0.069) | (0.329) | (0.183) | (0.090) | (5.050) | (0.226) |
| Furniture, jewellery, music equipment sector | –0.1790*** | –1.8185*** | –0.3932*** | –0.1235*** | –4.1706 | –0.3907*** |
| | (0.036) | (0.194) | (0.133) | (0.039) | (4.061) | (0.120) |
| Recycling sector | –0.2286*** | –2.4582*** | –0.6768** | –0.0881 | –5.3350 | –0.6048** |
| | (0.076) | (0.342) | (0.282) | (0.113) | (5.110) | (0.258) |
| Constant | 0.5723*** | 1.7284*** | 0.0000 | 0.3587*** | 3.6483 | 0.6157*** |
| | (0.101) | (0.152) | (0.000) | (0.083) | (3.243) | (0.173) |
| Observations | 12,331 | 12,331 | 7,783 | 7,775 | 7,775 | 7,775 |
| R-squared | 0.010 | 0.023 | | 0.039 | 0.064 | |
| Number of panels | | 4,418 | 3,120 | | 3,120 | 3,120 |
| AR(1) test (*p*-value) | | | 0.094 | | | 0.095 |
| AR(2) test (*p*-value) | | | 0.792 | | | 0.753 |
| Hansen test of over-identification (*p*-value) | | | 0.993 | | | 0.961 |
| Diff-in-Hansen tests of exogeneity (*p*-value) | | | 0.530 | | | 0.612 |

*Source*: Authors' calculation from the SME surveys, 2007–2015

*Notes*: Robust standard errors in parentheses. The models also control for time dummies and ownership. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. Following Schultz, Tan, and Walsh (2010), and Wintoki et al. (2012), firm age and year dummies are considered to be exogenous.

Table 3 presents the results of the effect of government support on firms' financial performance. Regarding the role of the government support covariate in determining firms' financial performance, pooled data estimations reveal that government assistance has a statistically insignificant influence on ROA. However, the results may be biased because of the absence of control for unobservable characteristics in the model. Attempting to control for time-invariant unobserved features and overcome the challenges noted above, we applied two-step dynamic GMM systems as guided by Wintoki et al. (2012). It should be noted that OLS and fixed effects methods may provide more efficient estimations than the GMM system if explanatory variables are not endogenous. Hence, a Durbin-Wu-Hausman test was implemented for all independent variables as a group if they are actually endogenous. According to Schultz et al. (2010), one-year lagged differences in explained covariates, such as $\Delta government\ support_{it-1}$, $\Delta firm\ size\ in\ log_{it-1}$, $\Delta Innovation_{it-1}$, $Bribe_{it-1}$, $\Delta Export_{it-1}$, and $\Delta leverage_{it-1}$, are considered instrumental variables, with year dummies and firm age in log considered as exogenous variables. The results of the test show that the null hypothesis is rejected at the traditional level of significance (1%). The endogeneity of regressors is of concern, so it is necessary to apply the GMM system in this study (Durbin-Wu-Hausman tests for endogeneity of covariates are used).

The results of the specification test are reported in Table 3. A serial correlation test of the AR(2) yields *p*-values of 0.792 and 0.753. In addition, we determined the validity of the system GMM estimation by applying a Hansen-J test for overidentification. The result is displayed in the last row of Table 3. The *p*-values of the Hansen-J test are 0.993 and 0.961. These results suggest that the GMM system instrumental variables used in this study are valid. In addition, Table 3 reports the results from an exogeneity test of a subset of our instruments that show a *p*-value of 0.53 and 0.612. These results suggest that we cannot reject the hypothesis of the exogeneity of the additional subset of instruments used in the GMM system estimates.

Interestingly, a totally different picture emerges when using two-step GMM regression. As reported in Table 3 column 3, the effect of government support on firms' financial performance becomes significant after controlling for unobservable characteristics and dynamic endogeneity. This finding reflects the fact that the results from OLS regression are biased. Specifically, the estimated coefficient of government support shows that firms with government support achieve nearly 4% better financial performance than firms without such support. The positive, significant effect of government support on firms' financial performance is further confirmed in extended specifications and the results are displayed in columns 5 and 6 of Table 3.

With regard to the impact of past firms' financial performance, the estimated results in Table 3 show a positive, significant effect on current performance, when unobservable factors are controlled for by using a dynamic two-step general system. This finding agrees with the empirical results of recent studies (e.g., Wintoki et al., 2012). These results show the importance of controlling for unobservable characteristics and also imply that past firms' financial performance is a vital variable in considering the dynamic nature of the factors affecting current performance. Ignoring this variable in the model can result in researchers failing to capture the real effect of government support on firms' financial performance.

To provide additional insight into the linkage between government support and firm financial performance, this study explores several additional scenarios. First, different types of government support may have various effects on firms' financial performance. Accordingly, this study explores the role of types of government support on firm performance. Interestingly, government technical support for trade activities, training of personnel and technology, has no statistically significant influence on firms' financial performance. However, government financial support has a positive influence on SME financial performance and obviously includes assistance such as tax exemptions, tax reductions, or loans from the Vietnam Development Bank (VDB) or Vietnam Bank for Social Policy with preferential interest rate support.

Table 4 shows that exporters tend to achieve better financial performance than non-exporters and this finding is consistent with previous studies (e.g., Vu, Holmes, Lim, & Tran, 2014). Furthermore, the results of columns 3 of Table 4 also show the positive relationship between financial leverage and financial performance covered by the dynamic two-step GMM model when the potential sources of endogeneity and unobservable factors are taken into account. This finding supports the argument of González (2013), who suggests that a firm with higher financial debt may force directors into value-maximising decisions to cope with the higher debt pressure. Consequently, such actions improve firms' productivity and financial performance.

Second, many Vietnamese SMEs are not formally registered and government assistance programmes may depend on whether the firm is registered (Loayza, 1997). Accordingly, the linkage between government support and firms' financial performance is examined further in each sub-group, taking into account the formal status of firms. As one would expect, Table 4 shows that government financial assistance is beneficial for registered but not for unregistered firms. The reason may be that the informality may prevent firms from taking full advantage of

government support (Loayza, 1997). In addition, the absence of account books and other required documents hinders unregistered firms from accessing and using these forms of support effectively (CIEM, 2010).

Table 4
*The effect of types of government support on firms' financial performance*

| Variables | ROA | ROA | ROA | ROA | ROA |
|---|---|---|---|---|---|
| | Pooled | FE | Dynamic GMM[3] | | |
| | | | Whole sample | Formal firms | Informal firms |
| | (1) | (2) | (3) | (4) | (5) |
| lagROA | | | 0.1481** | 0.0173* | 0.0332 |
| | | | (0.015) | (0.008) | (0.090) |
| Financial support | –0.0059 | 0.0068 | 0.0383** | 0.0177+ | –0.0760 |
| | (0.022) | (0.031) | (0.015) | (0.010) | (0.211) |
| Technical support | –0.0620+ | –0.0123 | –0.0103 | –0.0099 | –0.0811 |
| | (0.032) | (0.043) | (0.034) | (0.023) | (0.230) |
| Innovation | –0.0344* | –0.0087 | –0.0138 | –0.0254** | –0.1119 |
| | (0.017) | (0.018) | (0.012) | (0.008) | (0.265) |
| Bribes | –0.0578** | –0.0183 | –0.0221* | –0.0144 | –0.0584 |
| | (0.014) | (0.020) | (0.010) | (0.007) | (0.060) |
| Export | 0.1294** | 0.0363 | 0.0607** | 0.0084 | 0.1011 |
| | (0.038) | (0.058) | (0.022) | (0.010) | (0.439) |
| Firm size in log | –0.0468** | –0.0358 | 0.0054 | 0.0050 | –0.0255 |
| | (0.013) | (0.053) | (0.014) | (0.009) | (0.103) |
| Firm age in log | –0.0580** | –0.0084 | –0.0384+ | –0.0261** | –0.0589 |
| | (0.019) | (0.020) | (0.020) | (0.010) | (0.084) |
| Leverage | 0.2920** | 0.1390* | 0.0542* | 0.1200** | 0.5223 |
| | (0.092) | (0.056) | (0.026) | (0.024) | (0.958) |
| Tobacco sector | –0.2950** | –1.9269 | –0.5556** | –0.2757+ | –0.7972 |
| | (0.043) | (1.853) | (0.214) | (0.143) | (2.093) |
| Textiles sector | –0.1945** | –1.6008 | –0.3669** | 0.0020 | –1.0619 |
| | (0.041) | (1.710) | (0.100) | (0.052) | (2.720) |
| Apparel sector | –0.0592 | –1.7371 | –0.4907** | –0.5039** | –1.8866 |
| | (0.050) | (1.687) | (0.093) | (0.103) | (3.740) |
| Leather sector | –0.1331** | –1.8848 | –0.3284** | –0.2229** | –0.7209 |
| | (0.047) | (1.740) | (0.117) | (0.068) | (2.384) |
| Wood sector | –0.1696** | –1.8036 | –0.3633** | –0.0944** | –0.9266 |
| | (0.031) | (1.757) | (0.083) | (0.033) | (2.598) |
| Paper sector | –0.1603** | –1.4518 | –0.5302** | –0.1462** | –1.2309 |
| | (0.031) | (1.401) | (0.139) | (0.047) | (4.483) |

*(continued on next page)*

Table 4 (*continued*)

| Variables | ROA | ROA | ROA | ROA | ROA |
|---|---|---|---|---|---|
| | Pooled | FE | Dynamic GMM[3] | | |
| | | | Whole sample | Formal firms | Informal firms |
| | (1) | (2) | (3) | (4) | (5) |
| Publishing and printing sector | –0.1307** | –1.6246 | –0.4624** | –0.0971 | –0.6273 |
| | (0.046) | (1.616) | (0.130) | (0.056) | (2.072) |
| Refined petroleum sector | –0.2773** | –1.6741 | –0.3153** | –0.0828 | –0.9575 |
| | (0.049) | (1.648) | (0.084) | (0.065) | (2.326) |
| Chemical products sector | –0.1917** | –1.7866 | –0.4794* | –0.1377* | –0.6433 |
| | (0.041) | (1.725) | (0.215) | (0.061) | (2.227) |
| Rubber sector | –0.1379** | –1.8942 | –0.5242** | 0.0093 | –1.1250 |
| | (0.042) | (1.793) | (0.118) | (0.049) | (2.352) |
| Non-metallic mineral products sector | –0.1472** | –2.0169 | –0.4501** | –0.0508 | –0.4941 |
| | (0.034) | (2.050) | (0.123) | (0.054) | (2.249) |
| Basic metals sector | –0.0838 | –2.4452 | –0.6772** | 0.0114 | –1.7575 |
| | (0.105) | (2.361) | (0.126) | (0.056) | (4.013) |
| Fabricated metal products sector | –0.1281** | –2.4767 | –0.5519** | 0.0437 | –2.0708 |
| | (0.034) | (2.432) | (0.119) | (0.042) | (4.638) |
| Electronic machinery, computers, radio sector | –0.1554** | –2.3454 | –0.6846** | –0.1316** | –1.4486 |
| | (0.039) | (2.268) | (0.144) | (0.045) | (3.403) |
| Motor vehicles sector | –0.2197** | –2.3985 | –0.4118** | 0.0799 | –2.7431 |
| | (0.046) | (2.247) | (0.137) | (0.071) | (6.647) |
| Other transport equipment sector | –0.1904** | –2.4219 | –0.4847** | –0.2095** | –0.8924 |
| | (0.070) | (2.310) | (0.105) | (0.041) | (2.322) |
| Furniture, jewellery, music equipment sector | –0.1727** | –1.8165 | –0.3895** | –0.0298 | –1.0679 |
| | (0.035) | (1.800) | (0.088) | (0.035) | (2.772) |
| Recycling sector | –0.2128** | –2.4571 | –0.6073** | –0.1383** | –0.8489 |
| | (0.078) | (2.328) | (0.087) | (0.027) | (1.850) |
| Constant | 0.5829** | 1.7202 | 0.0000 | 0.3065** | 1.3321 |
| | (0.104) | (1.483) | (0.000) | (0.045) | (2.552) |
| Observations | 12,322 | 12,322 | 7,775 | 4,263 | 1,905 |
| R-squared | 0.014 | 0.024 | | | |
| Number of panels | | 4,417 | 3,120 | 2,005 | 985 |
| AR(1) test (*p*-value) | | | 0.080 | 0.003 | 0.692 |
| AR(2) test (*p*-value) | | | 0.751 | 0.520 | 0.935 |
| Hansen test of over-identification (*p*-value) | | | 0.934 | 0.661 | 0.764 |
| Diff-in-Hansen tests of exogeneity (*p*-value) | | | 0.527 | 0.320 | 0.380 |

*Source*: Authors' calculation from the SME surveys, 2007–2015
*Notes*: Robust standard errors in parentheses. The model also controls for time dummies and ownership. $^{**}p < 0.01$, $^{*}p < 0.05$, $^{+}p < 0.1$. Following Schultz et al. (2010) and Wintoki et al. (2012), firm age and year dummies are considered to be exogenous.

As a final step, the robustness of the results is checked by conducting several scenarios. First, as documented by Wong and Hooy (2018), political connections are typical in countries with weak protection of property rights and in developing countries. In addition, some studies show that our results may be biased, ignoring the role of political connections in investigating the relationship between government support and firms' financial performance (e.g., Zhang et al., 2014).[4] Consequently, in further regressions, a political connection index is added. Furthermore, the measure of firms' financial performance (ROA) is replaced by ROE (return on equity). However, the positive effects of government support on firms' financial performance are still recorded and the results are reported in Table 5.

Table 5
*Robustness check*

| Variables | ROA | ROE | ROA | ROE |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| lagROA | 0.1477** | | 0.1506** | |
| | (0.073) | | (0.074) | |
| lagROE | | –0.0064 | | –0.0062 |
| | | (0.005) | | (0.005) |
| Government support | 0.0390* | 0.0401* | | |
| | (0.022) | (0.022) | | |
| Financial support | | | 0.0436* | 0.0472* |
| | | | (0.024) | (0.026) |
| Technical support | | | –0.0164 | –0.0343 |
| | | | (0.056) | (0.063) |
| Firm size in log | 0.0078 | –0.0270 | 0.0067 | –0.0259 |
| | (0.019) | (0.034) | (0.019) | (0.035) |
| Firm age in log | –0.0262 | –0.0686 | –0.0303 | –0.0705* |
| | (0.031) | (0.044) | (0.035) | (0.042) |
| Innovation | –0.0066 | –0.0083 | –0.0091 | –0.0098 |
| | (0.018) | (0.020) | (0.017) | (0.020) |
| Bribes | –0.0224* | –0.0140 | –0.0228* | –0.0139 |
| | (0.013) | (0.017) | (0.014) | (0.017) |
| Export | 0.0668 | –0.0047 | 0.0665 | –0.0036 |
| | (0.067) | (0.038) | (0.063) | (0.039) |
| Leverage | 0.0635 | 0.3262 | 0.0631 | 0.3100 |
| | (0.069) | (0.374) | (0.066) | (0.370) |
| Party member | –0.0143 | 0.0534 | –0.0118 | 0.0605 |
| | (0.059) | (0.063) | (0.069) | (0.064) |

*(continued on next page)*

Table 5 (*continued*)

| Variables | ROA | ROE | ROA | ROE |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Tobacco sector | –0.6366* | –0.7003 | –0.6159* | –0.7300 |
| | (0.352) | (0.479) | (0.318) | (0.487) |
| Textiles sector | –0.4084*** | –0.6191** | –0.3944*** | –0.6124** |
| | (0.145) | (0.275) | (0.147) | (0.278) |
| Apparel sector | –0.5203*** | –0.7390** | –0.5202*** | –0.7341** |
| | (0.154) | (0.344) | (0.167) | (0.356) |
| Leather sector | –0.3674** | –0.5349* | –0.3432* | –0.5316* |
| | (0.181) | (0.283) | (0.184) | (0.301) |
| Wood sector | –0.3891*** | –0.6052*** | –0.3892*** | –0.6122*** |
| | (0.101) | (0.205) | (0.113) | (0.217) |
| Paper sector | –0.5528*** | –0.7671** | –0.5663*** | –0.7650** |
| | (0.210) | (0.343) | (0.217) | (0.343) |
| Publishing and printing sector | –0.4896** | –0.6565* | –0.4952** | –0.6647* |
| | (0.226) | (0.352) | (0.214) | (0.347) |
| Refined petroleum sector | –0.3305** | –0.5213** | –0.3285** | –0.5175** |
| | (0.152) | (0.221) | (0.161) | (0.226) |
| Chemical products sector | –0.4505** | –0.9466* | –0.4894** | –0.9402* |
| | (0.228) | (0.507) | (0.232) | (0.493) |
| Rubber sector | –0.5690*** | –0.7893** | –0.5519*** | –0.7830** |
| | (0.180) | (0.337) | (0.169) | (0.328) |
| Non-metallic mineral products sector | –0.4720*** | –0.6876** | –0.4784*** | –0.6984** |
| | (0.141) | (0.267) | (0.159) | (0.285) |
| Basic metals sector | –0.6956** | –0.8898** | –0.6919** | –0.8966** |
| | (0.306) | (0.451) | (0.333) | (0.449) |
| Manufactured metal products sector | –0.5667** | –0.8354** | –0.5714** | –0.8329** |
| | (0.246) | (0.418) | (0.262) | (0.413) |
| Electronic machinery, computers, radio sector | –0.7187** | –0.9588* | –0.7307** | –0.9750* |
| | (0.301) | (0.527) | (0.298) | (0.517) |
| Motor vehicles sector | –0.4463* | –0.6223* | –0.4422* | –0.6167* |
| | (0.249) | (0.323) | (0.255) | (0.324) |
| Other transport equipment sector | –0.5116** | –0.7663* | –0.4992** | –0.7467* |
| | (0.223) | (0.417) | (0.239) | (0.410) |
| Furniture, jewellery, music equipment sector | –0.4179*** | –0.6167*** | –0.4149*** | –0.6193*** |
| | (0.114) | (0.212) | (0.125) | (0.223) |
| Recycling sector | –0.6371*** | –0.8078*** | –0.6366*** | –0.8117*** |
| | (0.239) | (0.265) | (0.243) | (0.274) |

*(continued on next page)*

Table 5 (*continued*)

| Variables | ROA | ROE | ROA | ROE |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| Constant | 0.6157*** | 1.0022*** | 0.6349*** | 0.0000 |
| | (0.168) | (0.319) | (0.189) | (0.000) |
| Observations | 7,775 | 7,772 | 7,775 | 7,772 |
| Number of panels | 3,120 | 3,118 | 3,120 | 3,118 |
| AR(1) test (*p*-value) | 0.093 | 0.032 | 0.093 | 0.031 |
| AR(2) test (*p*-value) | 0.758 | 0.876 | 0.771 | 0.882 |
| Hansen test of over-identification (*p*-value) | 0.959 | 0.996 | 0.921 | 0.997 |
| Diff-in-Hansen tests of exogeneity (*p*-value) | 0.560 | 0.854 | 0.466 | 0.852 |

*Source*: Authors' calculation from the SME surveys, 2007–2015
*Notes*: Robust standard errors in parentheses. The model also controls for time dummies and ownership. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.1$. Following Schultz et al. (2010) and Wintoki et al. (2012), firm age and year dummies are considered to be exogenous. Models are estimated using dynamic GMM

## CONCLUSION AND POLICY IMPLICATIONS

Aiming to contribute to the small but growing amount of empirical evidence concerning the linkage between government support and financial performance, this study contributes to the existing literature by providing the first evidence of the influence on SME financial performance exerted not only by government support but also by types of government subsidy. Based on the empirical results, some of the main findings may be summarised as follows.

Regarding traditional firm characteristic factors, the empirical results are generally consistent with other international empirical studies. For example, exporters who sell in both markets achieve a higher financial performance than non-exporters. In addition, leverage has a positive association with firms' financial performance. Furthermore, it is not surprising that firms marked by corrupt behaviour turn in a lower financial performance than their counterparts that are free of it.

With regard to the connection between government support and firms' financial performance, estimates of the OLS indicate that there is no linkage between the two. However, dynamic two-step GMM estimates reveal that government support has a positive influence on firms' financial performance. Also, GMM approaches

show that while financial assistance shows a positive association, technical support proves to be a negative link with firms' financial performance. This suggests that the effect of government support on firms' financial performance varies depending on type of subsidy.

Regarding policy implications, changes in government financial support for firms are accompanied by an improvement in firms' financial performance. This finding implies that private Vietnamese SMEs are often small so that the cancellation of subsidies will have a negative impact on both their growth and financial performance. Our results further show that financial support rather than technical assistance has a positive effect on firms' financial performance. This suggests that it is very important to focus on tax exemptions, interest rate subsidies, and investment incentives since these may help private SMEs improve their growth and financial performance, especially in the present context of discrimination against non-state SMEs.

Vietnam is considered to be a successful example of a transitional economy, having shifted from a centrally planned economy to a market-oriented one with an annual average GDP growth rate of 6.8% during the 1986–2009 period (Le, 2010). Also, according to the World Bank (2012), Vietnam's poverty rate fell from nearly 60% in the early 1990s to 20.7% in 2010. Accordingly, Vietnamese government policy may offer a good example for other transitional economies with similar characteristics and conditions.

There are some limitations to the current study. It uses data from manufacturing SMEs, so its findings may not be representative for other enterprises. In particular, the findings may not be true for large enterprises which command various resources and business approaches, including markets and negotiating power. This suggests that further research on larger firms and other sectors beyond manufacturing should be carried out to draw general conclusions about the relationship between government support and firms' financial performance.

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## NOTES

1. For more details concerning data, see Cuong, Rand, Silva, Tam, and Tarp (2008).
2. Definitions and measurements of the variables in Table 2 are explained in Appendix.
3. According to Rand and Torm (2012), formal firms are firms that are registered to pay taxes (have a tax code).
4. According to Li, Meng, Wang, and Zhou (2008), political connection is measured as a dummy variable, taking the value 1 if the firm owners/managers are members of the Communist Party of Vietnam (CPV), and zero otherwise.

## APPENDIX

Definitions and measurements of variables in the models

| Variables | Definition | Measurement |
|---|---|---|
| **Dependent variables** | | |
| ROA | Ratio of net profit to total assets | Continuous variable |
| ROE | Ratio of net profit to total equity | Continuous variable |
| **Explanatory variables** | | |
| Government support | 1 if firms received support from the government, 0 otherwise | Dummy variable |
| Financial support | 1 if firms received tax exemptions or reductions or loans with preferred interest from the government, 0 otherwise | Dummy variable |
| Technical support | 1 if firms benefited from a human resource training programme, trade promotion programme, or quality assurance programmes from the government, 0 otherwise | Dummy variable |
| Innovation | 1 if firms introduced new products, applied new technology, or modified existing products, 0 otherwise | Dummy variable |
| Bribes | 1 if firms had to pay informal fees to do business, 0 otherwise | Dummy variable |
| Export | 1 if firms participated in export markets, 0 otherwise | Dummy variable |
| Firm size | Total employment | Continuous variable |
| Firm age | Number of years since establishment | Continuous variable |
| Leverage | Ratio between total debt and total assets | Continuous variable |

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# 5

# MARKET STRUCTURE OF MALAYSIAN PALM OIL REFINING INDUSTRY

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**ABSTRACT**

*Palm oil refining industry has become one of the most important industries in Malaysia since 1960s. In the second quarter of 2018, total production and total exports of Malaysian palm oil products recorded low-single digit drop, despite an encouraging recovery in production in 2017. It is worrying to note the declining trend of utilisation rate of these refineries over the years signifying the loss of market share of these refineries in the global market. This study aims to focus on determining the structure of the industry using six concentration indicators namely Herfindahl-Hirschman index (HHI), concentration ratio (CR), entropy index (EI), relative entropy (RE), Hannah and Kay index (HKI), and the Gini coefficient (GINI). The results obtained indicate that the industry is an oligopoly with apparent shift from a highly indexed oligopoly to a lower indexed oligopoly during the studied period. The results further affirmed the concern raised in this study that the domestic palm oil refining industry has lost its market share and position in the international market.*

**Keywords:** concentration indicators, market structure, Malaysian palm oil refining industry, oligopoly, market share

## INTRODUCTION

Palm oil refining industry plays the most important role in the country's economy and in the palm oil industry itself. Based on Malaysia Standard Industrial

Classification 2000 (MSIC) by the Department of Statistics Malaysia, palm oil refining industry is grouped under Division 15 in manufacture of food products and beverages. This is associated with the value added and quality of processed palm oil (PPO) after going through the refining process. Palm oil that undergoes the refining process can be sold at higher prices as well as for other further usage. Incentives and promotion by government in the early days were believed to have driven and influenced refiners to enter the industry following rapid increase in the number of refineries in operation in the 1980s (Ahmad, 2012).

The cultivation of palm oil was rapid in 1960s as government took heed of the suggestion by World Bank mission to reduce the reliance of the nation's economy in tin mining and rubber. Tin mining industry was threatened in terms of exhaustion of resources, uncertainties in commodity prices, and aggressive competition from other producers. In the case of rubber, the sharp fall in the prices of rubber and the innovation of synthetic rubber added to the cause that further dimmed the future of this commodity, be it in the global market or in the economy of Malaysia. Other palm oil producer countries doubted Malaysia's ability to achieve comparative advantage in producing PPO. Malaysia had however taken the step of faith to promote downstream activities through investment incentives given to pioneer refiners.

Malaysia then had the world's largest palm oil refining industry with the establishment of 15 refineries in 1976 producing a capacity of 800,000 tonnes. A year later, in 1977, up to one million tonnes of palm oil were refined whereby 890,000 tonnes were crude palm oil (CPO) (Gopal, 1999). Refining factories began to flourish at that time. Some refiners ventured into large-scale production of oils and fats for the purpose of export. The number of refineries was growing gradually over the years from 15 refineries in 1976 to 51 refineries in five years' time, producing a capacity of 1.0 million tonnes to 3.5 million tonnes, respectively.

However, in 1984, the number of refineries reduced from 55 to 35 with a capacity amounting to 5.35 million tonnes. The drastic drop in the number of palm oil refining factories was caused by the soy oil producers launching a worldwide health campaign in United States and in other countries to increase the demand of the latter by severely reducing the import of the former (Hasan, 2007). In addition to that, the European countries discouraged the import of Malaysian palm oil products by reducing the prices of vegetable oils in which the demand of vegetable

oils rose sharply as palm oil was costlier compared to vegetable oils. It was in the late 1980s and early 1990s that this condition improved as a result of negative impact of consumption of hydrogenated vegetable oils. This caused consumers to switch to palm oil instead. Since then palm oil refining industry continued to grow, where the total number of refineries increased to 74 and 75 in 1987 and 1988, respectively. The capacity produced peak in 1987 with 14.28 million tonnes, which signified that refineries were producing at economies of scale. Refineries were said to refine CPO in a large bulk (Gopal, 1999). The positive growth of palm oil refining industry reflected the affirmative result of government's intervention in developing the industry domestically to compete internationally. A brief illustration of total production, export, import, and domestic palm oil consumption for the period of 2010 to 2018 is presented in Figure 1.

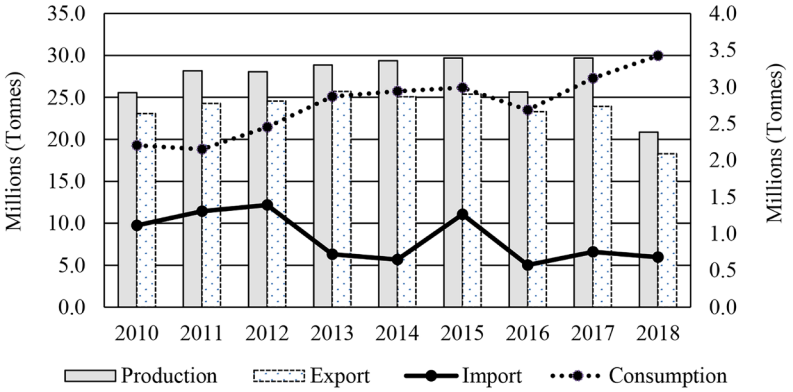


*Figure 1.* Total production, export, import, and domestic palm oil consumption, 2010–2018[a]

*Sources:* MPOB (2018) and USDA (n.d.)
*Note:* [a] Data as of September 2018

The capacity utilisation rate achieved by domestic refineries has been showing a downward trend where it plunged to the historic low of 54.29% in 2012. It is worrying to note the declining trend of utilisation rate of these refineries over the years. Domestic refiners would lose their market share in the global market if the drop in production level persists. In relation to analysis by Ng (2012), palm oil refining industry's competitiveness is questioned and the future of this industry is rather bleak if Malaysia does not fight to sustain its market share and position in the global market. The main purpose of this paper is to determine the market structure of the Malaysian palm oil refining industry through empirical analysis of 52 refining firms in the industry. This study offers insights on competition in domestic palm oil refining industry that will help policy makers in formulating policies for the interest of domestic refineries in the country.

## LITERATURE REVIEW

The central point of the field of industrial organisation lies in the studies of market structure of an industry. Structure is the characteristics that explain the market in terms of the number of firms and buyers, entry barriers that existed in the market, size of the firm, market share, and competition among firms. These characteristics would draw the picture of the performance and competition of firms in the market as according to Bain (1956). He added that concentration and entry barrier are the most conventional characteristics to study the structure of any given market.

According to Bain (1956), concentration ratio is an important element in studying market structure. It signifies the degree to which firms in the industry hold market power. Firms with high degree of market power have the ability to raise prices and earn high profits in the process. Market share is often used to illustrate the degree of market power a firm holds in the industry. In analysing the behaviours of firms in the market, particularly apparent in the oligopolies industries, firms compete with one another in establishing market power by gaining more market share. By enhancing their market share, established firms deter entry of potential entrants following studies contributed by Ukav (2017), Viseur (2016), Barham and Ware (1993), Waldman (1991), Brock and Scheinkman (1985), and Heflebower (1967).

Following that, Duetsch (1975) adopts four-firm concentration ratio in studying the structure, performance, and entry of firms into manufacturing industries. He found that market with high concentration ratio attracted entry of new firms, as profit rates were higher in this market. On the other hand, the work by Cowling and Waterson (1976) established that Herfindahl index was a better method in measuring concentration ratio than four-firm concentration ratio. They argued that the results of Herfindahl index explained the concentration of an industry and the market outcome well.

In studying structure and concentration of a market, Sukpaiboonwat, Piputsitee, and Punyasavatsut (2014), Martin (2010), and Church and Ware (2000) suggested the employment of Herfindahl index. They implied that Herfindahl index takes into account the variation in terms of sizes of firms while four-firm and eight-firm concentration ratios fail to do just that. The conventional calculation of concentration ratio also does not provide fair distribution of market shares of firms that would have caused bias in indicating the exact level of competitiveness of firms in the market. Hence, they affirmed that Herfindahl index contributes to reflect a clearer picture of firm concentration in the market as well as interpretation of Herfindahl index compared to four-firm and eight-firm concentration ratios.

The empirical work of Charumbira and Sunde (2010) combined several market concentration indices in studying the market structure of grain milling industry in Zimbabwe from 1985 to 2005. The concentration indices of their studies were inclusive of concentration ratio, Herfindahl index, Hannah and Kay index (HKI), and entropy index (EI). They concluded that the four concentration indices used in their studies were consistent to affirm that Zimbabwe's grain milling industry fell into the category of concentrated oligopoly. Their studies also showed that competition did encourage entry of several new firms in the industry that reduced the concentration levels in the industry.

In studying the international construction market, Ye, Lu, and Jiang (2009) opted four major concentration indices to measure the concentration of the said industry from 1981 to 2008. Accordingly, the indicators used to measure the concentration level of the international construction market were concentration ratio, Herfindahl index, Gini coefficient (GINI), and EI. Their empirical findings concluded that the concentration level of construction market was consistent across four indices used and was categorised as moderate, with healthy competition among major firms in the industry. In addition to these four concentration indices, Ukav (2017) suggested the use of Lorenz curve and Rosenbluth index in studying various industries in Turkey.

The empirical studies measuring competitiveness and concentration of major companies in 13 industries ranging from software, telecommunication, communication equipment, computers, semiconductor equipment, bank, airlines, beverages, financials, retail, utilities, oil and gas, and drugs manufacturers. The extensive studies of Nawrocki and Carter (2010) adopted indices such as Herfindahl index, EI, and relative entropy for the period of 1971 to 2001. The empirical findings indicated that firm's return was directly affected by the competitiveness of the industry in which high concentration yield high returns for most firms.

The structure-conduct-performance paradigm has been the core of industrial economics. In studying the structure of an industry, economists measure the level of concentration through the commonly used Herfindahl index and concentration ratio, and the least used indices such as the EI, HKI, GINI, and relative entropy. The market structure of an industry is determined through analysis of concentration of a particular industry, in which concentration will determine the competitiveness of firms and the market structure of the industry.

## METHODOLOGY

In studying the structure of a market, concentration ratio is observed to determine the degree of competition of firms in the market. Concentration ratio of a market is crucial in influencing potential entrant's decision and plan to enter. When the industry has only a few firms, that is, when concentration ratio is high, new entry is unlikely to occur. Overseeing the threat of new entry, incumbents would collude to form market power to delay or prevent new firms from entering. Collusion of firms in highly concentrated industry would be a deadly intimidation to new firm upon entering, as the former would cut prices and increase capacity to reduce new firm's return. Entry in highly concentrated market is less likely as the market signifies high competition level from firms and limited growth opportunities for new firms to explore.

With regard to the discussion above, Sukpaiboonwat et al. (2014), Günalp and Cilasun (2006), Bunch and Smiley (1992), and Cotterill and Haller (1992) pointed out that potential entrants were less likely to invade highly concentrated industries. Given the high competitiveness in the market and the issue of market power by incumbents, entrants would prefer to not enter the market. By looking at these evidences, this variable is estimated to bear the negative sign related to entry.

Herfindahl-Hirshman index (HHI), often referred to as Herfindahl index, is calculated by taking sum of market share of all firms in the market as:

$$\begin{aligned} HHI &= s_1^2 + s_1^2 + \ldots + s_n^2 \\ &= \sum_{i=1}^{N} S_i \end{aligned} \tag{1}$$

where, $N$ equals the number of firms in the market and $S_i$ represents the market share of the particular firm in the market. The structure of the market is determined based on Herfindahl index measuring from zero (0) to one (1). When the market is in perfect competition with many firms in the market, the index is said to be zero. On the other side, when the Herfindahl index is one, the structure of the market is known to be a monopoly. As the index grows bigger in number, the lesser the number of firms in the industry, the more market share firms in the industry hold, the higher the concentration ratio of the industry, the lesser the event of entry occur. Following Church and Ware (2000), in taking account of variation of firm sizes,

$$HHI = 1/N + N\sigma^2 \tag{2}$$

in which, $\sigma^2$ denotes the variance of firm sizes. Following Church and Ware (2000), both changes in the number of firms and the variation of firm sizes would cause changes in Herfindahl index as well. It is important to note that Herfindahl index gets larger as the variation or distribution in terms of the sizes of the firms gets bigger.

Concentration ratio (CR) is a common ratio used to measure the cumulative degree of concentration in the market as:

$$CR_k = \sum_{i=1}^{k} S_i \tag{3}$$

in which, $k$ represents the number of largest firms in the industry and $S_i$ equals the market share of the firms in the industry. Usually, the four largest firms in the market is used to measure the ratio, which is also known as $CR_4$. The CR ranges from zero (0) to one hundred (100), where zero indicates no concentration or perfect competition, while the ratio of one hundred indicates total concentration or monopoly. As the ratio grows bigger, the market becomes concentrated indicating firms have more control and more market power in the industry and vice versa.

EI is another index used to measure market concentration and competition which is given as:

$$EI = \sum_{i=1}^{n} S_i ln\left(1/S_i\right) \tag{4}$$

where, $n$ equals the number of firms in the market and $S_i$ represents the market share of the particular firm in the market. The EI ranges from zero (0) to, *ln n* and it is therefore not restricted to [0,1] (Kramaric & Kitic, 2012; Bikker & Haaf, 2002). In other words, the maximum value that can be taken by the EI in the case of firms with equal market shares and when the market concentration is at the lowest would be the *ln* value of the number of firms in the market (Kramaric & Kitic, 2012; Ferguson & Ferguson, 1994). The EI has an inverse relationship with the concentration level, where index of zero (0) indicates that the market is a monopoly while the smaller the value of EI signifies that the more concentrated the market is and vice versa.

EI is often adopted to measure the competition level or the degree of competition of firms in the industry by measuring the level of uncertainty of the market. As quoted, EI is a measure of "the degree of disorder, uncertainty, or randomness in a system" (Horowitz & Horowitz, 1968). According to Barthwal (2004) and George, Joll, and Lynk (2000), a higher index that indicates a less concentrated market with more competition would signify the existence of uncertainty in the

market in which firms have little control over the market. Likewise, a monopoly market represented by index zero (0) takes on the meaning that the degree of uncertainty is equal to zero or is non-existence.

As mentioned, EI is used to measure the competition level of firms in the industry; relative entropy measures the actual degree of dispersion of market share by taking into account the number of firms in the industry (Nawrocki & Carter, 2010; Barthwal, 2004). Relative entropy (RE) is given as:

$$RE = EI / ln\, n \tag{5}$$

where, *EI* is the entropy index, *n* is the number of firms in the market, and *ln n* is the maximum entropy value. The RE ranges from zero (0) to one (1), whereas the value gets smaller, the market become concentrated and vice versa.

HKI is an index commonly used to measure market concentration and is given as:

$$HKI = \sum_{i=1}^{n} S_i^{\alpha} \tag{6}$$

where, $\alpha > 0$; $\alpha \neq 1$, *n* equals the number of firms in the market, $S_i$ represents the market share of the firms in the market, and $\alpha$ refers to elasticity parameter and to be determined freely in order to reflect about changes in concentration on entry and exit of firms (Bikker & Haaf, 2002). As stated by Hannah and Kay (1977), for a sensible result, it is suggested that the $\alpha$ value range from 0.6 to 2.5 (Charumbira & Sunde, 2010; Bikker & Haaf, 2002; Ferguson & Ferguson, 1994). Following OECD (2013) and Charumbia and Sunde (2010) as the value of $\alpha = 2$ would yield the same result as HHI, HKI is often referred to as HHI. The value of HKI is similar to that of HHI ranges from zero (0) to one (1), in which the value of zero indicates perfect competition and the index of one signifies a monopoly. The focus of HKI lies upon the distribution effect of the firms in the market where Hannah and Kay (1977) suggested that the concentration of the market would be affected with the changes in the number of firms in the market.

GINI evaluates the market concentration of the industry through measuring the market share of firms in the industry and it is given as:

$$GINI = \sum_{i=1}^{n} S_i / 1 + n(1 - S_i) \tag{7}$$

where, *n* represents the number of firms in the market, and market share of $S_i$. Similarly, the value of GINI ranges from zero (0) to (1), where the value of one represents a monopoly with complete control of the market, while the value of

zero indicates that firms in the market is equally distributed with little control over the market. GINI measures the distribution of firm sizes in relation to the firm's market share. With an even distribution in the market share, firms have little dominance in the industry as compared to uneven distribution in the market share which signifies dominance and control over the industry. The market power held by firms reduces as the number of firms in the industry increases.

This study employs a total of 256 financial statements obtained from Companies Commission of Malaysia (CCM), where these financial reports are extracted according to the suitability and availability solely for the purpose of academic research. The variable used is the revenue sales of individual firm for each year that is then converted to represent the market share of each firm in the industry and is later summed up as the total market share of all firms. In the case where discrepancies arise from the number of refineries in operation as reported by MPOB and the actual financial statement reports acquired, the number of refineries in operation is established based on the statistics as the numbers captured by MPOB are deemed accurate to reflect the actual condition of the industry.

## RESULTS AND DISCUSSION

The structure-conduct-performance paradigm has been the core of industrial economics. In studying the structure of an industry, economists measure the concentration through HHI, CR, EI, RE, HKI, and GINI. The market structure of an industry is determined through analysis of concentration of a particular industry. Concentration ratios are often used to determine the competitiveness of firms and the market structure of the industry.

The analysis of this study involves a total of 52 firms in which the activity carried out by these firms is mainly refining of palm oil from 2005, where Malaysia was then the number one producer in the world to 2013, when government took initiative to boost competitiveness of domestic downstream producers following Indonesia's policy change in 2011. These firms are divided into two categories namely the public listed and the non-public listed firms, in which the public listed firms take up 67% while the non-public listed firms account for the remaining 33%, equivalent to 17 firms. These public listed firms are mainly owned by 19 parent companies listed in the Bursa Malaysia. Public listed firms remain the largest contributors to the industry sales with the total sales worth RM37.3 billion in 2005 which accounted for 90.9% of the total industry sales before topping the chart in 2008 with double-folded sales of RM80.8 billion. The total sales of public listed firm however declined by 2.2% in 2009 due to the huge drop in the prices of palm

oil. The total sales amount bounced back to record high of RM85.6 billion in 2011 before fluctuating again to account for 87.4% of total industry sales equivalent to RM71.9 billion in 2013.

On the other hand, the non-public listed firms accounted for a mere 9.1% of the total industry sales in 2005. Figure 2 illustrates the total industry sales based on public listed and non-public listed firms in the period of 2005 to 2013. The contribution of non-public listed firms grew to RM0.83 billion, which accounted for 10.3% of the industry sales in 2008. The total sales of non-public listed firms in the palm oil refining industry illustrates a fluctuating pattern over the observation years probably due to the unstable palm oil prices in the world market. The total sales of non-public listed firms are worth RM0.91 billion, making up 12.6% of the total industry sales in 2013. A brief descriptive statistics summary on the concentration analysis is presented in Table 1 for 52 palm oil refining firms in Malaysia in the period of 2005 to 2013.

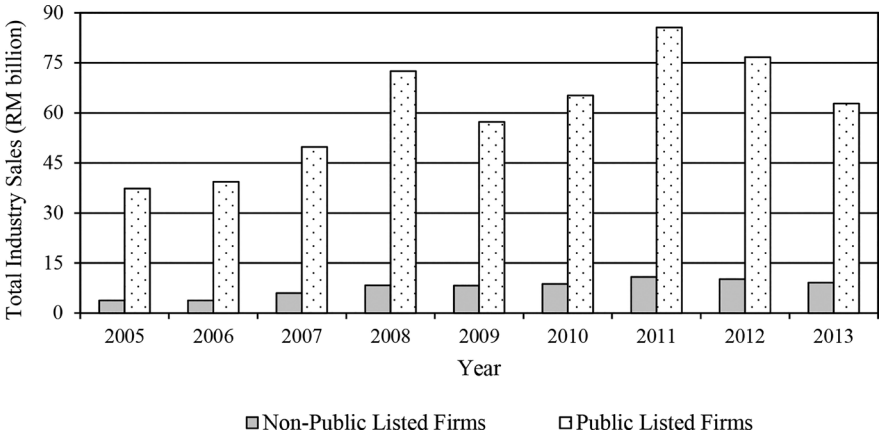


*Figure 2.* Total industry sales based on public listed and non-public listed firms, 2005–2013

The results from the concentration indicators illustrated in Table 2 categorised Malaysian palm oil refining industry as an oligopoly across the various concentration indices. According to Ahmad (2012) and Abdul Jalil (1996), given that the industry has moderate to high government intervention and the existence of excess capacity, it is further affirmed that the domestic palm oil refining industry that falls under manufacturing is indeed an oligopoly. Following that, Choo and Abdul Jalil (2014) concluded that government intervention in terms of operational policy, production capacity, and licensing of entrance of firms exist in Malaysian palm oil industry.

Table 1
*Descriptive statistics of concentration analysis summary*

| | HHI | $CR_4$ | $CR_8$ | EI | RE | $HKI^{0.6}$ | $HKI^{1.5}$ | $HKI^{2.5}$ | GINI |
|---|---|---|---|---|---|---|---|---|---|
| Mean | 1462.92 | 71.56 | 86.21 | 2.18 | 0.55 | 45.35 | 356.25 | 6397.31 | 0.83 |
| Median | 1479.34 | 71.21 | 85.65 | 2.22 | 0.56 | 45.69 | 357.10 | 6548.89 | 0.83 |
| Std. dev | 81.88 | 2.61 | 2.38 | 0.10 | 0.02 | 1.57 | 12.01 | 467.65 | 0.01 |
| Min | 1316.59 | 67.54 | 83.19 | 2.04 | 0.52 | 42.58 | 335.98 | 5539.17 | 0.82 |
| Max | 1565.74 | 75.34 | 90.34 | 2.36 | 0.59 | 47.49 | 373.13 | 6914.35 | 0.85 |

Table 2
*Concentration indices for all firms, 2005–2013*

| Year | HHI | $CR_4$ | $CR_8$ | EI | RE | $HKI^{0.6}$ | $HKI^{1.5}$ | $HKI^{2.5}$ | GINI |
|---|---|---|---|---|---|---|---|---|---|
| 2005 | 1558.94 | 75.34 | 85.81 | 2.2045 | 0.5695 | 2.7304 | 0.3711 | 0.0690 | 0.8206 |
| 2006 | 1539.20 | 75.24 | 85.33 | 2.2259 | 0.5661 | 2.7789 | 0.3686 | 0.0675 | 0.8305 |
| 2007 | 1511.06 | 72.63 | 82.93 | 2.3028 | 0.5828 | 2.8815 | 0.3605 | 0.0676 | 0.8277 |
| 2008 | 1471.57 | 71.21 | 81.73 | 2.3392 | 0.5920 | 2.9272 | 0.3549 | 0.0653 | 0.8253 |
| 2009 | 1360.90 | 69.14 | 81.05 | 2.4018 | 0.6109 | 2.9814 | 0.3422 | 0.0578 | 0.8177 |
| 2010 | 1442.14 | 70.65 | 81.86 | 2.3759 | 0.6043 | 2.9648 | 0.3499 | 0.0638 | 0.8242 |
| 2011 | 1484.12 | 72.17 | 83.27 | 2.3239 | 0.5853 | 2.8935 | 0.3569 | 0.0659 | 0.8400 |
| 2012 | 1414.89 | 70.11 | 82.39 | 2.3868 | 0.5983 | 2.9674 | 0.3472 | 0.0618 | 0.8387 |
| 2013 | 1306.56 | 67.54 | 81.53 | 2.4647 | 0.6151 | 3.0458 | 0.3332 | 0.0551 | 0.8338 |

An oligopoly industry signifies a medium concentrated industry with less competition and firms have significant market power over the industry. It is however noteworthy that despite remaining in the oligopoly industry, the concentration of Malaysian palm oil refining industry has shifted from being a highly indexed oligopoly industry to a lower indexed oligopoly industry over the span of eight years. This is consistent across the various concentration indices as shown in the Table 2, further affirming the notion of Malaysian palm oil refining industry being an oligopoly industry. As the PPO is considered a homogenous product where it is not differentiated, the Malaysian palm oil refining industry is classified as a pure oligopoly or perfect oligopoly, similar to that of cement, steel or aluminium industry. In addition, May (2012) and Hueth and Marcoul (2006) noted that agricultural commodities such as palm oil, vegetables, and fruits manufacturing are classified as oligopoly.

The decline in the concentration indices across Table 2 since 2006 is consistent to the event where Malaysia lost its position as the world's largest palm oil producer to Indonesia. Back then in 2005, Malaysia was still in her glorious position in the

world market ahead of Indonesia. As a result, according to Department of Statistics Malaysia (2018), the production of domestic refined palm oil in 2006 experienced a slight dip due to weaker demand for domestic refined palm oil. This is projected clearly in the weaker concentration indices of domestic palm oil refining industry in 2006.

The concentration indices have depicted gradual decline over the years where in 2009 these indices fell to historic low against previous years. This is believed to be caused by the international financial crises in 2008 in that the aftermath of this worldwide crisis left the global economy and the Malaysian economy with the historic worst contraction since World War II (Bank Negara Malaysia, 2010; Abidin & Rasiah, 2009). According to these reports, manufacturing sector was one of the most hit sectors in Malaysia since the outburst of the global economy crisis. With the uncertainty in the global market, the commodity prices, especially palm oil, continued to drop in 2008 causing the sales of domestic palm oil refiners to decline sharply before recovering progressively in second half of 2009. The concentration indices for Malaysian palm oil refining industry had thus bounced back in 2010 as a result.

According to Ye et al. (2009), as the minimum value of EI is conventionally zero (0), the maximum value of EI however is not restricted to one (1) as it is determined by the number of firms ($ln\ n$) in the industry. Although this study only recorded analysis of 52 refineries, considering the number of refineries in operation based on statistics by MPOB, where in this case, there are 55 refineries in operation in 2013, the maximum value of EI takes the form of $ln$ 55 which is given as 4.007. The entropy value of 2.4647 in 2013 is approximately 61.51% relative to the maximum value of $ln$ 55, where the industry is interpreted as an oligopoly. As discussed earlier, the entropy value has an inverse relationship with the concentration level, whereas the value of entropy increases, the concentration of the industry decreases.

Alternatively, the EI is also used to measure the level of uncertainty of the said market, in which the entropy values suggested the existence of uncertainty in the palm oil refining industry. The progressive increase in the EI has yet again supported the notion that firms in the industry have lesser control over the market following the increase in the level of uncertainty in the industry as a whole. RE on the other hand is an easier index to interpret, where it takes the form of zero (0) to one (1) with zero being the monopoly and vice versa. The RE exhibits a similar trait where the value has continued to increase further affirming the findings of HHI, concentration ratios, and EI in the palm oil refining industry in Malaysia.

Following Hannah and Kay (1977), the value of $\alpha$ that ranges from 0.6 to 2.5 would yield a sensible result, therefore this study employs the values of 0.6, 1.5, and 2.5 in the analysis. The greater the value of $\alpha$ is assigned, the more weight the result is given to the larger firms. It is worth noting that the value of $\alpha$ determines the weight of firms in the analysis where a higher  indicates more weight is assigned on the large firms and vice versa. Therefore, the findings of HKI $\alpha = 0.6$ in this study imply that the palm oil refining industry is a highly concentrated industry as reflected in the small values of HKI in the observation years. This result is consistent to that of the condition of the palm oil refining industry as the market power is held by only a handful of large firms. The result of HKI $\alpha = 1.5$ showed that the concentration level in the industry have increased slightly although it still remains in the category of high concentrated industry. As the $\alpha = 2.5$ gives weight to large firms, the HKI indicates that the Malaysian palm oil refining industry has fallen to the category of low concentrated industry. As stated by Charumbira and Sunde (2010), the choices of $\alpha$ caused the findings of market concentration for HKI to be inconclusive. Therefore, it is affirmed that HKI does not prove consistent and conclusive findings to measure the industry concentration of Malaysian palm oil refining industry.

The new policy implementation by Indonesia in 2011 as a move to boost its refining industry through reducing the PPO export duty and increasing the CPO export tax, followed by Malaysian government lifting export tax of CPO have clearly hurt Malaysian palm oil refining industry. Subsequently, the concentration and market share for all firms have fluctuated across various indices in recent years. Non-public listed firms and small public listed firms were among the firms that were hit the most as these firms have little ability to compete with foreign competition. The zero export duty of CPO has caused upstream industry to export CPO out of the country, leaving domestic refiners with limited supplies of CPO. Consequently, export duty on CPO was raised to 4.5% in March 2013 providing domestic refiners with more leverage to compete in the global market.

As these concentration indices take into account the market sales to measure the market share and market power of an industry, the decline in the sales of Malaysian palm oil refining industry has significantly impacted the market share held by these firms, thus illustrating that these firms have lost the grip of their market power. In recent years, the domestic palm oil refining firms have faced tough and challenging competition from one another and from refining firms abroad, especially from Indonesia.

As GINI is also used to measure the distribution of the firm sizes as stated in the literatures, following the higher indices values in the empirical results, it indicates

that the firm sizes is not equally distributed. Accordingly, it is stated by Ye et al. (2009) that as the GINI appears closer to one (1), the industry is less equally distributed and vice versa, where the value of zero (0) indicates perfect equality while the value of one (1) signifies perfect inequality in terms of firm's distribution. As stated by Ginevičius and Čirba (2007, 2009), with the increase in the number of firms in the industry, the uncertainty of firms is expected to intensify as firms are required to compete with one another. It is true that the big public listed firms in the domestic palm oil refining industry are facing tough competition from small non-public listed firms and held lesser market power as compared to earlier years.

## CONCLUSION

Evidences from concentration indicators of HHI (1306.56), $CR_4$ (67.54), EI (2.4647), RE (0.6151), HKI (3.0458), and GINI (0.8338) on all 52 firms in 2013 indicate that the Malaysian palm oil refining industry falls in the oligopoly category. The structure of the said industry indicates that this industry falls under the oligopoly category where the condition of the market as a whole has clearly displayed traits of a weakened oligopoly concentration in the recent years. Both public listed and non-public listed firms are indeed struggling to survive in the world market. The empirical results of this study are evident to verify Palm Oil Refiners Association of Malaysia's (PORAM) claims that our domestic palm oil refineries are facing intense competition and losing their market share in the global market (Ahmad, 2012). This study provides empirical evidence and references for policy makers and regulators' decision making process in further developing plans to ensure that our domestic palm oil refining industry remains significant players in the global market.

As findings of this study indicate that firms' market share continued to shrink, policy makers and regulators ought to formulate policies to encourage continuous healthy competition among refineries in the domestic arena. For instance, in enhancing firms' competitive level, policy makers and regulators should encourage these firms to achieve vertical integration so as to remain competitive in the industry, domestically and globally. It is believed that moving forward, the palm oil refining industry is expected to face challenges with fierce competition from Indonesia, stagnant PPO demand from India and China, the sustainability issues raised by European Union and the productivity issues of domestic refineries. Policy makers and regulators ought to encourage refineries to be involved in plantation, milling, refining, and other downstream sub-sectors for a complete supply chain to enjoy additional economic gains from cheaper inputs and materials for refining processing.

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# 6

# KEY DRIVERS OF BRAND LOYALTY AMONG MALAYSIAN SHOPPERS: EVIDENCE FROM A JAPANESE FASHION RETAILER

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**ABSTRACT**

*Due to the uncertain, changing landscape and challenges in the fast-moving fashion retailing market, fashion retailers have to find their way to stay competitive and survive in the market. One of the ways is through effective use of branding. Focusing on a currently-leading, Japanese fast fashion retailer (Uniqlo), this research sought to determine the branding attributes which could lead to the formation of brand loyalty among customers. The Service Brand Verdict Model (SBVM) served as the basis for this study's research model. Through the partial least squares (SmartPLS 3.2.6) analysis on 309 Uniqlo customers, the results showed that merchandise, value-for-money, feelings, self-image congruence and uncontrolled communications are significant aspects that contribute to building brand loyalty among customers. In building intense and active loyalty among customers, both tangible and rational aspects of a brand as well as the imagery and emotional aspects of it need to be integrated in strategic branding decisions.*

**Keywords:** brand evidence, brand hearsay, brand loyalty, Japan, retail clothing

## INTRODUCTION

Fashion retailing is a fast-moving industry characterised by boundless, increasing competition. It has been frequently referred to as an uncertain, changing, and

challenging landscape. As a consequence, fashion retailers have to frequently find ways to sustain their presence in the marketplace while remaining profitable at the same time. In Malaysia, the fashion retailing industry has demonstrated positive performance over the last few years (Euromonitor International, January 2017). Like other consumers worldwide, Malaysians are becoming more demanding, more discerning, and less predictable in their consumption behaviour. Malaysians, especially the millennial consumers, are very image-conscious. They are considered as heavy consumers, especially on apparel and personal accessories, and this has contributed to the strong performance of retail channels.

From a gender perspective, menswear showed a value growth of 6% in 2016 while womenswear showed a value growth of 5% (Euromonitor International, March 2017a, 2017b). This statistic indicates that men are also paying more attention towards their appearances. From a fashion retailer perspective, Malaysians have been and are projected to continue paying more attention towards international fashion brands. Due to that, major fashion retailers such as Uniqlo, H&M, Cotton-On, Zara, and Mango are still expanding their stores across the nation rapidly to raise their brand awareness (Euromonitor International, January 2017). Furthermore, to stimulate consumer demand and encourage consumers to spend, fashion retailers have resorted to implementing aggressive marketing strategies.

In order to remain viable in the marketplace, it is pertinent that fashion retailers understand the key drivers of retail success. One of these key drivers includes effective branding. If successful, a brand can serve as a company's strongest weapon and best guarantee of corporate survival (Temporal, 2000). However, all too often companies either do not fully appreciate the power of their brands or that they fall short in executing strong branding strategies. According to Berry (2000), branding is seen as a key success factor for service organisations and that it must be seen as a "cornerstone of services marketing". To consumers, brands could convey rich meaning and connotation. Therefore fashion retailers should take the advantage to build a relationship between themselves and their customers. When a customer has enhanced strong relationship with the brand, this could drive the customer to be loyal towards the brand.

Brand loyalty in this study is defined as "a deeply held commitment to rebuy or repatronise a preferred product/service consistently in the future, thereby causing repetitive same brand or same brand-set purchasing, despite situational influences

and marketing efforts having the potential to cause switching behavior" (Oliver, 1999, p. 34). Brand loyalty can be approached from two main perspectives namely the behavioural approach and the attitudinal approach (Jacoby & Chestnut, 1978). Behavioural loyalty is based on actual purchase behaviour (overt behaviour) and also known as actual past behaviour (Jacoby & Chestnut, 1978). On the other hand, attitudinal loyalty is based on preference or intention to behave but it is not an actual purchase behaviour (Jacoby & Chestnut, 1978) rather the overall feelings of the consumer towards the entity and his or her intention to purchase (Schiffman & Kanuk, 2014). The outcome of brand loyalty is believed to drive brand profitability (Marticotte, Arcand, & Baudry, 2016). For example, previous researchers such as Reichheld (1996) had identified that brand loyal customers are more willing to pay for the brand because the uniqueness value of the brand cannot be substituted by other brand-name. Similarly, brand loyalty could lead to a greater market share when loyal customers keep repurchasing the brand. Moreover, because of the loyalty, positive word-of-mouth will also be spread either through online or offline environment (Wallace, Buil, & Chernatony, 2014). All the above outcome is closely associated with the increase of brand equity. For this reason, superior brand evaluation by the customer is very important.

**Objective of the Study**

Japanese retail brands have started gaining recognition and popularity among consumers worldwide, in particular, the fashion brand Uniqlo. Beginning with just one store in the suburbs of Japan in 1984, Uniqlo today has established itself as one of the most recognised and admired fashion brands in the world with more than 1,300 stores in 15 countries throughout Asia, London, Europe, and the USA. Uniqlo has become the envy of retailers worldwide with its brand value of US$4.16 billion surpassing US rival, the Gap's, brand value of US$3.92 billion (Interbrand, 2014).

As a fairly new entrant to the Malaysian market, Uniqlo has successfully gained awareness among consumers of all ethnicities and age groups within a short period of time. With Uniqlo's slogan "Made for All", it offers a wide range of "lifewear" (clothing as how the company calls it) that is high-quality, functional, innovative, and affordable for men, women, and kids. Furthermore, Uniqlo is not an ordinary fashion brand that offers only fashion trends but it is also a fashion brand that offers clothing innovation through product innovations such as HeatTech and AlRism.

This has prompted its rapid expansion within the last few years ever since entering the Malaysian market circa 2010. As of August 2017, there are 41 Uniqlo stores spread out across both East and West Malaysia (https://www.uniqlo.com/my/

store). What makes Malaysian consumers attracted to and continue to patronise this Japanese retail brand? Accordingly, this study was driven by the aim of acquiring a deeper understanding on the way in which Malaysian consumers make sense of and evaluate Japanese retail brands particularly Uniqlo. This study strived to uncover the aspects or attributes of branding which were meaningful to consumers during their experience with Uniqlo that led them to their loyalty towards the brand.

In other words, the crux of this study is simple – to identify the key drivers of brand loyalty in the context of retailing by focusing on one popular Japanese retail brand. To do so, we applied and modified the Service Brand Verdict Model (SBVM) developed by Grace and O'Cass (2005). The SBVM which was originally constructed as sufficient enough to be applied in most service settings, should in fact deserve more attention from scholars in the retailing context. The retailing industry has now evolved into an era dominated by single brand retailers such as Uniqlo whereby all aspects of branding need to be considered prudently should one aspire to survive in this industry. The SBVM with its simple premise as well as holistic coverage of brand aspects can serve as an appropriate model to study brand loyalty in single brand retailers. Grace and O'Cass (2005) and Krystallis and Chrysochou (2014) may have empirically verified the SBVM, however more studies are needed to apply the SBVM in different settings. In this case, the SBVM was applied in the context of single brand stores of foreign brand origin, an area which is still in want of research studies.

Furthermore, the application of SBVM in this study was modified in that only the impact of branding aspects on brand loyalty were examined. The main intent was to examine how brand loyalty can be developed using the most parsimonious of branding variables as upheld in the SBVM. In the midst of complicated models consisting of conditional (third) variables, oftentimes it is the basic and most uncomplicated of things studied, grounded on the principle of parsimony that are able to deliver simple but deep insights. This study attempts to fulfill that neglected void for straightforward and direct studies.

**Significance of the Study**

Focusing on retail brand evaluations held by Malaysian consumers is crucial given that retailing is an important industry for Malaysia. It is a significant contributor to the economic development of the country. The wholesale and retail sector is the fourth biggest contributor to Malaysia's gross national income (GNI) among the 12 National Key Economic Areas, contributing to a growing share of gross domestic product (GDP) between 2010 and 2015 which grew 30% from RM797.3

billion to RM1.13 trillion (Economic Transformation Programme, 2015). Retailing also attracts tourism which is another major income generator for the country. Since 2014, tourists' spending in the retail sector has contributed over RM21.6 billion to the country's economy. This has made Malaysia the 10th most attractive countries for retailers (Economic Transformation Programme, 2014). Furthermore, Malaysia's Private Consumption accounted for an average share of 47.1% or its nominal GDP from March 1991 to September 2017 (CEIC, 2017). To achieve the 2020 GNI target, the retail sector would be a key driver of domestic consumption, which in turn will lead to Malaysia's economic growth. Therefore, there is a need for attractive retail brands that can boost domestic consumption while at the same time stimulate tourist expenditure. For this reason, studies such as this would be beneficial in helping aspiring as well as struggling retailers, both small and large, on the ways of creating powerful brands by drawing lessons from one of the world's dynamic, leading retail brands, i.e. Uniqlo. When most of the big brands such as Old Navy and Banana Republic are closing their stores overseas and concentrating on the US market, Uniqlo seems to be going the opposite direction where they continue on with their plans for global expansion (Melody, 2016). As in Malaysia, the fashion and design industry has a great potential to grow (Melody, 2016).

## LITERATURE REVIEW

### Theoretical Foundation

Several theories had been proposed by previous researchers (Chernatony & Riley, 1998; Berry, 2000) in understanding branding from various perspectives and in different contexts of study. However, none of these theories help to explain how customers evaluate and respond towards a brand. For example, Berry (2000) proposed a Service-Branding Model on the analysis of existing matured brands but the constructs (servicescapes, word-of-mouth communications, publicity, and advertising) had not been tested empirically. As for Chernatony and Riley (1998), their study only focused on branding experts without involving the end users. Due to this limitation, the SBVM was proposed to explain how consumers evaluate and respond to the brand. The SBVM was proposed by Grace and O'Cass in 2005. According to this model, it could provide a better picture of service branding which had not been done so in previous research. Furthermore, the nature of service brand which is based on experience and delivered by employees could contribute to a different outcome as compared to physical goods. Due to this, the dimensions of this model are relevant to consumers' perspective on service brands and more importantly in Japanese brand name, Uniqlo.

In the SBVM, Grace and O'Cass (2005) identified two key constructs which are brand evidence and brand hearsay. Brand evidence refers to the brand attributes that are being experienced by the consumer during the pre-purchase as well as the consumption stage. The dimensions in brand evidence consist of brand-name, merchandise, value-for-money, servicescape, employee service, feelings, and self-image congruence. These dimensions will influence customers' brand evaluation. As for brand hearsay, it consists of two types of communication which are controlled and uncontrolled communications. Similar to brand evidence, these communications will be received by customers prior to the purchase and it will influence customers' evaluation towards the brand. Given its merits, the SBVM served as the basis for this study's research framework.

**Development of Research Framework and Hypotheses**

Brand name is very important for a product or a service to be successful in the market. Brand name is defined as a "multidimensional construct consisting of functional, emotional, relational and strategic elements that collectively generate a unique set of associations in the public's mind" (Aaker, 1996, p. 68). Brand names are also a source of differentiation between an organisation and their competitors. When buying a product or a service, most of the customers buy according to the brand name that could give them the best value. Furthermore, brand names also help customers to recall the brand's benefits. However, if a brand name fails or leads to a negative perception, an organisation will face difficulties to reverse it (Aaker, 1996). As a result, brand name dilution or enhancement, either to prevent negative perceptions or to enhance existing equity, is of critical interest to organisations especially to the managers (Gurhan-Canli & Maheswaran, 1998). Indirectly a brand name becomes the product's/services' inferences as well as evaluations (Heckler, Keller, Houston, & Avery, 2014). Therefore, fashion retailers should acknowledge their brand names' contribution in communicating the brand because it could lead to brand loyalty.

H1: Brand name has a positive influence on brand loyalty.

Retailers offer a unique assortment of merchandise in their stores to maximise their appeal to customers. Customers identify a fashion retailer through their merchandise and make most of their purchase decisions based on these merchandise. Furthermore, cognitive factors such as the variety of merchandise, could lead to a positive customer behaviour especially in spending more money and time in a store (Donovan, Rossiter, Marcoolyn, & Nesdale, 1994). Pan and Zinkhan (2006) had identified that assortment of merchandise was ranked highest by customers as compared to other factors in choosing a particular retailer. Morales, Kahn,

McAlister, and Broniarczyk (2015) also confirmed that customer's attitudes and their possibility of shopping at a particular retail store especially fashion retail stores are positively linked to their view of the variety of merchandise available. Due to this, retail stores that can provide an assortment of merchandise for their customers will contribute to their store image, their store brand (Merrilees, Miller, & Shao, 2016), and more importantly as a key determinant for future patronage of the retailer (Bauer, Kotouc, & Rudolph, 2012). This could lead to the biggest influence towards customer satisfaction with the merchandise provided by the retailer (Kursunluoglu, 2014; Marques, Cardoso, & Palma, 2013) and influence customer evaluations towards brand loyalty.

H2: Merchandise has a positive influence on brand loyalty.

Value-for-money is always linked with consumption (Grace & O'Cass, 2005). Despite having some similarities, value-for-money differs from perceived value. Perceived value is customers' overall assessment of utility of a product based on perceptions of what is received and what is given (Zeithaml, 1988). In short, this assessment is a comparison between what the customer gets and what he/she has to give for a product or a service. However, the most common definition of value is the ratio or trade-off between quality and price which is a value for money conceptualisation (Sweeney & Soutar, 2001). Value-for-money is the utility derived from the product due to the reduction of its perceived short- and long-term costs (Sweeney & Soutar, 2001). From customers' perspective, a brand that has value-for-money is linked with the quality of the product that they purchase. In addition, brand and price are factors that customers will look into when there is lack of confidence in choosing the most appropriate alternative products (Suarez, Quinones, & Yague, 2016). In other words, the "trade-off" between what is being sacrificed in enabling them to obtain what they want (Zeithaml, 1988). Therefore, customers' perceived value towards a product or a service could influence their purchase given that consumers have become more demanding and discerning in their purchase behaviour.

H3: Value-for-money has a positive influence on brand loyalty.

Servicescapes refer to the physical environment of a service business or a place where products are sold. This includes the space/function; signs, symbols, and artifacts; and ambient conditions of the environment (Raab, Zemke, Hertzman, & Singh, 2013). More importantly, servicescapes influence consumers' emotional, cognitive, and psychological responses (Bitner, 1992; Sachdeva & Goel, 2015). For example, retailers could break free from the standard design of servicescapes by creating more interactive, immersive, and authentic environments (Foster & McLelland, 2015). Subsequently, these could influence consumer evaluations

towards the retail environment experiences (Durna, Dedeoglu, & Balikcioglu, 2015) and their behaviours. Therefore, if consumers have a great experience towards the servicescapes, it will influence them to return and be loyal towards the fashion retail store.

H4: Servicescapes have a positive influence on brand loyalty.

Employee service refers to the service provider's employees' behaviour, response, or performance while they are serving and assisting the customers (Liao & Chuang, 2004). Customers will evaluate the employees' service quality and determine the worthiness to stay loyal towards the brand (Ramaseshan, Rabbanee, & Burford, 2017). In other words, customers' perception of service quality of a retail store is highly reliant on the employees' activities and behaviour. Therefore, considering and meeting customers' expectations is very important in delivering good employee service. Research has identified that employee service has a positive effect on customer loyalty (Rabbanee, Burford, & Ramaseshan, 2015).

H5: Employee service has a positive influence on brand loyalty.

Feelings play a very important role in consumer decision making especially in purchasing a fashionable brand. Furthermore, it has a profound effect on consumption experiences and consumer reaction (Babin & Babin, 2001). There is, however, some distinction between feelings and emotions. While emotions are mental states of readiness that stem from the appraisals of events or one's own thoughts, feelings are perceived physical or mental sensations (Bagozzi, Gopinath, & Nyer, 1999). The arousal of positive feelings at the time of consumption has been shown to affect several brand outcomes in a positive way such as customers' brand choice, brand loyalty, and brand retention (O'Cass & Grace, 2004). Therefore, if customers are feeling uncertain towards a brand, they are less likely to buy. Berry (2000) observed that retail brands need to make strong feeling connections with their customers. Customers who have stronger feelings for a brand will tend to trust a brand more. When trust occurs, customers will be emotionally reliant, and this will affect them when purchasing and using the brand (Dunn & Schweitzer, 2005). Subsequently when customers' have positive feelings towards the brand, this may explain the condition that they would consider being loyal towards the brand.

H6: Feelings have a positive influence on brand loyalty.

Self-image congruence refers to the match between customers' self-concept and the user image of a given brand (Kressmann et al., 2006). In other words, customers will evaluate the brand based on the brand's user-image with their own

self-concept. Accordingly, the higher the degree of congruence, the higher the intention to purchase will be. The consumption of a brand symbolises a person's attributes, motivations, and social patterns (Hosany & Martin, 2012). To maintain one's self-image congruence, consumers will stay loyal towards the brand (Das, 2014). Hence, self-congruity could influence and play a very important role in customers' brand loyalty (Kressmann et al., 2006).

H7: Self-image congruence has a positive influence on brand loyalty.

Controlled communications in the form of advertising and promotions play a dominant role in establishing awareness and customers' attachment towards the brand (O'Cass & Grace, 2004). It is a bridge that links the organisation's identity with the image of the company (He & Mukherjee, 2009). According to Johan van Rekom (1997), control communications could improve a certain desired corporate image for target audience. For example, advertising plays a very important role especially in affecting customers' attitude, intentions as well as perceptions towards a product or service. Furthermore, advertising also includes corporate logo, which is important for product and corporate companies because it helps customers reduce their doubts and uncertainties, creating future purchase intentions, and more importantly convey a favourable brand image when compared to their competitors. Since controlled communications will influence customers' evaluation of brand dimensions, therefore, controlled communications delivered by retailers to their customers ought to be relevant (Krystallis & Chrysochou, 2014).

H8: Controlled communications have a positive influence on brand loyalty.

Similar to controlled communications, uncontrolled communications in the likes of word-of-mouth, non-paid publicity, or tertiary communication have the same important role in influencing customers' awareness and attachment towards the brand (O'Cass & Grace, 2004; Melewar, Foroudi, Gupta, Kitchen, & Foroudi, 2017). Uncontrolled communications can exert either positive or negative impact towards a retailer's brand. In other words, uncontrolled communications will have either positive or negative effect towards customer evaluations of the brand. Moreover, customers tend to believe uncontrolled communications more than controlled communications because the comments or the publicity that are given by other customers or parties are their pre-purchase expectation of the brand and post-purchase experience with the brand (O'Cass & Grace, 2004). This indirectly will challenge the dynamics of the retailers' brand. Therefore, uncontrolled communications have the power to influence customers' brand loyalty tendencies.

H9: Uncontrolled communications have a positive influence on brand loyalty.

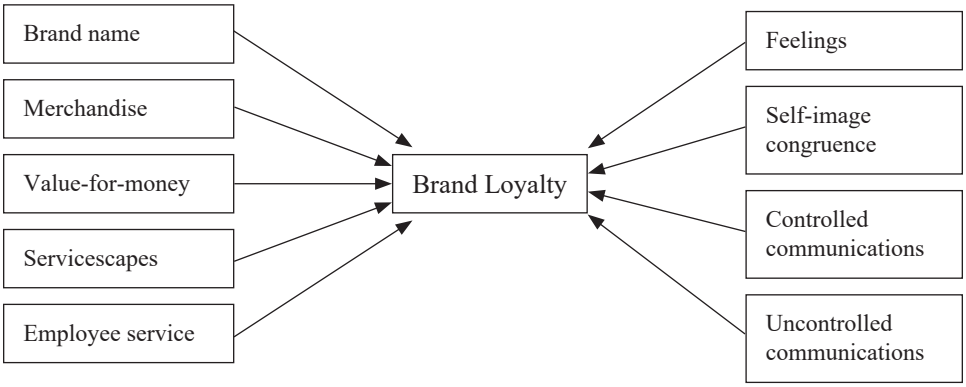


*Figure 1.* Research framework

## METHODOLOGY

### Population and Sample

The population of this study concerns Uniqlo customers in Malaysia. Specifying the entire population of Uniqlo customers in Malaysia would not be possible, as they would not all be known and access will be difficult. For this reason, a non-probability sampling method, particularly purposive sampling, was used whereby consumers who have experienced Uniqlo before would be targeted. This meant that consumers would have to be aware of the Uniqlo brand name and have at least visited the stores before they can qualify as respondents for this study. From there on, a snowball sampling method (which is a subset of purposive sampling) was applied in which the respondent was asked to suggest someone else such as their family members and friends whom they know would be appropriate respondents for the study (i.e., being Uniqlo customers). Consumers were approached and surveyed mainly via two methods: face-to-face and online. In this way, respondents would be able to concentrate better on answering the survey as opposed to a mall-intercept method where noise and other distractions are most likely to impair survey completion. The data collection via face-to-face method was conducted mainly in Penang, Kuala Lumpur, and Selangor. These are the most urban, populous areas in Malaysia where there is high purchasing power and brand savviness among the consumers. In addition, the number of Uniqlo stores are also high in these three areas (total of 27 stores). A total of 309 usable responses were obtained from the sampling exercise and used for the analysis.

## Instrument

The survey of Uniqlo customers was carried out using a self-administered questionnaire. Prior to the data collection, a pre-test was carried out to ensure that the questionnaire was comprehensible. Confusing or unclear words and statements were removed at this point. The finalised questionnaire for data collection was made up of several sections. The first section queried the demographic details of the respondents such as their gender, ethnicity, and age group. The subsequent sections inquired the respondents' shopping experience with Uniqlo such as their purchase frequency and also their experience with Uniqlo across a range of branding aspects. Altogether, respondents spent approximately 10 to 15 minutes answering the questionnaire.

## Measures

Two primary sides of branding aspects were examined namely brand evidence (Brand Name, Merchandise, Value-for-Money, Servicescapes, Employee Service, Feelings, Self-Image Congruence) and brand hearsay (Controlled Communications such as advertising and promotions, Uncontrolled Communications such as publicity and word-of-mouth) along with the outcome of the branding aspects which was assessed via brand loyalty. The items/measures of the branding aspects in the questionnaire were adapted from the measures in SBVM (Grace & O'Cass, 2005). Brand Name, Merchandise, Value-for-Money, Servicescapes, Employee Service, Controlled Communications and Uncontrolled Communications were measured using a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree. On the other hand, Feelings, Self-Image Congruence, and Brand Loyalty were measured on a 5-point Likert scale ranging from 1 = definitely disagree to 5 = definitely agree.

## Data Analysis

Two analysis software packages were utilised for the analysis of data. SPSS 20 was used to compute the descriptive statistics (frequencies, percentages) for the respondents' demographic profile while SmartPLS 3.2.6 (Ringle, Wende, & Becker, 2015) was used for the partial least squares analysis of this study's measurement model and structural model. Following Anderson and Gerbing's (1988) recommended two-stage analytical procedure, the measurement model was tested prior to the testing of the structural model. The validity and reliability of the measurement model had to be established first before proceeding to examine the structural model for the hypothesised relationships.

## RESULTS

### Respondents' Demographic Profile

Out of 309 respondents, majority were females (64.4%). A high percentage were Millennials, as those who fell under the 18–29-year-olds group constitute 77.3% of the respondents. This was followed by respondents who were aged between 30–39-year-olds (13.9%), 40–49-year-olds (6.5%), and finally 50–59-year-olds (2.3%). Given that Malaysia is a multiracial country, respondents were of different ethnicities. The Chinese constitute 58.3% of the respondents followed by the Malays at 36.9%, and the Indians at 4.9%. Most of them had at least a bachelor's degree (43.4%). The remaining respondents had at least some secondary school education (5.2%), pre-university or matriculation qualification (27.2%), a certificate or diploma (19.4%), or a master's degree and above (4.9%).

### Common Method Bias

Common method bias is a serious issue in management research in which the variance is attributed to measurement method rather than variance explained by the study's constructs. The measurement items in this study were tested for bias using the Harman's single factor test. Through the principle components factor analysis, the principal factor explained was 31.76% showing no indications of common method bias given that the principal factor did not account for a majority of variance explained. In short, the percentage of variance explained for a single (principal) component in the factor analysis does not exceed 50% (Podsakoff & Organ, 1986).

### Measurement Model

Prior to hypothesis testing, the measurement model of this study had to be assessed for its convergent and discriminant validity. The measurement model consists of relationships among the latent constructs of interests and the measures (indicators) underlying each construct. Thus it is important to establish whether the indicators reflect their underlying constructs. Table 1 lists the indicator loadings, average variance extracted (AVE), and composite reliability scores for all the constructs in the measurement model.

Table 1
*Convergent validity of the measurement model*

| Construct | Indicators | Indicator loadings | AVE[a] | Composite reliability[b] |
|---|---|---|---|---|
| Brand name | U_brandname1 | 0.857 | 0.774 | 0.911 |
| | U_brandname2 | 0.908 | | |
| | U_brandname3 | 0.873 | | |
| Controlled communications | U_controlledcom1 | 0.877 | 0.823 | 0.933 |
| | U_controlledcom2 | 0.926 | | |
| | U_controlledcom3 | 0.917 | | |
| Employee service | U_employees1 | 0.908 | 0.8 | 0.923 |
| | U_employees2 | 0.889 | | |
| | U_employees3 | 0.887 | | |
| Feelings | U_feelings1 | 0.89 | 0.812 | 0.929 |
| | U_feelings2 | 0.904 | | |
| | U_feelings3 | 0.91 | | |
| Merchandise | U_merchandise1 | 0.862 | 0.717 | 0.884 |
| | U_merchandise2 | 0.868 | | |
| | U_merchandise3 | 0.809 | | |
| Self-image congruence | U_selfimage1 | 0.849 | 0.712 | 0.881 |
| | U_selfimage2 | 0.843 | | |
| | U_selfimage3 | 0.839 | | |
| Servicescapes | U_servicescape1 | 0.894 | 0.778 | 0.913 |
| | U_servicescape2 | 0.86 | | |
| | U_servicescape3 | 0.892 | | |
| Uncontrolled communications | U_uncontrolledcom1 | 0.825 | 0.718 | 0.911 |
| | U_uncontrolledcom2 | 0.836 | | |
| | U_uncontrolledcom3 | 0.867 | | |
| | U_uncontrolledcom4 | 0.861 | | |
| Value-for-money | U_value1 | 0.858 | 0.779 | 0.914 |
| | U_value2 | 0.908 | | |
| | U_value3 | 0.881 | | |
| Brand loyalty | U_verdict1 | 0.938 | 0.855 | 0.947 |
| | U_verdict2 | 0.922 | | |
| | U_verdict3 | 0.914 | | |

*Notes:*
[a] AVE = (summation of squared factor loadings) / (summation of squared factor loadings) (summation of error variances)
[b] Composite reliability = (square of the summation of the factor loadings) / [(square of the summation of the factor loadings) + (square of the summation of the error variances)]

All indicator loadings were above 0.70 ranging from a lower bound of 0.809 to an upper bound of 0.938. The composite reliabilities of the latent constructs ranged from 0.881 to 0.947; exceeding the threshold value of 0.70 recommended by Hair, Hult, Ringle, and Sarstedt (2017). The AVE for each construct exceeded the recommended value of 0.50 suggested by Fornell and Larcker (1981), indicating that on average the construct explains more than half of the variance of its indicators (Hair et al., 2017). Apart from that, the variance inflation factor (VIF) scores for all the constructs were within the acceptable threshold of 5 (Hair et al., 2017). In short, there is sufficient evidence to conclude that convergent validity was achieved.

Discriminant validity which is the extent to which a construct is truly distinct from other constructs (Hair et al., 2017) is commonly established using the Fornell-Larcker criterion. Under this criterion, the square root of the AVE values are compared with the latent variable correlations (Hair et al., 2017). However, according to Henseler, Ringle, and Sarstedt (2015), the commonly-applied Fornell-Larcker criterion has a low sensitivity meaning that discriminant validity problems can sometimes go undetected. Hence, a better approach is used in this study to evaluate the measurement model for discriminant validity which is the Heterotrait-Monotrait Ratio of Correlations (HTMT). Based on the HTMT results in Table 2, none of the inter-construct correlations were above 0.85, thereby complying with the conservative $HTMT_{.85}$ criterion (Henseler et al., 2015). In addition, none of the HTMT confidence intervals include a value of 0. Hence, the HTMT results proved that all the constructs in the measurement model are conceptually distinct from each other.

Table 2
*Discriminant validity of the measurement model*

| | BR | CC | EM | FE | ME | LO | IM | SE | UC | VA |
|---|---|---|---|---|---|---|---|---|---|---|
| BR | | | | | | | | | | |
| CC | 0.523 | | | | | | | | | |
| EM | 0.326 | 0.592 | | | | | | | | |
| FE | 0.414 | 0.464 | 0.496 | | | | | | | |
| ME | 0.524 | 0.573 | 0.579 | 0.706 | | | | | | |
| LO | 0.396 | 0.53 | 0.418 | 0.747 | 0.7 | | | | | |
| IM | 0.561 | 0.437 | 0.297 | 0.714 | 0.574 | 0.685 | | | | |
| SE | 0.334 | 0.578 | 0.761 | 0.483 | 0.613 | 0.45 | 0.228 | | | |
| UC | 0.492 | 0.71 | 0.467 | 0.512 | 0.558 | 0.576 | 0.539 | 0.414 | | |
| VA | 0.473 | 0.54 | 0.457 | 0.561 | 0.849 | 0.636 | 0.559 | 0.533 | 0.526 | |

*Note:* BR = Brand Name; CC = Controlled Communications; EM = Employee Service; FE = Feelings; ME = Merchandise; LO = Brand Loyalty; IM = Self-Image Congruence; SE = Servicescapes; UC = Uncontrolled Communications; VA = Value-for-Money

## Structural Model

With the validity of the measurement model established, the structural model comprising the hypothesised relationship between exogenous (independent) and endogenous (dependent) variables in the model was then examined. Bootstrapping was applied to obtain the path coefficients and their corresponding t-values. Consequently inferences would be drawn by determining the statistical significance of each path's t-value. A bootstrapping procedure of 1,000 samples was applied to acquire more stable results. Table 3 lists all path coefficients, their corresponding t-values, and verdict for each hypothesised path.

Table 3
*Results of the structural model*

| Relationship | Std. Beta | t-value | Decision | $f^2$ | VIF |
|---|---|---|---|---|---|
| H1: BR → LO | –0.074 | 1.92* | Not supported$^{\Psi}$ | 0.01 | 1.526 |
| H2: ME → LO | 0.143 | 2.14* | Supported | 0.02 | 2.677 |
| H3: VA → LO | 0.127 | 1.96* | Supported | 0.02 | 2.264 |
| H4: SE → LO | 0.056 | 0.93 | Not supported | 0.00 | 2.129 |
| H5: EM → LO | –0.054 | 1.06 | Not supported | 0.00 | 2.032 |
| H6: FE → LO | 0.329 | 5.54** | Supported | 0.12 | 2.127 |
| H7: IM → LO | 0.216 | 3.39** | Supported | 0.06 | 1.983 |
| H8: CC → LO | 0.093 | 1.46 | Not supported | 0.01 | 2.134 |
| H9: UC → LO | 0.119 | 2.04* | Supported | 0.02 | 1.893 |

*Note:* $^{*}p < 0.05$; $^{**}p < 0.01$; $^{\Psi}$not supported due to contrasting directions of the hypothesised relationship

Out of all the branding aspect variables, merchandise ($\beta = 0.143$, $p < 0.05$), value-for-money ($\beta = 0.127$; $p < 0.05$), feelings ($\beta = 0.329$; $p < 0.01$), self-image congruence ($\beta = 0.216$; $p < 0.01$), and uncontrolled communications ($\beta = 0.119$; $p < 0.05$) exhibited a significant, positive impact on brand loyalty. Following Cohen's (1988) criteria for effect sizes whereby $f^2$ values of 0.02, 0.15, and 0.35 indicate an exogenous construct's small, medium, or large effect, respectively on an endogenous construct, all the positive and significant variables were found to exert small effect on brand loyalty, with feelings ($f^2 = 0.12$) having the highest impact, followed by self-image congruence ($f^2 = 0.06$), merchandise ($f^2 = 0.02$), value-for-money ($f^2 = 0.02$), and lastly uncontrolled communications ($f^2 = 0.02$). Hence, only H2, H3, H6, H7, and H9 were supported. On the other hand, servicescapes, employee service, and controlled communications did not show any significant impact on brand loyalty. Though the effect of brand-name on brand loyalty ($\beta = –0.074$; $p < 0.05$) was found to be significant, the effect itself is a negative

one, contrary to what was hypothesised. Owing to this, H1 was not supported. It was revealed that 59% ($R^2 = 0.590$) of variance in brand loyalty can be explained by the model which is deemed adequate by Falk and Miller's (1992) standards considering that an $R^2$ must be at least 0.10.

## CONCLUSION

This study set out to determine which of Uniqlo's branding aspects contribute to building its brand loyalty among customers. The findings of the study showed very distinctly that the significant aspects were merchandise, value-for-money, feelings, self-image congruence, and uncontrolled communications. The beta values in the analysis indicated that feelings had the strongest impact on brand loyalty followed by self-image congruence, merchandise, value-for-money, and finally uncontrolled communications. In contrast, Grace and O'Cass (2005) found that servicescapes of all the brand dimensions had the strongest contribution to a customers' experience or usage of the brand. Nevertheless from the findings of their study, Grace and O'Cass (2005) acknowledged that branding dimensions experienced at the time of consumption such as core service, feelings, and value-for-money were significant and salient dimensions that make up customers' interaction with the brand, just as how this study confirmed the importance of merchandise (the core aspect), value-for-money, and feelings in customers' experience with the brand. Similarly, Krystallis and Chrysochou (2014) found in their study of the airline service that core service, value-for-money, feelings, and self-image congruence were the most important brand components that form consumers' perception of their chosen brand.

The importance of feelings in consumer decision making and its effect on consumption experiences and consumer reactions have long since been acknowledged by scholars (Babin & Babin, 2001). Compared to cold cognition which involves logical and rational thinking in product evaluations, hot cognition which involves emotional influence on decision making seem to exert a stronger impact or brand loyalty (Kunda, 1990; Roiser & Sahakian, 2013). This could explain the reason of the relationship between feelings and brand loyalty being comparatively more intense than other branding aspects in this study. To the customers, Uniqlo offers a unique shopping experience that delights them; making them happy and pleased to the extent that they are more than willing to revisit and repurchase from Uniqlo.

Next to feelings, self-image congruence accounts for the second highest impact on brand loyalty. Keller states that user imagery whereby consumers' perception of

the type of person who uses the product or service is a crucial element in building consumers' resonance with the particular brand of the product or service. From this study, it is evident that customers of Uniqlo could relate very much to Uniqlo's brand personality (identity) – basic, timeless yet stylish. As classic research has proven, the more similarity consumers can see between a brand's user image and the characteristics of their own actual or ideal self, the more preference they will develop for the brand (Belk, 1985; O'Cass & Lim, 2001; Quester, Dzever, & Chetty, 2000; Sirgy, 1986).

Subsequently merchandise had the third most impact on customers' loyalty towards Uniqlo. Given that Uniqlo is in the business of selling apparel and accessories, naturally consumers' evaluation of aspects relating to its merchandise such as its product quality, variety, and suitability play a determining role in whether they will revisit, repurchase, or recommend the brand to others. As consumers become savvier, they tend to demand more value for the money that they pay to obtain a product or service. Ideally, benefits obtained should exceed the amount of money that they spend on their purchases. The consumers surveyed definitely felt that Uniqlo's merchandise and service provided value-for-money to the extent that they are willing to continuously repatronise the stores.

Millennials tend to view a company's controlled communications such as its paid advertising with caution. In some instances, they are unlikely to respond to advertisements or other marketing type at all (Hawkins & Mothersbaugh, 2014). This may well explain why the impact of controlled communications on brand loyalty was not found to be significant. However, they respond more favourably to other forms of communications such as the publicity generated by third parties like journalists' review articles and bloggers' reviews as well as word-of-mouth recommendations because these uncontrolled communications are regarded as more authentic and trustworthy. Millennials, who made up the majority of respondents in this study have certainly shown a strong preference for uncontrolled communications which has been proven to contribute to their loyalty towards Uniqlo.

With regard to the inverse relationship found between brand name and brand loyalty, it can be explained by the fact that consumers may grow to become disinterested in a particular brand should it settle to become very predictable through time, subsequently this could lead them to seek out other clothing brands as well. Krystallis and Chrysochou (2014) who found that the insignificance of the brand name in shaping the brand evidence construct could be attributed to inconsistency of service delivered to the customers which consequentially heightens customers' perceived risk associated with the brand name.

In terms of employee service, the degree of courtesy, friendliness, helpfulness, and knowledge of the personnel in the store may still vary from person to person and from one occasion to the other, therefore the positive impact of this variable on brand loyalty was not evident. No doubt servicescapes or physical surroundings of a store contribute to the overall brand experience encountered by consumers, however in this case, it was not enough to retain customers and give them a reason to keep returning to Uniqlo.

To successfully attain customers' loyalty, a brand needs to ensure that it strikes both the head and the heart of the consumer. Building intense and active loyalty is a function of both the performance of the brand's products/service and the imagery of the brand which is how the brand is thought of by consumers in abstract terms (Keller, 2013). In other words, both tangible and rational aspects of a brand need to integrate with the intangible and emotional aspects. Uniqlo has undeniably high quality merchandise sold in ambient stores supported by customer service, but what eventually won the affinity and loyalty of Malaysian consumers towards its brand was how it made them feel happy, pleased, and impressed. For its brand to continue resonating well among consumers, Uniqlo should focus on tapping more into the consumer emotions (e.g., warmth, fun, excitement, self-respect, social approval or security) through the use of promotional campaigns which apply transformational appeals (Naylor, Kleiser, Baker, & Yorkston, 2008). In doing so, it is pertinent that Uniqlo continues to showcase itself as a brand that caters to the needs of the modern, 21st century consumer who desires functionality without compromising style. At the same time, the rational aspects of the brand through the quality and variety of the merchandise sold and its value-for-money attribute should be maintained.

This study focused on Uniqlo customers in general without considering them according to their different demographic characteristics such as gender, age, and ethnicity. Though simple, demographic characteristics can provide rich insights that help in making strategic segmentation, targeting, and positioning decisions. As an extension to this study, future studies may identify which key brand loyalty drivers are important to the particular groups of consumers (e.g., males vs. females; Generation X, Y, and Z). Future studies can also consider the inclusion of third variables such as mediators or moderators to expand the research framework on SBVM. For instance, customers' familiarity towards the brand and customer involvement can be added as moderators given that these are important aspects that could influence service branding and corresponding consumers' decision-making and behaviour (Brodie, Whittome, & Brush, 2009; Chernatony & Riley, 1998; Krystallis & Chrysochou, 2014).

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## APPENDIX

The brand name tells me a lot about what to expect from it. (U_brandname1)
The brand name means something to me. (U_brandname2)
The brand name tells me everything I need to know about its products. (U_brandname3)

This brand's products suit my needs. (U_merchandise1)
This brand's products are of high quality. (U_merchandise2)
This brand has a wide selection/variety of products. (U_merchandise3)

This brand's products are reasonably priced. (U_value1)
This brand's products offer value for money. (U_value2)
This brand's products provide good quality for the price. (U_value3)

The physical environments in the brand's stores are comfortable (e.g. lighting, music) (U_servicescape1)
The employees in this brand's stores are neat and well-dressed. (U_servicescape2)
The products sold in this brand's stores are organized and displayed attractively. (U_servicescape3)

The employees in this brand's stores are helpful. (U_employees1)
The employees in this brand's stores are knowledgeable. (U_employees2)
The employees in this brand's stores are friendly. (U_employees3)

The advertising and promotions of this brand are good. (U_controlledcom1)
The advertising and promotions of this brand are effective. (U_controlledcom2)
I like this brand's advertising and promotions. (U_controlledcom3)

Publicity about this brand has been significant in affecting my views of this brand. (U_uncontrolledcom1)
Publicity about this brand influenced my evaluation of this brand. (U_uncontrolledcom2)
My friends'/family's opinions have been significant in affecting my view of this brand. (U_uncontrolledcom3)
My friend's/family's opinions about this brand influenced my evaluation of this brand. (U_uncontrolledcom4)

The image of this brand is consistent with my own self-image. (U_selfimage1)
The kind of person who usually shops at this brand is very much like me. (U_selfimage2)
Using this brand reflects who I am. (U_selfimage3)

I am likely to visit this brand's store in future. (U_verdict1)
I will possibly purchase this brand's products in future. (U_verdict2)
I will recommend this brand to others. (U_verdict3)

My experience with this brand makes me feel:
Impressed (U_feelings1)
Happy (U_feelings2)
Pleased (U_feelings3)

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# 7

# PROFIT, OUTPUT MARKET UNCERTAINTY, AND CORPORATE INVESTMENT: EVIDENCE FROM VIETNAM

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**ABSTRACT**

*This paper empirically investigates how the variation of profits affects the relationship between the degree of output market uncertainty and firm investment. Using a primary dataset of 667 firms randomly selected in Vietnam, the empirical results indicate that higher profits mitigate the negative impact of the degree of output market uncertainty on investment by those firms. Specifically, as profits go beyond a certain benchmark, output market uncertainty even triggers investment. Given the results, this paper proposes recommendations that enable firms to make better investment decisions, thereby avoiding over-investment that may lead to debt burden (even bankruptcy) as output markets somehow turn worse. More importantly, the implication of this paper is to help the government devise better policies for moderating competition, containing monopoly, and mitigating corruption.*

**Keywords:** investment, irreversibility, profit, Vietnam, uncertainty

## INTRODUCTION

Investment is key to firm establishment and growth. Making wise investment decisions will contribute to improving performance, therefore helping firms grow fast. Mistakes in making investment decisions that lead to over-investment will confront firms with hardships due to output market uncertainty, among others.

Over-investment may occur as prior investments have brought about high profits, inducing firm to invest more regardless of output market uncertainty (Lin, Hu, & Chen, 2005; Aggarwal & Samwick, 2006; Deltas, 2006; Pinheiro, 2008; Fu, 2010; Liu & Jiang, 2012). Thus, if output markets go down (for instance, as a result of economic crisis), firms may go bankrupt because of being unable to sell out products as a consequence of over-investment. This episode seems to be prevalent as to firms in Vietnam but few studies have dealt with it.

Vietnam is considered as an institutionally weak transition economy where the government still maintains a tight grip on the economy, especially regarding bank loans, business formation, investment magnitude, and finance (De Jong, Tu, & van Ees, 2012). In such a context, building close relationships (network) with government officials is crucial since it helps firms tackle constraints imposed by bureaucratic procedures, obtain investment (business) licenses, and win contracts, thereby improving performance. Then, bribery can be regarded as an inevitable investment of firms (Peng & Heath, 1996).

The aim of this paper is to examine the impact of profits on the relationship between output market uncertainty and investment by firms in Vietnam, using a primary data set of 667 firms randomly selected from the Mekong River Delta of this country. Findings of this paper shed further light on investment decisions of firms under output market uncertainty and give recommendations for firm managers to make good investments in order to improve performance and boost growth.

## LITERATURE REVIEW AND EMPIRICAL MODEL

Capital is an indispensable factor to firm investment since investment depends primarily on the capital that firms have. Jorgenson (1963) assumes that capital markets are perfect, so using either internal or external funds make no difference for firms. In fact, capital market is basically imperfect due to asymmetric information between borrowers and lenders that results in default risk, among others. Hence, to minimise that risk, credit institutions eventually ration credit after raising interest rates up to a reasonable level, as pointed out by Stiglitz and Weiss (1981). If that is the case, firm investment should depend on internal funds, mainly profits (Guariglia, 2008; Engel & Middendorf, 2009).

Meanwhile, when making investment decisions, firm managers do face output market uncertainty because of being unable to know the exact future sales. Market uncertainty stems from the skill of firm managers in terms of gathering relevant

information. As time elapses, new information arrives and firm managers take it into account to adjust activities, including investment decisions, so as to make use the most of the socio-economic condition that constantly changes, for instance due to the sovereign cost of borrowing embedded in government bonds (Dergiades, Milas, & Panagiotidis, 2015). Indeed, as government bond yields hike up, the country will face a burden if having borrowed in international markets, and its ability to roll existing debt over at low cost is in fact squeezed. The fact that the country has to roll its debt over at high interest rates is detrimental to its fiscal prospect, making default more likely and the socio-economic condition more unstable.

Such a situation induces Credit Rating Agencies (CRAs) to downgrade the debt rating of the country or assign an increased probability of its default on debt obligations, implying higher borrowing costs in international markets (Boumparis, Milas, & Panagiotidis, 2017). Since both corporate and sovereign debts are subject to the same country-specific macroeconomic risk factors, international creditors would handle their overall exposure to the country irrespective of whether lending is channelled to the public or to the private sector. Consequently, a rise in government debt pushes corporate borrowing costs higher for firms. For those reasons, firms facing market uncertainty for their output tend to postpone investment so as to fetch more relevant information to avoid the risk of failing, if not having to invest to preempt competitors (Dixit & Pindyck, 1995; Guiso & Parigi, 1999; Le, Hermes, & Lanjouw, 2004; Mason & Weeds, 2010; Nishide & Yagi, 2016).

Nevertheless, although firms will invest less as the degree of output market uncertainty increases, the higher the internal funds (profits) firms have, the lower the negative impact of the uncertainty on investment (Minton & Schrand, 1999; Ghosal & Loungani, 2000; Peeters, 2001). Specifically, if profits go beyond a certain threshold, firms will raise investment. Such behaviour is due to two reasons. First, as profits are higher, it is easier for firms to diversify investments, thereby better managing risks. Second, higher profits make firm managers more ambitious in making breakthroughs and optimistic about future business prospects so that they tend to take risk regardless of output market uncertainty. This trend strengthens itself as successes have been previously achieved.

Given the above argument, the empirical model used to investigate the impact of profits on firm investment under output market uncertainty reads as follows:

$$INV_i = \beta_0 + \beta_1 UNCER_i + \beta_2 UNCER_i \times PRO_i + \beta_3 PRO_i + \varepsilon_i \quad (1)$$

In Model (1), $INV_i$ is the ratio of planned investment to current total fixed assets of firm $i$. $UNCER_i$ is the degree of output market uncertainty, measured by the coefficient of variation (CV) of expected sales of firm $i$ (Guiso & Parigi, 1999; Lensink, Van Steen & Sterken, 2005). According to those studies, the higher the coefficient of variation of expected sales, the higher the output market uncertainty. Coefficient $\beta_1$ is expected to be negative since the theory postulates that output market uncertainty has negative impact on firm investment.

$PRO_i$ is the ratio of after-tax profits to total assets of firm $i$. Le et al. (2004), Le (2008), and Engel and Middendorf (2009) argue that firm investment is closely related to profits because it is difficult for firms to get access to external funds (for instance, bank credit) due to information asymmetry and limited liability, among others. Therefore, coefficient $\beta_3$ is supposed to be positive.

$UNCER_i \times PRO_i$ is an interaction of $UNCER_i$ and $PRO_i$, which is employed to examine the impact of profits on the relationship between output market uncertainty and investment of firm $i$. As just mentioned, several studies (for instance, Minton & Schrand, 1999; Ghosal & Loungani, 2000; Peeters, 2001) identify that the negative impact of output market uncertainty on high-profit firms is less severe than that on low-profit ones. Specifically, as profits go beyond a certain threshold, output market uncertainty triggers firm investment. This argument is clarified by Model (1). Taking the first derivative of $INV_i$ with respect to $UNCER_i$ gives:

$$\frac{\partial INV_i}{\partial UNCER_i} = \beta_1 + \beta_2 PRO_i \tag{2}$$

Expression (2) divulges that if profits are low ($PRO_i \rightarrow 0$), output market uncertainty has negative impact on investment (since $\beta_1 < 0$) but that impact decreases in magnitude if profits go up. Specifically, as profits get over a certain benchmark (namely, $PRO_i > -\beta_1/\beta_2$), this relationship turns positive. If that is the case, $\beta_2$ should be positive.

To be complete, the empirical model should include other determinants of investment decisions identified by previous studies (for instance, Guiso & Parigi, 1999; Engel & Middendorf, 2009; Polder & Veldhuizen, 2012) such as the irreversibility of used assets, growth rate of sales, degree of competition, bribes, and field of specialisation. Therefore, the empirical model is augmented to become:

$$\begin{aligned} INV_i = {} & \beta_0 + \beta_1 UNCER_i + \beta_2 UNCER_i \times PRO_i + \beta_3 PRO_i \\ & + \beta_4 IRR_i + \beta_5 RISK_i + \beta_6 DSAL_i + \beta_7 COMP_i \\ & + \beta_8 COMP_i^2 + \beta_9 BRI_i + \beta_{10} BRI_i^2 + \beta_{11} MANU_i \\ & + \beta_{12} SERV_i + \varepsilon_i \end{aligned} \tag{3}$$

$IRR_i$ is the irreversibility of used assets of firm *i*. To construct this variable, the manager was asked to evaluate the possibility to resell used assets to create variable $IRR1_i$, which takes a value of 1 if the answer is "easy" and 0 if the answer is "not easy." We also use information about the expected resell value of used assets to create variable $IRR2_i$ (i.e., the ratio of the expected resell value of used assets to their replacement costs). Since $IRR1_i$ and $IRR2_i$ are correlated, the factor analysis technique is used to combine them into one common factor (namely, $IRR_i = w_1 IRR1_i + w_2 IRR2_i$, with $w_1$ and $w_2$ are factor scores) to proxy for the possibility to resell used assets of firm *i*. According to studies (Dixit & Pindyck, 1995; Guiso & Parigi, 1999), most investment decisions are irreversible because of constraints on reselling used assets. Therefore, if it is easier to resell and/or obtain higher values of resold assets, firms tend to invest more. Coefficient $\beta_4$ is thus supposed to be positive.

$RISK_i$ is used to measure risk attitude of the top manager of firm *i*. To construct this variable, the manager was asked to choose between two cases: (1) investing a certain amount of money to earn 10% profit for sure, or (2) investing the same amount of money to earn 20% profit with a probability of 50% or nothing with the remaining probability of 50%. The answers are used to measure risk attitude of firm manager $RISK_i$, which takes a value of 0 (risk-averse) for the manager who chooses case (1) and 1 (risk-loving) for the one choosing case (2). Andrade and Stafford (2004) contend that risk-loving managers tend to invest more compared to risk-averse ones since they are more self-confident in own competence, especially in controlling market risk. Therefore, coefficient $\beta_5$ is supposed to be positive.

$DSAL_i$ is the annual growth rate of sales by firm *i* (%). Fast growth of sales means better prospects for firms, so they may make more investment to capture opportunities and expand market shares (Guiso & Parigi, 1999; Guariglia, 2008; Engel & Middendorf, 2009; Yang, Koveos, & Barkley, 2015). As a result, coefficient $\beta_6$ is expected to be positive.

$COMP_i$ is the degree of competition facing firm *i*, measured by its profit elasticity ($PE_i$). PE were coined by such as Boone (2000) and further developed by Boone (2008), and Polder and Veldhuizen (2012). According to those studies, the degree of competition can be identified by the ratio of percentage change of profit ($\pi$) to percentage change of marginal cost (MC), which means:

$$PE_i = \frac{\Delta\pi_i / \pi_i(\%)}{\Delta MC_i / MC_i(\%)} \tag{4}$$

Since it is often difficult to measure MC, researchers replace it by average cost (AC). In addition, the average cost of firms that operate in different sectors will be the ratio of total cost (TC) to total revenue (TR), because it is not plausible to add up the quantity of different goods (Polder & Veldhuizen, 2012). In sum, $PE_i$ can be written as follows:

$$PE_i = \frac{\Delta \overline{\pi}_i / \overline{\pi}_i(\%)}{\Delta AC_i / AC_i(\%)} < 0,\ \overline{\pi}_i = \pi_i / TR_i \tag{5}$$

As explained earlier, fierce competition may squeeze $PE_i$. Thus, in order to make it easier to grasp the impact of competition on investment, we use $COMP_i = |PE_i|$. Higher value of $COMP_i$ means higher degree of competition facing firm $i$. $COMP_i^2$ is used to reveal the presence of an inverted U-shaped ($\cap$) relationship between the degree of competition and investment by the firm. Nielsen (2002), Moretto (2008), Akdogu and MacKay (2008), and Polder and Veldhuizen (2012) assert that firms operating in a less severely competitive environment often have high costs due to moral hazard that results in inefficiency. As competition pressure strengthens, firms are forced to raise investment to mitigate costs, enhance efficiency, and preempt competitors so as to tackle the risk of squeezed market share. Yet, if competition pressure goes beyond a certain point, it becomes too fierce, market niche evaporates and the benefit from investing is no longer promising, firms will then scale down investment. Therefore, coefficient $\beta_7$ is expected to be positive and $\beta_8$ negative.

$BRI_i$ is the ratio of bribes that firm $i$ paid to government officials to its total assets. $BRI_i^2$ is included to detect the non-monotonic relationship between bribes and investment by the firm. If bribed, bureaucratic officials are greased to provide better services to firms, enabling them to take up available investment opportunities. However, despite being bribed, corrupt officials deliberately stay intact so as to urge firms to bribe more later on. If forced to bribe too much, expected profits from investment projects would go down and firms reduce investment accordingly. Thus, there exits an inverted U-shaped relationship between bribes and firm investment as well as growth (Svensson, 2005; Le, 2008). If so, $\beta_9$ is expected to be positive and $\beta_{10}$ to be negative.

$MANU_i$ and $SERV_i$ are included to test for the possible gap in investment among firms in different sectors (i.e., manufacturing, trade, and services). $MANU_i$ takes a value of 1 for manufacturing firms and 0 otherwise. $SERV_i$ takes a value of 1 for service firms and 0 otherwise. Coefficients $\beta_{11}$ and $\beta_{12}$ can be either positive or negative, depending on the environments in which firms operate.

## RESEARCH METHODOLOGY

Primary data used in this paper are directly collected from 667 non-state firms in the Mekong River Delta (Vietnam) in 2014. Based on a list of firms operating provided, we randomly select 200 non-state firms in Can Tho city and 100 firms in each of other provinces of the region to interview their top managers, using a questionnaire prepared in advance and corrected after several pilot surveys. Due to unexpected reasons (for instance, such as unable to contact the manager and missing information), we are able to get information from just 667 firms, consisting of 42 in An Giang province (accounting for 6.3% of the total number of the surveyed firms), 24 in Bac Lieu (3.6%), 22 in Ben Tre (3.3%), 44 in Ca Mau (6.6%), 194 in Can Tho (29.1%), 43 in Dong Thap (6.5%), 53 in Hau Giang (7.9%), 43 in Kien Giang (6.5%), 52 in Long An (7.8%), 44 in Soc Trang (6.6%), 24 in Tien Giang (3.6%), 25 in Tra Vinh (3.7%), and 57 in Vinh Long (8.5%).

The data collected include information about general characteristics, performance, actual investment in 2013, and planned investment in 2015 by the firms, among others. To give a full picture of the performance and investment of the surveyed firms, we use descriptive statistics. Then, Tobit model is utilised to estimate the impact of profits on the relationship between output market uncertainty and investment by the surveyed firms.[1]

## FINDINGS

### Characteristics of the Surveyed Firms

According to the survey, the average age of the firms is 10 years and their average assets in 2013 is VND146,913 million. A majority of them are liability-limited (accounting for as much as 34.6% of the total number of the surveyed firms), joint-stock (28.9%), and sole proprietorship firms (27.0%). The number of firms that export products accounts for 23.1% of the total number of the firms, in which 87.7% of them operate in both domestic and foreign markets.

Average sales of the surveyed firms in 2013 is VND210,402 million (increasing by 17.4% compared to that in 2012). Their average profit is VND16,761 million (increasing by 6.8% compared to that in 2012) and returns on sales (ROS) is 8.0%. However, the average cost went up markedly (by 18.4% compared to that in 2012). All this implies that the firms had reasonable growth rates but did not utilise resources well, so the cost is high.

Table 1
*General information about the surveyed firms (2013)*

| Indicators | Mean | Standard deviation | Min | Max |
|---|---|---|---|---|
| Age (year) | 10 | 9 | 2 | 52 |
| Total assets (VND million) | 146,913 | 492,392 | 130 | 6,750,400 |
| Sales (VND million) | 210,402 | 539,048 | 50 | 5,450,131 |
| Profit (VND million) | 16,761 | 77,904 | –705,087 | 1,200,000 |
| Investment (VND million) | 14,402 | 60,835 | 0 | 793,000 |

*Source*: Authors' own survey in 2014

About 46.3% of the surveyed firms paid bribes and the average bribe per firm is as much as VND192.2 million per year. Bribing seems to be pervasive as 45.6% of the firms did it on purpose and 48.5% deem it as an implicit norm while doing business in Vietnam. Types of bribes that firms use are gifts (accounting for 56.0% of the total number of firms), travel (54.3%), or in cash (52.8%).

Table 2
*Investment by the firms*

| Financing sources | Investment in 2013 | | Planned investment in 2015 | | Change in 2015 compared to 2013 (%) |
|---|---|---|---|---|---|
| | Amount (VND million) | % of total | Amount (VND million) | % of total | |
| Equity | 9,472.03 | 65.77 | 5,142.61 | 58.57 | –45.71 |
| Loans from joint-stock banks | 2,976.26 | 20.66 | 2,169.25 | 24.71 | –27.11 |
| Loans from state banks | 1,432.91 | 9.95 | 1,022.82 | 11.65 | –28.62 |
| Loans from foreign-owned banks | 221.11 | 1.54 | 90.67 | 1.03 | –58.99 |
| Loans from government projects | 30.58 | 0.21 | 19.34 | 0.22 | –36.76 |
| Others | 269.51 | 1.87 | 335.13 | 3.82 | 24.35 |
| Total investment | 14,402.41 | 100.00 | 8,779.81 | 100.00 | –39.04 |

*Source*: Authors' own survey in 2014

Table 2 shows that the average investment by the firms in 2013 is VND14,402.4 million. Due to economic downturn and suppressed market demand, planned investment of the firms in 2015 is just VND8,779.8 million (decreasing by 39.04% compared to that in 2013). Financing sources for investment by the firms are equity (mainly retained profits) and bank loans that are much less than retained profits. According to the survey, retained profits are the most important financing source

of investment by the firms. When making investment decisions, firm managers were also concerned with output market uncertainty. The coefficient of variation of the future sales of the firms is up to 37.7%. Trading and production firms seem to feel more uncertain about markets (with the coefficient of variation of sales of 0.388 and 0.379, respectively) compared to service firms (0.360).

**Estimation Results**

Before running the regression, we carefully check the assumptions of the regression model regarding multicollinearity and heteroscedasticity. The results show that all the coefficients between independent variables ($r_{ij}$) are smaller than 0.8 ($0.002 \leq |r_{ij}| 0.532$). Moreover, since the relationship between $COMP_i$ and $COMP_i^2$ or between $BRI_i$ and $BRI_i^2$ is nonlinear, this regression does not violate the multicollinearity assumption of the classical model (Gujarati, 2004). We have also performed the White test for heteroscedasticity and found this problem ($p$-value $= 9.436 \times 10^{-13}$) . Therefore, we use the Robust estimation option of Stata to correct it.

The result in column 2 of Table 3 (Model 2a) shows that if not taking account of $PRO_i$ and $UNCER_i \times PRO_i$ , coefficient $\beta_1$ of $UNCER_i$ is negative (−0.124) at a significance level of 10%, implying that output market uncertainty alone has a negative impact on investment by the surveyed firms. Variable $PRO_i$ is added in Model 2b (column 3 of Table 3) to empirically examine the dependence of investment on profits. Coefficient $\beta_3$ of this variable is 0.248 at a significance level of 1%, revealing that the higher the profits, the more firms tend to invest.

Model 2c is used to estimate the impact of profits on the relationship between output market uncertainty and firm investment (column 4 of Table 3). The result reveals that coefficient $\beta_2$ of the interactive term $UNCER_i \times PRO_i$ has a positive value of 0.610 at a significance level of 1% and coefficient $\beta_1$ of $UNCER_i$ has a negative value of –0.226 at a significance level of 1%. This is supportive evidence for the point of view that higher profits mitigate the negative impact of output market uncertainty on firm investment. Moreover, if profits go over a certain level (0.369),[2] firms tend to raise investment as output market uncertainty picks up.

Our finding is quite identical to those of several studies (for instance, Minton & Schrand, 1999; Ghosal & Loungani, 2000; Peeters, 2001), which divulged that the negative impact of output market uncertainty on high-profit firms is less severe than that on low-profit ones. Moreover, we found that as profits go beyond a certain threshold (0.369), output market uncertainty triggers firm investment, thereby adding interesting evidence to the investment literature.

Table 3
*Estimation results*

*Dependent variable: $INV_i$ – planned investment in 2015*

| | Model 2a | Model 2b | Model 2c |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| Constant C | –0.031 | –0.075* | –0.032 |
| $UNCER_i$ | –0.124* (–0.047) | –0.127* (–0.049) | –0.226*** (–0.087) |
| $UNCER_i \times PRO_i$ | | | 0.610*** (0.236) |
| *PROi* | | 0.248*** (0.096) | |
| $IRR_i$ | 0.048*** (0.018) | 0.048*** (0.019) | 0.045*** (0.018) |
| $RISK_i$ | 0.102** (0.043) | 0.089** (0.037) | 0.101** (0.042) |
| $DSAL_i$ | 0.002*** (0.001) | 0.002*** (0.001) | 0.002*** (0.001) |
| $COMP_i$ | 0.004** (0.002) | 0.005*** (0.002) | 0.005*** (0.002) |
| $COMP_i^2$ | 0.000* (0.000) | 0.000** (0.000) | 0.000** (0.000) |
| $BRI_i$ | 8.849*** (3.385) | 7.708*** (2.970) | 7.339*** (2.833) |
| $BRI_i^2$ | –64.419** (–24.640) | –61.337** (–23.634) | –55.166* (–21.296) |
| $MANU_i$ | –0.025 (–0.009) | –0.022 (–0.008) | –0.024 (–0.009) |
| $SERV_i$ | –0.052 (–0.019) | –0.051 (–0.019) | –0.058 (–0.021) |
| Observations | 667 | 667 | 667 |
| $\chi^2$ | 51.240 | 77.370 | 78.710 |
| Significance | 0.000 | 0.000 | 0.000 |
| Log likelihood | –346.585 | –333.517 | –332.847 |

*Source*: Authors' own survey in 2014
*Notes*: Numbers in the first line of each rows are coefficient $\beta_i$. Numbers in the parentheses are $\partial INV/\partial X_i$.
*** 1% significance level; ** 5% significance level; * 10% significance level

Coefficient of $IRR_i$ also has a positive value at a significance level of 1%, implying that the easier it is to resell used assets, the higher the level of investment is.[3] Likewise, coefficients of $RISK_i$ and $DSAL_i$ also have a positive value at the significance level of 5% and 1%, respectively. Coefficients of other variables (namely, $COMP_i$, $COMP_i^2$, $BRI_i$ and $BRI_i^2$ ) have expected signs, except for $MANU_i$ and $SERV_i$.

Interestingly, we found the inverted U-shaped relationship between bribes and firm investment, meaning that bribes trigger investment but after a certain threshold that positive effect will deteriorate. As a matter of fact, institution plays a key role since it provides firms with guidance and certain routines, thereby reducing economic and market uncertainties (Uzzi, 1997; Graeff, 2005; North, 2005; Bruton, Ahlstrom & Obloj, 2008). However, firms in transition countries face many difficulties due to deficiencies of the legal system and financial markets (Scase, 1997). Therefore, networking turns out to be a common practice and political connections become extremely important for firms in those countries (Yiu & Lau, 2008). This relationship is meant to trigger bribery behaviour of firms in order to create and maintain networks, thereby enhancing the ability to grasp investment opportunities.

Although bribes brought about advantages for firms, after going beyond a certain point bribes may crowd out investments and corrode incentives for innovation (Luo, 2004). In addition, bribes do not necessarily guarantee good performances because firms that have paid bribes may face more severe demands by corrupt officials. As a result, the more bribes firms pay, the more inefficient resources allocation and lower investment would be (De Jong et al., 2012).

## CONCLUSION AND RECOMMENDATIONS

Output market uncertainty is a key element that affects firm investment. Nevertheless, the relationship between investment and output market uncertainty depends on profits. Hence, this paper concentrates on empirically examining the impact of profits on the relationship between investment and output market uncertainty of 667 non-state firms in Vietnam using Tobit model. The findings show that most independent variables of the empirical model have coefficients that are statistically significant as predicted by the theory (for instance, output market uncertainty alone has a negative impact on investment of the firms). It is worth noting that higher profits are associated with reduced negative impact of output market uncertainty on investment of the firms. Especially, if profits go over

a certain level, an increase in the degree of output market uncertainty induce firms to invest more, so over-investment is very likely to occur.

In addition, the relationship of the degree of competition on investment of the firms has an inverted U-shaped, implying that low degree of competition stimulates investment but if competition pressure becomes too fierce, firms will scale down investment to avoid unexpected loss. The relationship between bribes on firm investment is also in the form of inverted U-shaped while higher growth rates of sales and higher reversibility of used assets do encourage firms to invest more. However, bribes seem to be costly for the firms, so those that have to pay too much bribes tend to invest less.

The findings give some thoughts that should be taken into account to enhance efficiency and ensure sustainable growth of firms. Firms need to set up a specialised department in charge of forecasting market tendency so as to have proper investment strategies that help avoid over-investment adversely induced by high profits. The government may pay more attention to moderate competition. When monopoly exists, it is desirable to remove barriers to firm entry to stimulate them to enter markets. When the level of competition is too fierce, the government may tight up regulations in terms of eliminating inefficient firms to ensure that markets operate effectively.

Moreover, in order to contain bribery phenomenon that seems to be pervasive, there is an urgent need to make administrative procedures transparent. More importantly, the government may reform the salary policy and re-allocate discretionary power to avoid power concentration that makes it difficult to manipulate or extort bribes. In addition, second-hand goods market should be established and endorsed in order to better price used assets of firms, thereby promoting their investment.

## NOTES

1. We have also applied Ridge regression to the empirical model and come up with almost the same result.
2. Taking the first derivative of $INV_i$ with respect to $UNCER_i$: $\partial INV/\partial UNCER = -0.087 + 0{,}236 \times PRO$. Let $\partial INV/\partial UNCER = 0 \Rightarrow PRO = 0.369$.
3. Factor analysis results show that IRR $- 0.609IRR1_i + 0.609IRR2_i$

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# 8

# CREATING SUSTAINED STRATEGIC CAPABILITIES THROUGH ORGANISATIONAL DYNAMIC CAPABILITIES AND STRATEGIES: A CASE STUDY OF RUBBER WOOD EXPORT INDUSTRY IN THAILAND

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**ABSTRACT**

*This exploratory research investigates how firms upgrade their strategic capabilities for superior returns of current markets and enable their entry into a new industry. The study explores how the current successful entrepreneurs build their organisation's strategic capabilities and achieve their sustained strategic capabilities in today's rapidly changing environment. As this is an exploratory study, a qualitative approach is used. We first interviewed the expert academicians in strategic management in order to validate and verify our research instrument. We then interviewed the sample successful entrepreneurs in the rubber industry in the South of Thailand on how they developed and adapted their strategies over time to sustain their competitiveness in the relevant product markets. Finally, a case study is used to illustrate how a successful company of latex product export industry became competitive in its new industry entry. This study finds that there is a positive systematic relationship between organisational strategic capabilities, namely resource-based capabilities (RBCs), knowledge-based capabilities (KBCs), network-based capabilities (NBCs), and organisational dynamic strategies. This relationship is linked to the development of a dynamic, process-oriented strategy that seeks to maintain a higher return on investment and to focus on new markets. This study contributes to the theoretical*

*knowledge of strategic management, and its practical implication is that entrepreneurs should focus on developing dynamic capabilities of their firm to cope with the constantly changing environment nowadays.*

**Keywords:** dynamic strategies, dynamic capabilities, organisational strategic capabilities, rubber wood export, Thailand

## INTRODUCTION

Dynamic change is the source of differentiation in today's competitive business environment; from the scale-based competition to speed-based competition and from tangible assets into intangible assets-based competition. The dynamic change in the business environment also turns the primary use of capital into the use of resources to develop creativity (Dess, Lumpkin, & Eisner, 2007; Pairoj, 2016). Therefore, dynamic organisational development is the major factor for firms to gain competitive advantage. But firms may have to discontinue its current strategies and create new resources that can quickly and continuously respond to the environment (Døving & Gooderham, 2008; Eisenhardt & Martin, 2000; Tushman, Smith, Wood, Westerman, & O'Reilly, 2010). In this regard, it requires the ability of integrated search and resource utilisation, as well as the alignment of strategies to cope with the changing environment (Savory, 2006; Wang & Ahmed, 2007).

The use of innovation as a strategy in firm operation has been widely studied. Innovation plays an important role in the development of organisations, industries, economies, and societies (Byrd & Turner, 2001; Dorf & Byers, 2008). Thus, innovation performance requires strategic capabilities that will improve organisation's capabilities to reduce friction when facing changes (Hult, Hurley, & Knight, 2004; Hurley & Green, 2005).

Relevant studies undertaken in the past on strategic capabilities and dynamic strategies have only covered some dimensions. For example, Baath and Wallin (2014) describe the components of dynamic strategy and its indicators; Parker, Storey, and Witteloostuijn (2010) assert that organisation growth requires dynamic strategies which are achieved by changing or adapting strategies continuously and learning from successes and failures in the past. This is in line with Sirén (2010) who asserts that strategic learning is a strategic process to create a new strategic analysis framework. In doing so, knowledge management is used to improve the firm strategies for sustainable competitiveness in the rapid environmental changes. For the use of dynamic/flexible strategy development, it is very important that the awareness and ability to cope with environmental change is developed (Feurer & Chaharbaghi, 1995; Tell, 2012).

The study of the relationship between contextual changes of strategic capabilities and major resources is critical to the sustained competitiveness of entrepreneurs in Thailand. It is more critical, especially for those in the latex industry in Thailand which has been ranked number one in the world's export. The industry currently is facing foreign competitors from countries such as Indonesia, Vietnam, China, and India which have increased their production capacity of latex by 4% per annum. Apart from that, there is also artificial rubber that becomes a substitute product of latex (TMB Economic Analysis Center, 2016). Therefore, Thai entrepreneurs must promptly adapt themselves. In this regard, the Thai government has set an economic policy that supports industrial development with Thailand 4.0 model that aims to develop products from commodity to innovation. Therefore, it is a great opportunity for latex entrepreneurs to elevate from existing industry to new industry.

Studying firm dynamic strategies is thus an important contribution to the understanding of the process of change in direction of firm strategic capabilities for firm performance improvement. The process of change was taken by these firms under uncertain conditions through the coordination and use of the limited resources to create productivity in the form of continuous adaptation in each phase of change. To date, there is no research on the antecedents or the critical factors of dynamic strategy. There is neither systematic explanation of strategy development and adaptation. Therefore, this is a research gap that we attempt in this study to provide a systematic explanation of the organisational adjustment in a dynamic environment. This justifies the importance of the research questions of this study, which are stated as follows:

RQ1: Which factors or abilities of an organisation affect the dynamic strategies and also have an impact on sustained strategic capabilities?

RQ2: How can firm strategic leverage be developed which delivers superior returns on industry-specific competition and organisation-level capabilities towards new industries?

As discussed above, the importance of theory-building purpose and the industry sector (which is the context of this study) is the reason to investigate how firms create their sustained strategic capabilities. This study has, as its sampling frame, the Thai latex exporters who are successful in leveraging their business from upstream to downstream industries and still maintain their competitive position. With regard to dynamic strategies, components, and factors that have an impact on various aspects form a systematic development framework of the entrepreneurs in creating innovation which enhances sustainable business competitive advantage.

This study also benefits entrepreneurs who want to leverage their strategic capabilities to cope with the current market volatility.

## LITERATURE REVIEW

### Understanding Resource-Based View, Dynamic Capabilities, and Dynamic Strategies

This research describes and discusses the relationships among strategic capabilities and dynamic capabilities improvement as well as the resources owned by an organisation to gain competitive advantage, especially the dynamic capabilities that require resources and capacities that need to be created concurrently. The dynamic capabilities will be effective when the organisation has good strategies (Daniel & Wilson, 2003; Roy & Roy, 2004; Teece, Pisano, & Schuen, 1997; Teece, 2014b). Good strategies must be flexible and there are no fixed formulas. Mintzberg's concept (Mintzberg & Waters, 1985) is considered a flexible concept as it does not give a fixed definition. The interpretation of the meaning of strategy depends on its utilisation in each context in order to come up with the way to achieve competitive advantage.

The term "dynamic strategy" refers to the concept of "dynamic organisational strategy." It is the management of resources along with the development of organisations to reduce the limits to achieve the target under the constantly changing situation. The goal is to develop a policy direction and the potential to create a competitive advantage with different strategies (Porter, 1991). Most researchers have focused on the development of time frame, with the development of human resources through strategic planning in line with changes to reduce risks (Delahaye, 2005). Consistent with TNS Business Solutions UK (2011), the need to set goals and align resources to address organisational change takes into account the following six key factors: (1) alignment, (2) agility, (3) strategy acceptance or employee buy-in, (4) clear accountabilities, (5) knowledge capital, and (6) integrated business platform. Another interesting point is the definition of dynamic strategies in terms of time (business model), i.e., response to organisational change with strategic capabilities, with time constraints involved. This study explores the strategic ability to reduce the impact of change by responding to a non-prevention system. It is called passive-backup and defense by dynamic integration strategies that have aggressive response strategies (Shanshan, Yong, & Lujie, 2017), and strategic alternatives or emergent strategies to mitigate the impact which can reduce the risk of an organisation's losses from volatility (Fang, Zhao, Fransoo, & van Woensel, 2013; He, Huang, & Yuan, 2015).

The core competency development of an organisation can be defined by the sustainable competitive strategy to support dynamic change (Lee, Lee, & Rho, 2002). Over the past 10 years, organisational capabilities have been developed or resources have been improved to be dynamic capabilities (Helfat & Martin, 2015). Dynamic capabilities are an organisational capability in a form that focuses on transforming the internal resources and environment in terms of appropriate strategic management and integration of skills, resources, and capabilities (Teece & Pisano, 1994). In fact, the elements or factors that affect organisational performance are not present in the balance sheet (Teece, 2015). Therefore, dynamic capabilities are defined as the ability to have a new kind of process or product innovation by integrating resources to align with change (Helfat et al., 2007; Eisenhard & Martin, 2000; Gimzauskiene et al., 2015). According to the definition of Wang and Ahmed (2007), the ability to change which focuses on the behaviour of an organisation must build or enhance its capacity in the context of external environmental change. Another issue this paper focuses on is the integration of resources in line with the strategies. As a result, the organisation's original operational systems should be discontinued (Savory, 2006). Dynamic capabilities arise from the interaction of the growth of the organisation and the transfer of business models, the consistency between the organisation, and the effectiveness of its adaptation occurs most often when it comes to cooperation, i.e., within foreign companies (Teece, 2014a). One of the main considerations of this research is that dynamic capabilities are also tools for strategic analysis. It is important to have a consistency which must be observed in all three areas: resources, strategies, and environment (Winter, 2003; Doving & Gooderham, 2008).

The resource-based view from a dynamic perspective is about the ability of firms to adapt their resources to cope with constantly changing environment (Barreto, 2010; Leskovar-Spacapan & Bastic, 2007). According to Porter (1991), the ability to change in the form of dynamic capability is rooted from dynamic theory of strategy. The major components that are the origin of the compatible strategies and must be constantly improved are critical resources of the organisation and the flexible organisation structure. Therefore, this research aims to explain how systematic relationships between organisational strategic capabilities, dynamic capabilities, and strategic change create strategic effectiveness of the organisation.

## Organisational Strategic Capabilities

An organisational strategic capability is another view of tangible and intangible resources that serves as an alternative to strategic planning and capabilities which need to be managed in order to integrate the organisation's ability to integrate multiple capacities (Kaleka, 2002; Ngo & O'Cass, 2012; Theodosiou, Kehagias,

& Katsikea, 2012). The current strategic philosophy that leads to the development of strategic capabilities is time management, technology management, relationship management, and the management of knowledge (Jacome, Lisboa, & Yasin, 2002; Walters, Halliday, & Glaser, 2002). Organisational strategic capabilities are the skills and capabilities of organisations that develop strategic assets to be useful and aligned with strategy and strategic alternatives that serve as their business guidelines (Di Benedetto, DeSarbo, & Song, 2008; Zhou & Li, 2010). In particular, technology assets can create superior products to meet the needs of customers quickly and overcome technical problems of the organisation (Eesley, Hsu, & Roberts, 2014). Most studies have found the same effect: organisational strategic capabilities have a positive influence on organisational performance (DeSarbo, Di Benedetto, Jedidi, & Song, 2006; Song, Di Benedetto, & Nason, 2007). Organisational strategic capabilities may act as interventions between strategic alignment and organisational performance, by providing managers with an easier understanding of strategic change mechanism functions (Hao & Song, 2015). For an organisation that focuses on high performance, it is important to integrate skills, technology, behavioural management, and workplace values into organisational strategic capabilities (Evans, Pucik, & Barsourx, 2002).

Organisational strategic capabilities refer to having resources connected to firm network and being capable to make a difference compared to other organisations. In other words, different types of resources have different effect on the organisations' capabilities (Mata, Fuerst, & Barney, 1995), especially knowledge or knowledge management in various forms, such as tacit knowledge and explicit knowledge. The knowledge of personnel can be developed into knowledge of the organisation (Nonaka & Takeuchi, 1995).

Some studies related to network building through the view of knowledge and competency explain the importance of skillful human resources who create networks (Robert, Mumin, & Thomas, 2015). Suli, Wei, and Jian (2011) identify patterns of problem solving by using knowledge management capabilities together with the informal structure network. Thomas and Hans (2003) assert that when an organisation can integrate knowledge resource with communication and knowledge exchange in the existing organisation structure, this affects organisational network capabilities. With regard to mutual information sharing and exchange, this can be explained in terms of the relationship and mutual cooperation to network-based resource that interconnects the organisations for the purpose of resource exchange, such as knowledge, technology, etc. The cooperation must be mutually independent (Hareebin, Aujirapongpan, & Siengthai, 2016).

## The Relationship between Strategy and Critical Resources

Connecting strategic capability improvement through supportive factor capabilities and resource-based view from a dynamic point of view is originated from the rapid life cycle of goods or products in the market and rapid expansion of technology. This leads to the imitation of competitor's products (Ireland, Hoskisson, & Hitt, 2006). With regard to dynamic capability, it is the behavioural determination of an organisation to integrate, restructure, restore, and create new resources and major potential to respond to environmental changes in order to achieve competitive advantage and business sustainability (Helfat et al., 2007; Wang & Ahmed, 2007). Therefore, to start before the competition get fiercer among the rapid life cycle of products in the market and create new capacity is a major question which the organisation's management has to make decisions and implement which shall determine firm's long-term operation (Thomas, David, Alan, & Chuck, 2014) and hence sustainability.

From a dynamic view, Mintzberg has proposed a planning concept that leads to implementation. This dynamic view starts from intended strategies, emergent strategies, and strategic learning which are the system feedback to improve or adapt the plan continuously (Mintzberg & Waters, 1985). In the following sections, we review the theoretical literature on dynamic strategy development, the process which is composed of intended strategy, emergent strategy, and strategic learning.

## Intended strategy

The intended strategy of the organisation is important for setting the mission and direction of business operation which are the keys to winning over the competitors under its owned resources (Hamel & Prahalad, 1990). The firm's competitive strategy must be related to the effort to benefit from its resource utilisation which affects the entrepreneur's ability to compete (Mishina, Pollock, & Porac, 2004). Apart from that, firms need to seek opportunity and identify limitations related to the external factors, so that the firms can set appropriate strategies (Porter, 1998). Therefore, the creation of dynamic strategy must take into account the environmental changes and strategic orientation of the organisation which are part of competitive strategy at the business strategy level (Chen, 1996; Chen, Su, & Tsai, 2007; Nadkarni & Barr, 2008).

## Emergent strategy

Emergent strategy will occur when the intended strategy is implemented but not realised as planned (Mintzberg & Waters, 1985). This adjusted strategy is important and it is the indicator of the flexibility of strategy to respond to changes. There is an organisational learning that will enable firms to cope with changes and support the planned strategy to be coherent (Fuller-Love & Cooper, 2000; Jett & George, 2005).

The adapted strategy should be used with the planned strategy that is set by the management for flexibility to solve problems at hand or certain critical situations (Moncrieff, 1999). Apart from that, the organisation must be able to sense the sign of change in order to analyse the influencing factors and create a framework or agreement within reporting structure and the joint utilisation of available resources with external organisation by focusing on more flexible system (Arlene, Andrew, & Grant, 2001; Effie, Ozcan, & Denis, 2016).

## Strategic learning

Learning is a strategy of organising (learning approach to strategy) through experiments and feedback for continuous planning and improvement (Marquardt, 1996), such as short-term or long-term strategic planning which must be reviewed on a yearly basis, turning information both inside and outside the organisation into policy and translated into implementation at the operational level (Fiol & Lyles, 1985).

Strategic learning is the critical component of dynamic strategy development. It enhances the dynamic nature of the strategic capability building. This stage is to investigate the change or even the patterns of the responses to business opportunities (Moncrieff, 1999). Baath and Wallin (2014) assert that firms should focus on strategic learning in their research because in the business with high growth rate, uncertainty is also high. Therefore, the strategic learning capability of the organisation must be continuously developed. It is a double-loop learning which is learning to fix the situation, activity, or experience to create compatibility with the strategic need and learning to aim for improvement in the future.

Therefore, this current research defines dynamic strategy capability improvement as follows: “Dynamic strategic capability improvement is the ability to create efficient strategic procedures in every stage of business operation. It has an impact on the effectiveness of organisation for resource management and organisation improvement to be ready for the changing environment both within and outside the business with limited resources” (Baath & Wallin, 2014).

From the literature review described and discussed above, it is clear from the systems perspective that both internal and external supporting factors affect dynamic strategies. These factors consist of organisational strategic capabilities, dynamic capabilities, dynamic strategies, and strategic effectiveness for organisation performance.

## METHODOLOGY

We developed a draft research instrument for the in-depth interviews with the experts in strategic management to validate the interview instrument drafted based on the relevant literature review in the first stage. We then conducted a qualitative study using the revised interview protocol with the group of sample entrepreneurs to collect data and information from the sample entrepreneurs in the latex export sector. This is the grounded theory approach to study some specific phenomena from many point-of-views in order to seek meaning in strategic management and bring the obtained information both from the in-depth interviews and secondary sources of information to develop the conceptual framework. The data and information obtained from these sources, i.e., experts in strategy and entrepreneurs and secondary sources of information were then analysed in order to ascertain the theoretical linkage among the relevant factors. The data collection was conducted during June 2016 until January 2017. Details of the research methodology of the study are described below:

1. Step 1: The researchers consulted five academics who are expert in strategic management on the draft research instrument (interview protocol) to validate its content which was based on the theoretical literature review. Then, a frame of reference or the structure of the questions about dynamic strategy and organisational strategic capabilities is finalised and used to interview the sample entrepreneurs. Based on the interviews of the academic experts, their views and issues are summarised in Table 1.

2. Step 2: We conducted direct interviews or phone interviews with 15 sample entrepreneurs in different sectors as follows: export business (3), hotel business (3), contractor business (2), retail business (3), hospital business (2), and IT parts business (2). These sample entrepreneurs were identified and selected from previous local research (from the ranks of outstanding domestic industries 2016) that indicates their ability to adapt and become competitive in their business in spite of several constraints and limitations in order to identify factors related to the use of competitive strategy currently in Thailand. Then, a factor analysis was performed to identify the significant constructs which subsequently answers our research

questions. The data and information about this stage of the research were gathered from July 2016 to October 2016.

3. Step 3: We consulted the same five academics who are expert in strategic management again about the result of the factor analysis in order to review and ascertain the theoretical validity of the importance of identified variables.

4. Final step: We then discussed the results obtained in Step 3 with five sample entrepreneurs of rubber wood exporting business who are successful in elevating the organisation to downstream industry for not less than seven years. By using the view of the academics and relevant factors or variables obtained to set the issues for discussing and assessing what the entrepreneurs do in their actual implementation, we then identified a set of indicators of dynamic strategy. This stage of data collection was undertaken from November 2016 to March 2017. The details of these procedures will be illustrated in the case study in the subtopic entitled "The Development of Sustained Strategic Capabilities."

Table 1
*Academics' view on dynamic strategy and organisational strategic capabilities*

| Issue | Detail |
|---|---|
| 1. Definition of dynamic strategy | Procedures or strategic capabilities that affect the effectiveness of an organisation in coping with change and adapting strategic direction as well as the implementation and enhancing organisational flexibility to respond and sense the significance and direction of changes. In addition, there is also a feedback system for organisational learning to improve the organisation innovative capability. |
| 2. Organisational strategic capabilities | |
| 2.1. Resource-based perspective | A strategic resource that is important for achieving competitive advantage which may be due to the organisation's capacities, such as organisation structure, organisation culture, standard operating procedures, or even the type of competitive strategies chosen. |
| 2.2. Knowledge-based perspective | Procedure of knowledge development from the creativity or experiences of the personnel, access to knowledge that is useful for innovation creation. Such factors are important for strategic learning. |
| 2.3. Network-based perspective | Cooperation for resource exchange caused by relationship system or specific cooperation due to certain constraints that do not allow implementation according to the intended strategy. |

## FINDINGS

### Capabilities Affecting the Organisation's Dynamic Strategies

Based on the in-depth interviews with the 15 sample entrepreneurs, we identified issues that are significantly similar and different which we have classified into two main categories, namely, organisational strategic capabilities and dynamic strategies. The detailed results of the research are summarised in Table 2.

### Capabilities Enabling Development of Dynamic Strategies

Strategic capabilities of the organisation are the supporting factors to develop the needed required capabilities. According to the interview with the sample entrepreneurs, it is found that organisational resources are very important for strategy driving. This is the capability which enable organisations to efficiently use the existing available resources that the competitors cannot imitate. Apart from that, there is an importance of resources generated from their network, which is generated due to the constraints faced by the organisations themselves, such as lack of expertise, necessary technology, innovation, etc. Therefore, this necessitates the resource exchange to enhance the organisation's competitiveness. These capabilities as organisational resources can be divided into three types as follows:

1. Resource-based capabilities (RBC)

   It comes from the sample entrepreneur's reflections on the awareness of the different valuable resources and the difficulty of imitation resulting in a firm competitive advantage. According to the expert opinion, the resources can be classified into five categories namely, financial resources, physical resources, human resources, technological resources, and organisational resources. In the perspective of strategic resources of the organisation, the important drivers of the strategies are structural system of organisation management, organisational culture, and leadership, since they are the capabilities of internal organisation management that will lead to improvement of strategy-implementing efficiency.

2. Knowledge-based capabilities (KBC)

   It is the analysis of the supporting factors of knowledge improvement process with dynamic features that are related to data, information, knowledge, and activity management. It also includes experiences, beliefs, values, and creativity of employees in the organisation. The linkages of

strategic capabilities show that knowledge management is important to clearly communicate and promote the organisation's vision and policies throughout the organisation, to clarify strategy.

3. Network-based capabilities (NBC)

   A NBC is the mutual cooperation that is linked together by group relationship. These can be at the level of the individual, working group, or organisation exchanging resources. It can be both formal and informal relationship systems. Such a network is actually the competitor in the same product market, but the specific cooperation can lead to competitive advantage and still maintain the existing customer base by preventing them from changing the target for new and other firms. Therefore, the concept of network is important for organisation's capability improvement, but it needs to be under the condition of network management that is established to create stability of needs of the network members.

The interviews with the sample entrepreneurs can be summarised into sub-component in each factor as shown in Tables 2 and 3.

Based on the literature review, we have identified this as a priori model which is composed of the following factors influencing the organisation's strategic capabilities: (1) intended strategy, (2) emergent strategy, and (3) strategic learning. The in-depth interviews with the academics also suggest that these three components are important to strategic capability improvement. In addition, the explanation of 15 entrepreneurs further supported the importance of these following indicators.

In the strategy making process, it must be long-term plans and it must match with strengths and weaknesses of the organisation. The strategy making must result in plans or programmes and it must show the budget plans in order to follow the strategy, as well as the procedures to show the plan to use available resources in their operations to maximise effectiveness of the organisation.

For the emergent strategy, the interviews with the sample entrepreneurs suggest the same view that strategy implementation has many obstacles, such as inadequate resources like personnel, manufacturing factors, technology, and laboratory. Therefore, the performance is inefficient. Mostly the challenges they face are inadequate skilled personnel since the existing manpower are overloaded with other works. One of the sample entrepreneurs said:

> Most of the personnel are on the production line and are labour-intensive. They are very skilled in their work. At present, the supervisory personnel are graduates in mechanics recruited from vocational high school. There is a lack of research and development personnel to work for the improvement of the quality and production of rubber. This group of personnel is the most lacking in Thailand. Many companies solve this problem by employing knowledgeable personnel from abroad.

Table 2
*Components and indicators of dynamic strategies affecting sustained strategic capabilities*

| Organisational strategic capabilities | Indicator |
|---|---|
| RBC | |
| • Organisational structure | Strategic orientation, self-managed team, formal and informal organisation. |
| • Organisational culture | Acculturation, openness, cultural integration, culture of adaptabilities, learning group, and entrepreneurial styles |
| • Leader | Challenges seeking, need of control, formulator and implementer, potential force, expert power, and control over resources. |
| KBC | |
| • Expertise capabilities | Strategic expert, product expert, commitment to learner, external awareness, resilience, and service maturation. |
| • Technology subsystem | Communication technology, collaboration technology, storage technology, and management information system. |
| • Knowledge centre | Executive information system, individual memory, information memory, connection memory, structural memory, and cultural memory. |
| NBC | |
| • Resource access | Finding network partners, managing network relationship, leveraging network relationship, network maintenance, and resource sharing. |
| • HRM activities | Personnel recruitment and selection, personnel development, performance management, and labour relations. |
| • Integrated communication | Formal communication, informal communication, content, channels, and continuity. |

*Note*: Factors identified in this research are from the 15 in-depth interviews.

The last component of dynamic strategy is the strategic learning which is the method or procedure to assess the possibility or approach of evaluation, which can improve or help develop the performance indicators of chosen business strategy to ensure that the organisation is moving towards its goals, what problems that the organisation is facing with during the strategy implementation, and whether there are any changes required in the intended strategy. For example, in a complex dimension, an entrepreneur shared that:

> According to the improved strategy implementation, the target or goal needs to be changed. We found a better business opportunity than the intended target. In the process, there is a strategic learning that proves that the intended target does not match the current situation and there is no possibility that it is suitable with the existing resources owned by our company.

The strategic learning is thus the important process that may lead to new target that brings success to the organisation in the future.

Therefore, dynamic strategy, consisting of intended strategy, emergent strategy, and strategic learning is a construct that can simultaneously enhance organisation performance and elevate strategic capabilities of the organisation. It is the process that requires continuity and requires supporting factors for dynamic features as a basic and important foundation to drive the organisation strategies for organisational changes to achieve competitiveness.

## The Development of Sustained Strategic Capabilities

### Entrepreneurs of rubber wood export industry in Thailand

Rubber wood export business is quite good since the demand of rubber wood of China has been increased due to the growth of the wooden furniture market in the country and also its export growth to other countries. Thai competent entrepreneurs started to increase the production ratio of rubber wood furniture and rubber wood products in order to increase value for export and to join force to realise the Thai government policy in bringing the country up to “Thailand 4.0” model. This model requires at least three major dimensions of change, which are (1) change from “commodity” production to “innovation” products, (2) change from adopting new technology, creativity, and innovation to industry sectors, and (3) change from production sector-focused to more on service sector-focused. According to such policy initiative, the government has supported rubber wood

industry systematically and completely, starting from doing research to improve rubber wood quality, supporting product design to promote a high-quality product.

Therefore, the entrepreneurs need to get ready for this new challenge of organisation, adaptation or organisation capability enhancement. We interviewed and discussed with the entrepreneurs to identify the approaches used to enhance their strategic capabilities which lead to innovation creation and capacities that affect their dynamic strategy.

**Organisational strategic capabilities**

The organisational strategic capabilities are the ability of firms to effectively use available resources through continuous strategy making to support their operation. The five sample rubber wood entrepreneurs have jointly agreed on the development of the similar overall strategies in the industry. However, they create differences in the capabilities by integrating strategy in the context of each organisation and discussion of planning. Strategic decision making can be divided into three strategic directives as follows:

1. To develop latex and rubber wood products by improving technology in midstream material quality and latex and rubber wood product testing room in order to improve quality and standard of Thai latex and rubber wood products.

2. To develop personnel in research and design, and technicians in latex and rubber wood product industry.

3. To create and develop a database of Thai latex and rubber wood product industry by surveying and gathering data, news, and technological direction, as well as standards related to Thai latex and rubber wood product industry.

According to the three strategic directives mentioned above, additional factors are identified as indicators used by the 15 sample entrepreneurs. These indicators are adjusted in order to indicate the capability that will affect strategic capability improvement. The details are described in Table 3. The variables are categorised by element, key resources, development of temporary dynamic capabilities, strategic capability improvement, and sustained strategic capabilities.

Table 3
*Supportive factors to strategic capabilities improvement of the Thai rubber wood product exporter*

| Element | Key resources | Development of temporary dynamic capabilities | Leverage of strategic capabilities | Sustained strategic capabilities |
|---|---|---|---|---|
| RBC | • **Organisational structure** (Tina, Ian, & Anne, 2002; Elbanna, 2016)<br>• **Organisational culture** (Ginevicius & Vaitkunaite, 2006; Genç, 2013)<br>• **Leadership** (Bass & Avolio, 1997; Chang, 2015; Prasertcharoensuk & Keow, 2017) | • Synergising and integration for new capabilities<br>• Avoidance of product imitation<br>• Developing and adding value through creating compatibility and alignment between resources and capabilities | • Identifying ways towards success, such as brand creation of furniture products, new market opportunities<br>• Innovation through promotion and support provided for universities' business incubator projects and the government | • Operation under strategic plans<br>• Reduction of risks from long-term investment<br>• Decisions of leaders who initiate change or new business target |
| KBC | • **Expertise capabilities** (Dooley, Corman, & McPhee, 2002; Kawamura & Vlaseros, 2017; Tiwana & Mclean, 2005)<br>• **Technological subsystem** (Santos, Araújo, & Correia, 2017; Yang & Chen, 2007)<br>• **Knowledge centre** (Rogers, McDonald, & Brown, 2005; Freeze, 2006; Venkitachalam & Willmott, 2017) | • Creating a new body of knowledge on a continuous basis<br>• Effective communication through knowledge sharing<br>• Learning for continuous improvement and ability to adapt and adjust | • Business operating procedures and clear understanding of the outcomes of such relationships<br>• Creation of deep knowledge in the rubber wood furniture industry and anticipation of future trends | • Integration of important activities to develop intellectual properties<br>• Human capital to bring new knowledge linking to existing knowledge<br>• Change of ideas leading to new industry |
| NBC | • **Resource access** (Mattsson, Corsaro, & Ramos, 2015; Phichai, 2009)<br>• **HRM activities** (Ritter, 1999; Lind, 2015)<br>• **Integrated communication** (Knoke & Yang, 2008; Mattsson et al., 2015) | • Negotiate to obtain better terms and conditions<br>• Networking and collaboration to reduce internal constraints and develop new products | • Collaboration on trend analysis of the furniture markets<br>• Testing of assumptions for the materialisation of business strategies<br>• Communication patterns between networks through marketing activities or MOU | • New agreements from collaboration opportunities<br>• Social capital to reduce complexities and difficulties in implementing strategies |

## The upgrading of strategic capabilities to innovation capabilities

For the entrepreneurs who want to implement new strategies in order to adjust to the change of export, i.e., by selling furniture instead of rubber wood and by creating more value added in the products, there must be necessary operational guidelines. This includes the appropriate area (market) analysis, knowledge sharing process, processing technology, environmentally-friendly rubber tree growing, information system, rubber market system/logistics, and clarity of management and government support. The most important aspect of such changes is that the entrepreneurs must create compatibility of resources and efficiency of response to the environment through flexibility and effective strategy making with the following procedures.

For the intended strategy, these sample entrepreneurs did the following:

1. They set their organisational goals, such as creating the awareness of the brand of their furniture products, searching for new target markets by avoiding major traders in order to enter into a new industry.

2. They established the policy for operational guidelines for furniture market analysis, knowledge absorption, technology, and innovation creation with the support and encouragement of university-business incubator project and the government support. One of the sample entrepreneurs said: "The workforce nowadays lacks of skill to use modern manufacturing tools and lack of product design skills which are needed for value creation of products."

3. Action plans are developed to create marketing channels, recruit, or develop research and design personnel to become an expert and who will understand the trading rules and regulations of the European Union (Forest Law Enforcement, Governance and Trade or FLEGT) in order to export furniture to Europe.

## Emergent strategy

We found that in order to be able to adapt their business strategy to respond timely and effectively to the changing environment, the sample entrepreneurs had undertaken the following:

1. Developing a dynamic sensing system to detect impact factors or a trend of demand of furniture market and change the approach and frequency of communication within the organisation at every level. Some entrepreneurs mentioned that: "There are many ways to help us sense the impact factors."

2. The experiment is performed to test the assumptions to assess the possibility of the strategies by trial and error and to test the forecast of competitors' responses and plan to deal with digital marketing in order to adjust the marketing promotion programmes to achieve the highest response from the customers by adding a variety of products, such as dining table set, living room furniture, cabinet, as well as garden furniture. In addition, there are also rubber wood export products in the form of finished products, semi-knocked-down products, or complete-knocked-down products.

3. Adjusted resource allocation of long-term investment to a short-term investment based on the similar studies undertaken in the same organisation. This practice creates variety in the resource allocation for the experiment. They also operated on a project basis as well as develop open collaboration with external organisations.

**Strategic learning**

These sample entrepreneurs demonstrated their strategic learning in the following ways:

1. They follow up, scan, and analyse the environment to continuously run their business using reliable information. For example, an entrepreneur said that: "We create compatibility of furniture demand and current economic conditions by learning about consumers' taste in various countries by offering modernised products with quality and standard. This is the result of the development of the product models that are in line with the consumers' need in various markets. In addition, the products are also promoted in many countries."

2. Creating in-depth knowledge of rubber wood furniture industry to enable all concerned parties to correctly and timely understand the strategic management process and understand the current situation of the business and the anticipated changes in the future.

Another perspective obtained from the in-depth interviews of these three sample entrepreneurs is strategic learning that can elevate firm's midstream to downstream industry. They agreed that it must be the learning that can create new sustainable capability in the competition. This needs to start from development or resource seeking, capability to sense and search opportunity. It is important for entrepreneurs to indicate and create new opportunities. All these are to improve furniture manufacturing industry or the materials processed from rubber wood thoroughly

and to be able to compete at international level, starting from manufacturing system, quality assurance, product development, financial management, and marketing in order to increase capability to compete in the global markets.

## DISCUSSION

### Factors Affecting the Dynamic Strategies and Sustained Strategic Capabilities

Dynamic capabilities are newly created capabilities upgraded to new capabilities that are consistent with changing environments to respond to innovation at the time of entry into the marketplace (Teece et al., 1997). This is the result of the organisation's ability to innovate through integration of changes in the patterns of internal and external processes to optimise productivity, product design, and service.

The theoretical implications of the sustained strategic capabilities are that the use of knowledge strategies drives organisational decision-making (Roozbeh, Mohammad, & Atieh, 2016; Yun, Jung, & Yang, 2015). Using strategic learning capabilities as part of a holistic process creates a continuous organisational behavioural process (Baath & Wallin, 2014; Moncrieff, 1999). Factors of strategic upgrading, such as technological resources being built, are new capabilities in research, development, and cost reduction (Doordarshi, Jaspreet, & Inderpreet, 2013; Ahenkora, 2012; Parnell, 2011; Sanchez, 2012). Finally, there is a relationship between dynamic strategies and performance (Ogilvie, 1998; Feurer & Chaharbaghi, 1995; Cappel, Wright, Wyld, & Miller Jr., 1994; Mintzberg & Waters, 1985). In Thailand, research that is concerned with the strategic upgrading of the rubber business is very rare. A study on resource availability by Punninon (2015) found that there is a positive relationship between resource availability and firm competitive advantage through export strategy. However, the study did not develop a holistic conceptual framework for explaining relationships in which inputs, moderator variable, process, and outcomes include links of elevation. Based on the field in-depth interviews, we have been able to see the overall picture and identified several issues and indicators of various organisational resources that affect dynamic strategy. We also find that in term of theory building, there are linkages between the systems theory that explain firm strategic capability improvement and their ability to shift from midstream industry to downstream industry. In order to show how these sample entrepreneurs develop their strategic capabilities, the description and discussion of the findings are provided below.

## Organisational strategic capabilities

Organisational strategic capabilities that affect a dynamic strategy include RBC (organisational structure, organisational culture, and leader), KBC (expertise capabilities, technology subsystem, and knowledge centre), and NBC (resource access, HRM activities, and integrated communication). These strategic processes that are resource-restructured respond to changes in the marketplace. The processes include integration and reconfiguration to suit the changes occurring (Eisenhardt & Martin, 2000).

For the RBC, an organisation's internal management capability affects efficiency of strategy implementation to create value added in the process. Three sample rubber exporters agreed that:

> Sending a research team to an incubator of a university with expertise in rubber products can lead to an innovative product, based on the knowledge of materials science, marketing, and manufacturing technology. This depends on the clarity of the entrepreneurial strategy and the technological rights of the university.

This team building affects new strategy development and enhances competitiveness through innovation (Tina et al., 2002; Elbanna, 2016). The organisation may have to initiate activities to develop the organisational culture that serves to blend all together. This research finds that network has a significant role. Therefore, the integration of organisational culture is important for the creation of new ideas and supportive to the creation of innovation (Ginevicius & Vaitkunaite, 2006; Genç, 2013). The organisational leaders must search for challenge without being afraid of failure. They must expertly use their management authority as well as controlling resources in order to achieve efficiency (Bass & Avolio, 1997; Chang, 2015; Prasertcharoensuk & Keow, 2017).

Knowledge management capability in the dynamic environment relates to dynamic strategy. It especially pays attention to the expertise, capability in the form of tacit knowledge that is developed over time until accepted as knowledge champions (Dooley et al., 2002; Kawamura & Vlaseros, 2017; Tiwana & Mclean, 2005). The organisation must create a next generation version of knowledge champions to replace the turnover rate or retirement (natural attrition) rate. There is a rubber exporter who said that: "Those who are knowledgeable about economic trends and export to new markets, especially CLMV (Cambodia-Laos-Myanmar-Vietnam) and new frontiers have continued to grow. They are highly ranked as one of the

world's leading and most knowledgeable persons in the rubber and plastics sectors, the rubber and sheet rubber materials have to be developed as innovative products." These knowledgeable people are important for the exchange of knowledge and knowledge transfer strategies within an organisation (Hansen, Nohria, & Tierney, 1999; Jones, Herschel, & Moesel, 2003).

The last component is network capabilities. This perspective focuses on formal and informal relationship of people, working group, and organisation in order to exchange resources. The network also involves drafting organisation strategy to change the policies and work plans leading to the exchange and sharing of needed resources (Phichai, 2009), and to get knowledge about the rubber industry. Through the network, there is an opportunity to meet knowledgeable people and share experiences in developing proposals. They can create a joint research network on rubber industry between and among agencies. They also get practical research problems that meet the needs of foreign customers. This may be a form of resource access (Knoke & Yang, 2008; Mattsson et al., 2015; Ritter, 1999).

In this regard, these three capability perspectives or supporting factors of dynamic strategy depend on the coherence or compatibility of various factors related to the context with which each organisation or industry is facing. Although paying attention to the guidelines and strategy under the responsibility of one division or department is good, but it also has to comply with the corporate-level strategy or business-unit-level strategies. This is because the competitiveness of an organisation results from the ability to create compatibility of the organisation's overall strategies (Pearce & Robinson, 2003; Porter, 1998; Thomas et al., 2014).

**Components and indicators of dynamic strategies**

The newly created capability was elevated to a new capability in response to the changing environment that corresponds to the innovation that meets the current market needs (Teece, 2014a). Strategic dynamic capabilities enhance the ability of the organisation to implement its strategy for change from an environmental perspective (Manu & Sriram, 1996).

Baath and Wallin (2014) found that components of dynamic strategy are dynamic strategy development and strategic learning. However, in this research, we have further defined that the components of dynamic strategy are intended strategy, emergent strategy, and strategic learning. These three components are systematically demonstrated in connection with the sample entrepreneurs' strategy improvement. The indicators of the discovered dynamic strategy for the sample respondents are as follows:

1. Setting the business strategy plan of the market and adjusting and allocating resources from long-term investment to include a ratio of short-term investment.
2. Having a system of prompt environmental change monitoring, assessment, and analysis.
3. Flexibility to allow implementation of backup plan concurrently and systematically with the main plan of the organisation without losing target opportunity due to risks.
4. Creating new knowledge in order to solve the problems due to internal and external changes.
5. The speed of the response to strategic knowledge of the personnel.
6. Communication of knowledge obtained from strategic decision making to further enhance the implementation of organisation chosen strategies.

Such indicators are developed by Mintzberg and Waters (1985) which are also included in these three components.

The linkage of all these factors identified in this research is shown in Figure 1. Organisational strategic capabilities (RBC, KBC, and NBC) must be adapted to the capacity of the organisation to develop as a dynamic capability; so it goes into the dynamic strategy process with the three components above. At one point, feedback is a strategic learning in two ways: (1) learning to develop strategic capabilities to outperform the current market and (2) learning to develop strategic capabilities to boost the organisation's entry into a new industry. Thus, this creates a cycle of creating sustained strategic capabilities through organisational dynamic capabilities and strategies.

**Strategic Leverage for Industry-Specific Competition and Organisation-Level Capabilities towards New Industries**

What is the strategic importance of improving the competitive advantage of the industry and the ability to upgrade the organisation to new industries? To answer this question, we have addressed two relevant issues which are: (1) Enhancing the strategic ability to generate superior returns (develop strategic capabilities) in the same industry as the development of temporary dynamic capabilities by gathering/using existing resources, strategic practices, and value creation which is the dynamic strategy. It also focuses on maintaining a competitive position in the

market by managing the risks of long-term investment and integrating important activities with a sustainable competitive advantage. (2) Upgrading the organisation to new industries (leverage of new industries) which is the strategic learning of the market orientation, organisational process, and capabilities which require the organisation's processes to create new knowledge, to create innovative products in collaboration with the network. It is a new organisational ability to focus on new markets by seeking partners for opportunities and sharing resources with its social capital. The advantage of human capital is that it creates innovative work and leads the way to a change in sustained strategic capabilities (see Figure 1).

The theoretical contribution of this study is that it has broadened the strategic management concept in addressing the issues of organisational competence in particular such as: First, RBC that require leadership qualities. These leadership qualities are the abilities to anticipate future changes in the industry. Strategic intuition is the ability to have a strategic instinct to synthesise a strategy or a way to compete for organisational success (Lewis, Spears, & Lafferty, 2008; Dane & Pratt, 2007; Duggan, 2013). Second, KBC that require business analytic capabilities as a tool for the organisation to create analytical capability, empower executives to make decisions to solve business problems (Yang & Chen, 2007; Davenport & Harris, 2007); and third, NBC that create business networks to enable them to expand their business base or exchange mutual resources under shared interests (Walter, Auer, & Ritter, 2006; Ranganathan & Rosenkopf, 2014; Bayne, Schepis, & Purchase, 2017).

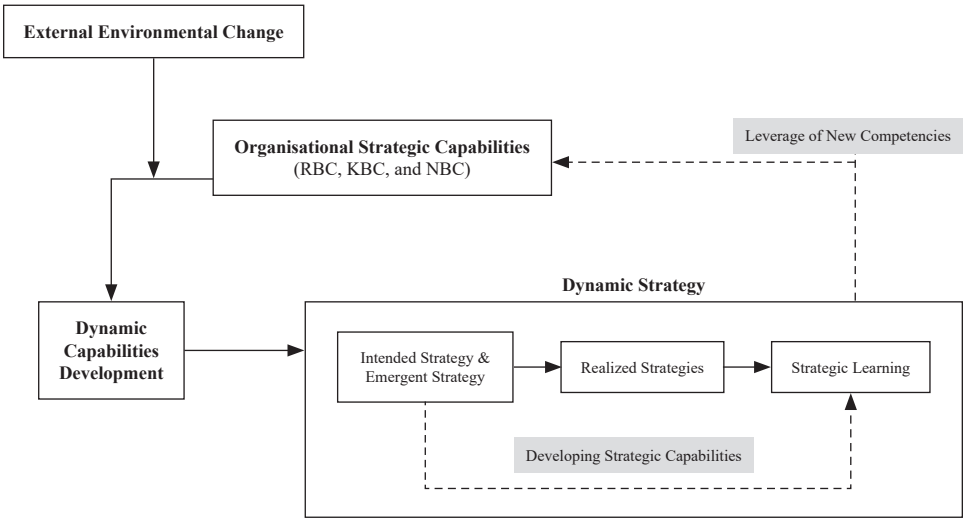


*Figure 1.* Conceptual framework

For practical contributions, this research has identified supporting factors that contribute to the dynamic processes that play an important role in business operations. At present, the entrepreneurs focus on the view of the network. This can reduce many limitations. It also contributes to the improvement of the organisation or even the development of human resources as knowledge champion within the organisation as a strategic and product specialist (Hansen et al., 1999; Jones et al., 2003). The use of power to control the resources of the leaders is based on adaptation of the strategy to the network (Chatzkel, 2003), the exchange of resources, and the development of personnel through learning between organisations to absorb knowledge. Thus, the issue of network factors can directly and indirectly affect the sustainability of today's competition (Gopalakrishnan & Santoro, 2004; Johnson & Johnson, 2006). Factors leading to the necessity to develop dynamic strategies are external environmental change. The change may be due to the management's intentions to use modern management tools such as digital transformations, disruptive innovation labs (Christensen, 2013; Darrell, 2009), etc. Management of information system and knowledge management are developmental sciences of modern organisations in the world. They also increase the potential of the entrepreneurs, including firm productivity and innovation of the organisation (Quintas, 2002; Freeze, 2006; Plessis, 2007). Finally, cooperation in the business network with innovative performance will rely on the following elements and support: government agencies, partners, coordinating units, and research and development organisations (Zeng, Xie, & Tam, 2010). These organisations are useful for entrepreneurs who want to make changes within the organisation to enhance their creativity by seeking outside cooperation (Antikainen, Makipaa, & Ahonen, 2010).

The current rubber processing business is interesting because it is a business that is expected to grow in the future and Thailand has the advantage of being a major producer of rubber. It is also a high-return industry where investment may be required to build a relatively large facility to create an economy of scale and value for technology. Therefore, upgrading the strategy requires resources such as product expertise, technology know-how, and win-win mindsets with their networks. For example, by setting up joint ventures with Malaysian entrepreneurs with market insights, the needs to control the industry from the beginning to the end will be less which can leave the performance of the industry to the market forces. A network of distributors and freighters covering ASEAN countries, China, South Africa, United States, and Europe can also increase bargaining power in international markets for such joint ventures.

## CONCLUSION

This study examines the new performance model of strategy development to achieve organisational objectives of superior returns in its current industry. We also examine how firms leverage their current capabilities to enter a new industry through dynamic processes which respond to the needs of the industry and current market volatility. This study also integrates the concept of resource-based view, dynamic capabilities, and dynamic strategy. We find that our priori conceptual framework based on the relevant literature review is further refined based on the in-depth interviews of about 20 successful entrepreneurs in the rubber wood export industry. Other empirical findings are as follows: (1) supporting factors that result in dynamic processes include organisational strategic capabilities (RBC, KBC, and NBC), and (2) forms of holistic strategy development linked to resource factors. Organisational competence can be explained by systems theory with feedback or strategic learning.

The pattern that emerged was a new concept in term of decision models to develop an entrepreneurial strategy. This is because both leverage of new competencies and development of strategic capabilities have its focus on potential markets. Organisational processes and the capabilities of the organisation are two different aspects. That is, leverage of new competencies must be developed. Organisational strategic capabilities in a dynamic form called the development of temporary dynamic capabilities which rely on the organisation's processes to build new knowledge of innovative products through collaboration with networks. Then, this will be upgraded to a new performance that will focus on new markets by seeking partners to create opportunities. Furthermore, resources are exchanged with social capital, the advantage of having human capital to create innovative work, and having a leader who wants to change to a sustained strategic capability.

Another perspective is development of strategic capabilities with temporary dynamic capabilities based on the integration/alignment of existing resources with strategic practices and the creation of resource values. It then focuses on maintaining a competitive position in the market by managing the risks of long-term investment and integrating critical activities with a sustainable competitive advantage.

One observation based on this study is that supporting factors that drive dynamic processes play an important role in business operations. At present, entrepreneurs value network perspective which can reduce many limitations. It also helps to elevate the organisation, or to develop human resources, i.e., as a knowledge champion within the organisation, as a specialist in strategy and product use,

and so on. The power to control a leader's resource is governed by a change in strategy. Finally, with network, there can be an exchange of resources and the development of personnel through learning between organisations to absorb knowledge. Therefore, this finding highlights the significance of network factors that can directly and indirectly affect the sustainability of today's competition.

### Limitations of the Study and Agenda for Future Research

This study is a qualitative research based on in-depth interviews of 5 experts and 15 entrepreneurs from 5 industries, group discussions, and case studies of 5 rubber entrepreneurs. The data and variables are derived from only one sector of each industry. The results of the classification of organisational strategic capabilities (RBC, KBC, and NBC), or the process of dynamic strategy of the organisations derived from this study are presented. Furthermore, it is observed that there is a limitation in term of the depth of information obtained although we have been able to build up some rapport with and get back to the sample entrepreneurs for clarification and additional information. Hence, it is suggested that future studies of quantitative nature be conducted to generate a larger database so that structural equation model can be performed to ascertain the relationships among dynamic capabilities and dynamic strategies, organisational performance, and innovation performance, hence higher level of generalisation.

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# 9

# THE IMPACT OF INTERNAL FACTORS ON SMALL BUSINESS SUCCESS: A CASE OF SMALL ENTERPRISES UNDER THE FELDA SCHEME

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**ABSTRACT**

*This study attempts to identify the antecedents of business success in the Malaysian perspective, with particular reference to small businesses under the Federal Land Development Authority (FELDA) scheme. Cross sectional data were collected from 199 small businesses operating under the (FELDA) scheme via questionnaire. The data collected were analysed using partial least square method. The empirical results indicated that only entrepreneurial competency and technology usage are related to successes of small businesses. However, this study found insufficient empirical evidence to support the relationship between marketing capability, financial resources, knowledge sharing, and business success. As this study was confined to the small businesses under the FELDA scheme, this provides valuable findings by uncovering the differences among the critical success factors due to the different reasons for formation of the small businesses. The insights gained from this study could facilitate industry practitioners to develop comprehensive business strategies and effective institutional policies to maintain the global competitiveness of small businesses under the FELDA scheme.*

**Keywords:** small business, business success, strategy, developing economy, FELDA

## INTRODUCTION

Research indicates that small businesses tend to have a higher failure rate as compared to large organisations, although they are commonly perceived as an engine of a country's economy (Bloch & Bhattacharya, 2016; Lo, Wang, Wah, & Ramayah, 2016). For example, in Malaysia, it was found that higher number of small and medium-sized enterprises (SMEs) indicated a worse performance in the first quarter of 2016 as compared to 2015 (SME Corp, 2016). Many failure stories of SMEs reveal that their characteristics which include reactive, fire-fighting mentality, resource limitations, informal strategies, flexible structures, and lack of strategic planning processes may have contributed to their failures (Gnizy, Baker, & Grinstein, 2014).

The SMEs' success factors have captured the interest of many scholars and practitioners (Onkelinx, Manolova, & Edelman, 2015; Khalique, Bontis, Shaari, & Md. Isa, 2015; Javalgi & Todd, 2011). Studies conducted by Onkelinx et al. (2015) reveal that business performance of a small firm is driven by entrepreneurial orientation, which is affected by the national culture and environment. Khalique et al. (2015) illustrate that human capital does not play a significant role in determining organisational performance in the Pakistani context. While human capital is generally understood as important antecedent factor in other related studies (Chen, Lin, & Chang, 2006) Khalique et al. (2015) explain that being a developing economy, investment in training and development among Pakistani small businesses is woefully underrepresented, leading to inconsistent result. These existing studies demonstrate that firms in different context may react differently due to distinct economic and environment setting.

Within the Malaysian context, little work has been done to explore the business performance issue of small businesses that operate under the Malaysian Federal Land Development Authority (FELDA). This uneven focus has invited further investigation into this area of research. Despite the existing literature explaining the reasons for small business success; theories, concepts and practices developed in different contexts are not necessarily applicable to FELDA case. Moreover, scholars argue that the determinants of business success should be based on the context of research study is made, as they may be different from one context to the other (Lussier & Pfeifer, 2001). In this line of argument, Yunus, Aris, Abdul Majid, and Md. Saad (2014) suggest that the FELDA settlers may have different entrepreneurial personality, and this may also affect the business performance.

Initially, FELDA was a land development agency to materialise the national plan to eradicate poverty in the rural area of Malaysia back in 1956. After 50 years of operations, the agency has transformed itself from being an agricultural leader to a global corporate player (Mohamad et al., 2014). Efforts have been made to inculcate and develop the culture of entrepreneurship among the FELDA settlers specialising in small enterprise development for them. As the globalisation become the in-thing, these firms have a very important role of penetrating the local produce to the international markets, and working hard to compete with the established multinational competitors in the local markets. No doubt, globalisation has created opportunities for the small businesses under the FELDA scheme. However, the integration of the firms into international market may bring with the firms challenges (Idris, Salleh, & Endut, 2014). Recognising this issue or phenomenon, there is a special need for a more deliberate study to rectify how these small businesses could succeed in the context they are in. This study therefore aims to examine the antecedents of business success among the small enterprises or businesses under the FELDA scheme. In determining the so-called business success factors, this study only focuses on the internal aspects. While businesses have also to be concerned with external macro environments which include political, social, economic, technology, and regulation, those factors are hardly controllable by management as they are in reality independent from the companies (Morrison & Teixeira, 2004). Internal factors on the other hand, reveal how management preference and company characteristics influence any decisions that have to be made regarding resolving company issues or expansion plan of company's products and/or services (Makhija, 2003). Moreover, internal factors could also be regarded as a unique factor that includes firms' resources and capabilities that can be controlled (Galbreath & Galvin, 2008). This unique factor explains the main reason for variations in the firms' performance despite of the same industry background with other firm(s) (Hirsch & Schiefer, 2016). Thus, an internal factor is within a firm's control, which if properly utilised can help the firm to gain superior competitive advantage.

## CONCEPT DEVELOPMENT

### Overview of Small Businesses under FELDA Scheme

There is no universal definition of small businesses, with many authors offering various criteria including size, number of employees, and financial turnover per annum in the definition (Devins, 2009; Muhammad, Char, Yasoa, & Hassan, 2010; Mahmood & Hanafi, 2013). In spite of these various criteria, definitions are commonly based on employment in the Malaysian context. For example, in this

study, small businesses are defined based on the Small and Medium Enterprise Corporation of Malaysia (SME Corp). The justification of using this definition is to ensure conformity of standards practiced among Malaysian researchers or policy makers. Furthermore, this classification of small businesses by SME Corp offers better cross-referencing purposes. For example, the SME Corp Malaysia defines a small business as one that employs between 5 to 75 full-time employees and has sales turnover between RM300,000 to RM15 million for the manufacturing sector; and 5 to 30 full-time employees and has sales turnover between RM300,000 to RM3 million for the services sector (SME Corp, 2016).

The Malaysian government has acknowledged the importance to develop the small businesses' capabilities as this strategy can help to broaden the sources of economic growth (SME Corp, 2016). The small business firm's capabilities can be developed, for example, by forming a strategic collaboration between SME Corp and FELDA. Beginning in 2005, FELDA has initiated an Entrepreneurial Development Program (Mohamad et al., 2014) in an effort to develop and encourage entrepreneurship and businesses among its settlers. By conducting such programme, the organisation hopes to increase the family income, which in turn can promote and enhance the quality of life among the settlers. As this looks good, various tremendous efforts have been implemented by FELDA under the programme. For instance, in an effort to increase the efficiency and delivery capacity, as well as to widen the distribution of small enterprises products, the agency has worked closely with respective firms in terms of developing their business premises by way of *halal* compliance and implementing good manufacturing practices. Apart from that, they also help the businesses to strengthen their promotional activities so that there is an increase in brand awareness in the local food industry (Ismail & Yusop, 2014).

With attempts as above, in 2014, there were approximately 21,796 businesses established by FELDA settlers, with sales recorded at RM1.9 billion. This figure is expected to grow at a rate of 5 per cent every year (FELDA, 2015). Moreover, the income generated by the small businesses under this scheme has indirectly increased the economic status of the settlers' families while reducing their dependencies on agricultural commodities. This also has resolved social issues and reduced migration of young generation to big cities owing to their unemployment factor. Given FELDA's contribution towards the country's and settlers' economy, it is therefore imperative to investigate any issues arising from the small enterprises that operate under the FELDA scheme that can affect the growth of those enterprises. The manifold contributions indicate the successfulness of the programme, which could be emulated in other entrepreneurship programmes.

## Business Success

Business success is about the achievement of goals and objectives of a company, which is not explicitly defined (Ngwangwama, Ungerer, & Morrison, (2013); Foley & Green, 1989). It can also be characterised as a firm's ability to create acceptable outcomes and actions (Van Praag, 2003; Marom & Lussier, 2014). There is no universal acceptable definition of business success and a majority of management studies measure business success from the perspective of firms' performance (Van Auken & Werbel, 2006; Reijonen & Komppula, 2007; Wang & Wang, 2012). In fact, firm performance is also complex and has multidimensional facets. Additionally, according to Islam, Khan, Obaidullah, and Alam (2011), there are at least two pertinent dimensions of business success: (1) financial vs. non-financial, and (2) short- vs. long-term success. Based on this contend, there are various ways to measure business success that includes survival, profits, return on investment, sales growth, number of personnel employed, happiness, corporate reputation, and others (Schmidpeter & Weidinger, 2014).

Similarly, for the context of small businesses, many early attempts at understanding firms' performance were made with reference to financial ratios and accounting measures (Shailer, 1989). However, few scholars (Riquelme & Watson, 2002) argued that there is lack of reliability with financial ratios and accounting data, as majority of small businesses have no formal reporting requirements on these financial data. Due to these reasons, it becomes impossible to obtain sufficient reliable information to measure the small businesses' success. Further to this thought, Wieder, Booth, Matolcsy, and Ossimitz (2006) added to the argument that financial accounting measures are not able to tap the essence of a firm's performance in other aspects as well, such as customer service, quality of products produced, innovation, and operational efficiency. Relying on financial data also limits the ability to explain future performance as they are historically oriented, hence can be misleading (Koufteros, Verghese, & Lucianetti, 2014). In the background of recent political and social developments, there are many other non-financial factors that should be included to make the measurement of firm performance more effective (Abdallah & Alnamri, 2015). Given these arguments, this study therefore only incorporated non-financial measures, which can be captured through managerial perceptions. The rationale for non-financial measures is that with limited information available on financial data of small businesses, it is impossible to quantify the respondents' performance using financial accounting measures.

## Attributes of Business Success through the Resource-Based View Theory

In determining the factors that affect business success factors of small businesses under the FELDA scheme, we adopted the resource-based view (RBV) theory. The theory contends that the key to improve a firm's performance is based on the firm's internal characteristics (Barney, 2001). The differences in performance are explained primarily by the existence of an organisation's resources which are valuable, rare, and not easily imitated and substitutable by rivalry (Barney, 2001). Prior to addressing the small business resource criteria, it is beneficial to define what resource is. Resources are those tangible and intangible assets owned by a firm (Galbreath, 2005). Tangible assets include financial resources, physical resources (plant, equipment, machine, etc.), human resources, and technological resources; while intangible assets refer to knowledge, skills, reputation, and capabilities. Usually, firms seek to acquire and exercise permanent or semi-permanent control over resources that can offer competitive advantage over the firms' competitors. As firms may apply different levels of control over various types of resources, they would be unique from each other in terms of offering different products or services. Organisational assets such as human resources, management policies, and capabilities are used by firms to develop and implement strategies or new innovations in those firms. Human capitals with high levels of skills and achieved good alignment between the skills represented in the firm and those required by its strategic needs will have positive impact on the firm (Crook, Todd, Combs, Woehr, & Ketchen, 2011). Hence, the main reason for firms' growth and success is actually coming from inside the firms. In other words, firms with superior resources and capabilities will build up a basis for gaining and sustaining competitive advantage.

The RBV theory is of particular relevance in the small business context, as it contends that long-term survival is dependent upon the firm's unique offerings. The development of this uniqueness over time is by nurturing the organisation's core competencies. It is widely accepted that small enterprises are often faced with a lack of resources, and this forces them to operate under severe financial and expertise constraints (Phillipson, Bennett, Lowe, & Raley 2004,; Zucchella & Siano, 2014). Moreover, inadequate resources issue can often influence these firms to focus on short-term rather than long-term goals, inhibit them from further development and exploitation of opportunities existing in the environment. Hence, the RBV perspective comes in handy as it offers an opportunity to analyse the small business success that are associated with internal resources and capabilities.

Table 1 provides a summary of past empirical works and attributes that are found to be associated with a business' success. As shown in Table 1, the list of attributes found to be associated with business success is extensive. Yet, of the most cited attributes (referred to by at least 20 authors), it could be argued that entrepreneurial competency which includes the skills, educational background, know-how, and personal motivations/goals appear to be the main contributing factor for small business success. The next factor relates to financial resources. Small businesses are often cited as facing restricted access to funds and instead rely on personal sources of finance in place. Consequently, limited financial access may restrict larger investments that require a longer payback period, creating a growth and development barrier in these organisational settings (Jasra, Hunjra, Rehman, Azam, & Khan, 2011; Kim, Knotts, & Jones, 2008). Hence, access to finance has been featured prominently in a number of studies as a constraint on small businesses development.

In addition to a firm's accessibility to resources, quite a number of studies have related business success with marketing capability (Kim et al. 2008; Coy, Shipley, Omer, & Khan, 2007; Bowen, Morara, & Mureithi, 2009). Marketing capability has been considered the domain of large firms previously; yet this dimension is argued to be as important with increased globalisation (O'Cass & Sok, 2013). In other words, most of the SME's operating internationally tend to have less marketing resources, do less market research and lack presence in large readily accessible markets, as well as have less well recognised brands (Merrilees, Rundle-Thiele, & Lye, 2011). Some studies have also recognised the importance of SMEs in ensuring knowledge is used and shared optimally within the firm by way of developing analytical and critical skills of individuals in order to sustain and reap competitive advantage (Egbu, Hari, & Renukappa, 2005; Ngah & Jusoff, 2009). Their focus has been primarily stemmed from the RBV theory. The theory suggests that the underlying unique competitive advantage of small businesses is centred on the capacity to learn (Barney, 2001). Nevertheless, these firms' resource poverty can lead to information deficit, as technology also plays an important role in this respect. In support, different studies (Thurik, 2007; Fink & Disterer, 2006; Raymond & Bergeron, 2008) have also revealed that lack of technology and equipment are impediments of small business success. Based on these prior empirical studies, this study anticipates that the FELDA's small business success is influenced by the five factors discussed earlier which includes financial resources, entrepreneurial competency, marketing capabilities, technology usage, and knowledge sharing.

Table 1
*Prior studies on successful business factors*

| Factor | Study | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Financial | | | | | | | | | | | | | | | | | | | | | | | | |
| Financial resources | √ | | | √ | | √ | | | | √ | √ | √ | | | √ | | | | | | | | √ | |
| Entrepreneur | | | | | | | | | | | | | | | | | | | | | | | | |
| Skills | √ | √ | | | √ | | | √ | √ | | √ | √ | √ | | | | | | | | | | | |
| Education | | | | | √ | | | √ | √ | | | √ | √ | | √ | | | | | | | √ | | |
| Motivation and goals | | | √ | | | | | √ | √ | | | | √ | | | | | | | | | | | |
| Know-how | | | | | | | √ | √ | √ | | | √ | √ | | | | | | | | | | | |
| Alertness | | | | | | | | | | | | | | | | | | | | | √ | | | |
| Marketing | | | | | | | | | | | | | | | | | | | | | | | | |
| Responsive to market/adaptable | | | | | | √ | | √ | | √ | √ | | | | | | | | | | | | | |
| Customer relations | | | | | | | | √ | | √ | √ | | | | | | | | | | | | | |
| Company image and brand | | | | | | | √ | | | | | | | | | | | | | | | | | |
| Marketing practices/research | √ | | | | | √ | | √ | | | | | | | | | | | | | | | | |
| Technology | | | | | | | | | | | | | | | | | | | | | | | | |
| Technology resources | √ | | | | | | | | | | | | | √ | | √ | | | | √ | | | | √ |
| Knowledge management | | | | | | | | | | | | | | | | | | | | | | | | |
| Sharing | | | | | | | | | | | | | | | | | √ | √ | √ | | | | | √ |

*Sources*: Study 1: Jasra et al. (2011); Study 2: Ahmad, Ramayah, Wilson, & Kummerow (2010); Study 3: Reijonen & Komppula (2007); Study 4: Mcmahon, (2001); Study 5: Gomezelj Omerzel & Antoncic (2008); Study 6: Kim et al. (2008); Study 7: Steenkamp & Kashyap (2010); Study 8: Coy et al. (2007); Study 9: Karami, Analoui, & Korak Kakabadse (2006); Study 10: Bowen et al. (2009); Study 11: Benzing, Chu, & Kara (2009); Study 12: Peris Bonet, Rueda Armengot, & Angel Galindo Martin (2011); Study 13: Eggers, Krauss, Hughes, Laraway, & Snycerski (2013); Study 14: Thurik (2007); Study 15: Franco & Haase (2010); Study 16: Fink & Disterer (2006); Study 17: Egbu et al. (2005); Study 18: Ngah & Jusoff (2009); Study 19: Tunc Bozbura (2007); Study 20: Raymond & Bergeron (2008); Study 21: Amato, Baron, Barbieri, Belanger, & Pierro (2016); Solomon, Frese, Friedrich, & Glaub (2013); Dyer, Nenque, & Hill (2014); Chatzoudes, Chatzoglou, & Viraimaki (2015); Study 22: Solomon et al. (2013); Study 23: Dyer et al. (2014); Study 24: Chatzoudes et al. (2015)

## CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Based upon the relevant literature, a conceptual framework was developed (Figure 1). The hypothesized model identifies a set of five variables covering entrepreneurial competency, marketing capability, financial resources, technology usage, and knowledge sharing as influencing the business success of FELDA SMEs.

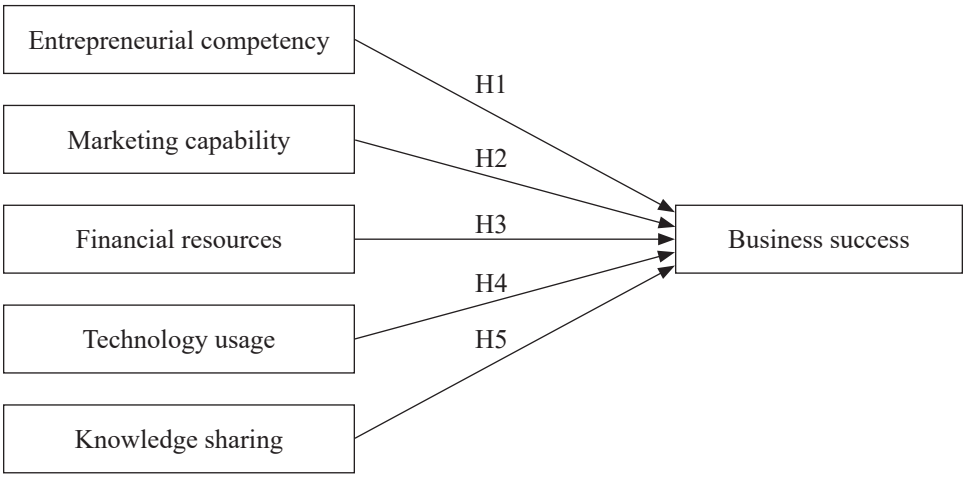


*Figure 1*. Research framework

Entrepreneurial competency refers to the small business owners' knowledge, skills and abilities (achieved via education, training, and experience), effectiveness of interpersonal relationships, network effects, and communication skills (Coleman, 2007; Collins-Dodd, Gordon, & Smart, 2004). Prior empirical works have established a relationship between entrepreneurial competency and business success (Coy et al., 2007; Karami et al., 2006; Eggers et al., 2013). It therefore becomes relevant to acknowledge that business owners, particularly in the small business context, act as a gatekeeper. These business owners enable the internal resources of a firm to be optimised in order to achieve business success (Ahmad et al., 2010). According to Amato et al. (2016) and Peris Bonet et al. (2011), the owner's attributes can drive motivation, positively impacting communication, and supporting an adaptive organisation. An owner that possesses entrepreneurial characteristics has the ability to recognise opportunities and transform these opportunities into a business activity, ultimately influencing the venture's success (Jasra et al., 2011). Specifically, Amato et al. (2016) argue that an entrepreneur who are more alert to their physical surrounding could acts independently in bringing forth a business concept or vision and able to carry a task through completion,

leading to business success. Additionally, entrepreneurs in successful firms are also found to have the willingness to support creativity, experimentation, possess forward-looking perspective, and demonstrate efforts to outperform industry competitors (Coy et al., 2007; Karami et al., 2006; Bowen et al., 2009; Peris Bonet et al., 2011; Eggers et al., 2013). Based upon these arguments, this study postulates that:

H1: Entrepreneurial competency is positively related to business success of FELDA's small businesses.

The resource based theory has suggested marketing capability as part of imitable organisational resources that may offer a potential basis for sustainable competitive advantage (Kozlenkova, Samaha, & Palmatier, 2014). Marketing capability refers to a company's ability to utilise its tangible and intangible resources to understand complex consumers' needs and ultimately achieve superior brand recognition (Nath, Nachappan, & Ramanathan, 2010). Differentiation strategy through new product and service development is believed to be able to facilitate firms in sustaining their competitive advantage (Vinayak & Kodali, 2014). However, these firms may not be able to reap the economic returns yet as potential customers may not fully aware of the uniqueness embedded in the products or services purchased (Agrawal & Bhuiyan, 2014). The unique features or characteristics may not be easily spotted by the customers at a first glance. This is because businesses need to have a good marketing capability to raise awareness of the individuals interested in purchasing the products (Chin, Lo, & Ramayah, 2013). Specifically within the context of small enterprises, marketing capability is often handicapped by poor resources including lack of cash flow and marketing expertise to handle statistical and strategic customer-related matters (Doole, Grimes, & Demack, 2006; O'Dwyer, Gilmore, & Carson, 2009). Despite this, small businesses strive hard to focus on their marketing capability as they believe that it is the key for competitiveness. Prior studies highlight (Kim et al., 2008; Steenkamp & Kashyap, 2010; Benzing et al., 2009) that small enterprises are able to offer great attention, friendly, and outstanding services as well as customised products since they usually target the small markets. All these are done to achieve business performance. Moreover, the rapid globalisation has forced them to acquire marketing strength in order to compete with the big firms (O'Cass & Sok, 2013). Additionally, appropriate resources need to be undertaken to ensure the small firms could develop and execute the right marketing mix strategies against the competitors (Benzing et al., 2009). Following these arguments, this study therefore postulates that:

H2: Marketing capability is positively related to business success of FELDA's small businesses.

There are various empirical studies verifying the importance of financial resources for successful business of small firms (Jasra et al., 2011; Bowen et al., 2009; Dyer et al., 2014). While financial resources are vital for an organisation to ensure smooth operation, small enterprises often have comparatively limited resources and additionally face greater difficulty in accessing funding sources (Peris Bonet et al., 2011). They are also found to have less adequate budgetary control system and because they are still small businesses they lack the economies of scales (Thurik, 2007). Sufficient financial resources are also required for the firms to make continuous investment in terms of employee training and education, and to initiate any innovation process in an effort to sustain their competitive advantage (Dyer et al., 2014). Following this trait, this study postulates that:

H3: Financial resources are positively related to business success of FELDA's small businesses.

The strategic importance of technological usage is well acknowledged in the literature as a factor that could enhance business success (Jasra et al., 2011; Raymond & Bergeron, 2008; Chatzoudes et al., 2015). Firms that utilise the latest technology tend to capture customers more than their competitors (Valacich & Schneider, 2014). Specifically, small firms that have timely access to technical, industry knowledge, and insights into the latest technological breakthrough will be more successful. By adopting information and communication technologies, this can ease collaboration between small enterprises and their supply chain partners (Greene, Brush, & Brown, 2015). Moreover, technologies such as the e-marketplace for instance, may allow firms to expand globally and enter into new markets that before were inaccessible due to geographical barriers, with a minimum cost (White, Daniel, Ward, & Wilson, 2007). This in turn would facilitate firms to gain and sustain competitive advantage. Few studies on small business performance have associated a strong link between technology resources and business success (Chatzoudes et al., 2015; Dibrel, Davis, & Craig, 2008; Kim et al., 2008). Those studies reported that information technology as vital for the small business to sustain innovation, promote customer loyalty, and stimulate demand for other products offered by the small business. Following these arguments, this study postulates that:

H4: Technology usage is positively related to business success of FELDA's small businesses.

Knowledge sharing has gained increased attention among researchers and managers as it can assist firms in optimising business goals and helps firms to foster individual and organisational learning (Desouza & Awazu, 2006; Erikkson

& Li, 2012). Purposeful sharing of useful knowledge for rapid individual and organisational learning can lead to innovation and development of better products, thus enhancing market performance (Egbu et al., 2005; Ngah & Jusoff, 2009; Chatzoudes et al., 2015). Small businesses tend to provide an environment that is conducive to generate knowledge due to their size and closer social relationships of employees, resulting in good communication flows that foster knowledge sharing (Chase, 2004). Since small firms are often supported by their cooperation and relationship-building with mostly local customers, they have less bureaucratic organisational structure, hence knowledge sharing can become uncontrollable (Desouza & Awazu, 2006). Knowledge should be the means for small businesses to overcome poor business environment and change the complex business environment to be manageable (Ngah & Jusoff, 2009). They normally compete on their know-how and use the knowledge to their advantage since they do not have sufficient financial resources to spend on land, labour, and capital. Based on these arguments, this study postulates that:

H5: Knowledge sharing is positively related to business success of FELDA's small businesses.

## RESEARCH METHODOLOGY

### Measure of Constructs

The constructs used in this study are measures adopted from the literature and adapted to suit the context of the study. Entrepreneurial competency was measured using five items adapted from Islam et al. (2011). These items assessed the levels of small business owners' personality in terms of innovativeness, leadership skills, and reactiveness. Meanwhile, seven items measuring marketing capability were adapted from Chittithaworn, Islam, Keawchana, and Yusuf (2011). These items measured the extent of a company's ability in utilising its resources to understand complex consumer needs and offer superior product, as well as achieve brand recognition. Four items measuring the level of financial resources were adapted from Cook and Nixson (2000). Based on Hove and Tarisai (2013), four items measuring technology usage were adapted. They measured the extent of information technology usage in processing business transactions, and communicating with suppliers and customers. Next, knowledge sharing was measured using four items adapted from Li and Lin (2006) while six items measuring perceived business success were extracted from Chittithaworn et al. (2011).

## Survey Administration and Sample

This study employed the survey method, which is using the questionnaire to test the conceptual model and hypotheses developed. The questionnaire was pilot tested on a sample of 20 entrepreneurs coming from small business enterprises. The feedback (e.g., inconsistency of wording, unclear or ambiguous items) from the pilot test was used to refine the questions for a larger study. The sample of this study was extracted from a population of 13,323 small business enterprises under the FELDA scheme that registered with SME Corp in February 2015. The stratified random sampling technique based on geographical location was used to avoid cases in which some members of the population were significantly under or over represented by the sample. The sample was divided into Northern region, Southern region, East Coast region and East Malaysia region. Subsequently, we used the systematic sampling technique to select and contact every 26th consecutive enterprise on the list, in order to yield a total of 500 firms. The questionnaires, including a cover letter in self-addressed and stamped envelopes, were mailed to the owners. Of the 500 questionnaires mailed out, 199 were returned, resulting in a 39.8% response rate. Table 2 presents the sample characteristics. Majority of the responding firms were from the manufacturing industry, with less than 10 employees. Most of them have established their businesses for about three to five years.

Since the response rate was only 39.8%, the validity and generalisability of the findings may be compromised by non-response bias. Being such, we conducted an assessment of the non-response bias by comparing the responses between the early and late respondents using an independent t-test (Armstrong & Overton, 1977). Early respondents were those who had completed and returned the questionnaires within the initial one-month response window, while late respondents refer to those who returned the questionnaires after the specified response period. Approximately 70% of the responses were from the early respondents. The results of the independent t-test showed that there was no significant difference between early and late responses, as the *p*-values were above 0.05, indicating that a non-response bias did not occur in the dataset (Table 3). Additionally, an independent t-test was also performed to assess for potentially confounding effects associated with dispersed geographical location. Our results found no statistically significant differences, as the *p*-value were above 0.05 (see Table 4).

Table 2
*Sample characteristics*

| | | Frequency | Percentage |
|---|---|---|---|
| Industry | Services | 66 | 33.2 |
| | Manufacturing | 133 | 66.8 |
| Year in business | < 3 | 42 | 21.1 |
| | 3–5 | 46 | 23.1 |
| | 6–10 | 68 | 34.2 |
| | 11–15 | 23 | 11.6 |
| | 16–20 | 7 | 3.5 |
| | > 20 | 13 | 6.5 |
| Annual sales revenue | < RM 50,000 | 87 | 43.7 |
| | RM50,000–RM100,000 | 52 | 26.1 |
| | RM101,000–RM250,000 | 36 | 18.1 |
| | RM251,000–RM500,000 | 12 | 6.0 |
| | RM501,000–RM1,000,000 | 9 | 4.5 |
| | > RM1,000,000 | 3 | 1.5 |
| Number of employees | 5–10 | 163 | 81.9 |
| | 10–15 | 21 | 10.6 |
| | 15–19 | 15 | 7.5 |
| Location | Northern region | 51 | 25.6 |
| | Southern region | 55 | 27.6 |
| | East Coast region | 48 | 24.1 |
| | East Malaysia | 45 | 22.6 |

Table 3
*Assessment of non-response bias*

| Factors | Early respondents (n = 143) | Late respondents (n = 56) | t-value | Significant |
|---|---|---|---|---|
| Entrepreneurial competency | 4.23 | 4.25 | 1.22 | 0.24 |
| Marketing capability | 4.87 | 4.80 | 1.20 | 0.18 |
| Financial resources | 4.39 | 4.42 | 1.10 | 0.13 |
| Knowledge sharing | 3.20 | 3.30 | 1.20 | 0.21 |
| Technology usage | 4.33 | 4.32 | 0.56 | 0.45 |
| Business success | 4.30 | 4.28 | 1.08 | 0.11 |

Table 4
*Assessment of confounding effects associated with geographical locations*

| Factors | Northern region (n = 57) | Southern region (n = 55) | East Coast region (n = 48) | East Malaysia (n = 45) | t-value | Significant |
|---|---|---|---|---|---|---|
| Entrepreneurial competency | 4.21 | 3.98 | 4.05 | 4.02 | 1.01 | 0.56 |
| Marketing capability | 4.17 | 4.28 | 4.22 | 4.01 | 1.00 | 0.58 |
| Financial resources | 4.13 | 4.05 | 4.12 | 4.10 | 0.22 | 0.55 |
| Knowledge sharing | 3.11 | 3.11 | 3.06 | 3.00 | 0.11 | 0.61 |
| Technology usage | 4.03 | 4.12 | 4.22 | 4.11 | 1.01 | 0.52 |
| Business success | 4.28 | 4.23 | 4.02 | 4.11 | 1.05 | 0.22 |

## ANALYSIS AND RESULTS

### Validity and Reliability

First, a convergent validity test was performed to assure that the multiple items that were used to measure the constructs are in agreement. As suggested by Hair, Hult, Ringle, and Sarstedt (2013), the factor loadings, composite reliability, and average variance extracted were used as indicators to assess the convergent validity. The loadings for all items exceeded the recommended value of 0.5 (Bagozzi, Yi, & Singh, 1991). The composite reliability values, ranged from 0.77–0.87, which exceeded the recommended value of 0.7 (Hair et al., 2013). The average variance extracted were in the range of 0.50–0.64, which exceeded the recommended value of 0.5 (Hair et al., 2013). Table 5 depicts the results of convergent validity.

Second, a discriminant validity test was conducted to assure that the measures do not reflect other variables. It is indicated by low correlations between the measure of interest and the measures of other constructs (Cheung & Lee, 2010). As suggested by Fornell and Larcker (1981), discriminant validity can be examined by comparing the squared correlations between the constructs and the variance extracted for a construct. As shown in Table 6, all the scales appeared to have a substantially higher average variance extracted value compared to their squared correlation with other constructs, providing evidence that there was discriminant validity. In total, the measurement model demonstrated adequate convergent and discriminant validity.

Table 5
*Convergent validity*

| Constructs | | Items | Factor loadings | CR | AVE |
|---|---|---|---|---|---|
| Entrepreneurial competency | EO1 | I have an ambitious goal with clear vision and mission to run my business | 0.77 | 0.87 | 0.60 |
| | EO2 | I have a characteristics of autonomy, competitive aggressiveness and risk taking | 0.76 | | |
| | EO3 | I am motivated and have high confident to run my business well | 0.82 | | |
| | EO4 | I am innovative and proactive | 0.80 | | |
| | EO5 | I have good leadership skills, reliable managerial skills, and decision-making skills | 0.71 | | |
| Marketing capability | MP1 | My company has a good service and delivery system | 0.80 | 0.86 | 0.62 |
| | MP2 | My company has a good knowledge of customers and their needs | 0.81 | | |
| | MP3 | My company has a good image and reputation | 0.78 | | |
| | MP4 | We have good quality product/service | 0.76 | | |
| | MP5 | We have effective sales skills, marketing and promotion activities | 0.77 | | |
| | MP6 | My company has high ability to find quick solutions for changing customer needs | 0.82 | | |
| Financial resources | OR1 | My company has a good financial base and adequate cash resources | 0.74 | 0.82 | 0.53 |
| | OR2 | We have a good accounting practice and systems to manage our operations | 0.64 | | |
| | OR3 | We make use of public financial support and grants | 0.76 | | |
| | OR4 | We keep track of financial reports on the sales, purchase, income statement, and balance sheet | 0.77 | | |

(*continue on next page*)

Table 5 (*continued*)

| Constructs | | Items | Factor loadings | CR | AVE |
|---|---|---|---|---|---|
| Knowledge sharing | KM1 | Employees in my company share know-how from work experience with each other | 0.77 | 0.88 | 0.51 |
| | KM2 | Employees in my company share expertise obtained from education and training methods | 0.69 | | |
| | KM3 | Employees in my company share business knowledge obtained informally (such as news stories and gossip) | 0.77 | | |
| | KM4 | Employees in my company share business knowledge from partners (such as customers, suppliers, and allies) | 0.60 | | |
| Technology usage | TU1 | My company uses webpages, email, and e-commerce technologies for business purposes | 0.78 | 0.77 | 0.64 |
| | TU2 | Our company's information could be accessed by customers and suppliers through internet | 0.78 | | |
| | TU3 | We use the internet to learn on the industry trends | 0.82 | | |
| | TU4 | Our company uses online systems to do banking transactions, applying permits, paying taxes, and others | 0.81 | | |
| Business success | BS1 | I am happy with the way my business is operated | 0.72 | 0.82 | 0.50 |
| | BS2 | I am satisfied with the growth of net income of the business | 0.59 | | |
| | BS3 | I consider my business as successful | 0.58 | | |
| | BS4 | I consider my business as growing | 0.79 | | |
| | BS5 | My business will continue to expand in the future | 0.72 | | |
| | BS6 | The company's market share is growing from year to year | 0.79 | | |

Table 6
*Discriminant validity*

| | Mean | SD | EO | MP | FR | KM | TU | BU |
|---|---|---|---|---|---|---|---|---|
| Entrepreneurialcompetency (EO) | 4.12 | 0.25 | **0.77** | | | | | |
| Marketing capability (MP) | 4.74 | 0.36 | 0.42 | **0.79** | | | | |
| Financial resources (OR) | 4.34 | 0.42 | 0.57 | 0.51 | **0.73** | | | |
| Knowledge sharing (KM) | 3.21 | 0.65 | 0.52 | 0.25 | 0.32 | **0.71** | | |
| Technology usage (TU) | 4.15 | 0.12 | 0.62 | 0.33 | 0.40 | 0.32 | **0.80** | |
| Business success (BS) | 4.32 | 0.66 | 0.65 | 0.62 | 0.41 | 0.32 | 0.55 | **0.71** |

*Note*: The numbers in bold in the diagonal row are square roots of the AVE; SD = standard deviations

### Assessment of Structural Model

Assuming that the hypothesized measurement model satisfied the validity and reliability assessment, we proceeded with hypothesis testing. The predictive accuracy of the model was evaluated in terms of the portion of variance explained. The results revealed that the model is capable of explaining 30.3% of the variance in business success. Nonparametric bootstrapping was applied (Hair et al., 2013) with 5,000 replications to test the structural model. The significance of direct effects specified by the research model was evaluated (Table 7). The results revealed that the effects of entrepreneurial competency ($\beta = 0.27$, $p < 0.001$) and technology usage ($\beta = 0.22$, $p < 0.001$) on business success are positive and significant. In contrast, the effect of marketing capability ($\beta = 0.14$, $p = 0.06$), financial resources ($\beta = 0.13$, $p = 0.12$) and knowledge sharing ($\beta = 0.02$, $p = 0.76$) on business success are non-significant. From these results, H1 and H5 are supported while H2, H3, and $H_4$ are rejected.

## DISCUSSION

This study utilises the RBV theory to determine the antecedents of business success. This study has extended prior empirical works by focusing specifically on small businesses under the FELDA scheme. Based on the RBV theory, two variables were found to be congruent with the existing research.

The significant role of entrepreneurial competency highlights that the business owner plays a vital role in succeeding the business. This finding is supported by prior research works (Peris Bonet et al., 2011; Eggers et al., 2013) . Since small firms are constraint by size and operated by the owners, strong entrepreneurial characteristics are important in determining the success of organisations. For small

Table 7
*Structural model analysis*

| Hypothesis | Relationships | Path coefficients | Decision | t-value | Standard error |
|---|---|---|---|---|---|
| H1 | Entrepreneurial competency → Business success | 0.27*** | Supported | 3.74 | 0.02 |
| H2 | Marketing capability → Business success | 0.14 | Not supported | 1.25 | 0.01 |
| H3 | Financial resources → Business success | 0.13 | Not supported | 1.22 | 0.01 |
| H4 | Knowledge sharing → Business success | 0.02 | Not supported | 1.08 | 0.00 |
| H5 | Technology usage → Business success | 0.22*** | Supported | 3.66 | 0.05 |

*** $p < 0.001$

businesses, the owners are involved in all decision roles in the organisation. As a result, there is less dependency on formal decision models and more reliance on the owners' institution (Kelliher & Reinl, 2009). Owing to this factor, the owner needs to be an expert in all fields of management. Besides that, the owner also needs to be capable of motivating and nurturing employees to get them to consistently cooperate to ensure competitive advantage is always achieved; thereby company is sustained. The owner's capability to become proactive and aggressive in initiatives to alter the competitive scene to the advantage of firms facilitate in improving the company's performance. This characteristic is necessary in helping many responding firms to face the rapidly changing environment and meet the varying emerging customers' requirements (Coy et al., 2007; Karami et al., 2006; Eggers et al., 2013).

In this study, we also found that the success of small businesses under the FELDA scheme is also shaped by technology usage. From our results, it appears that business owners who are able to integrate IT into their business processes and activities could enhance their business growth. Small businesses that are often faced with financial capital problems may face limitation in terms of their participation in economic activities. However, their participation in information technology could facilitate them in gaining cost-effective operations. For example, the use of e-marketplace may help these businesses to expand into new markets and select suppliers that offer services and products at lower, but competitive prices (Stockdale & Standing, 2004). Perhaps, a lack of technology resources over time may render the firm incapable of meeting customers' changing requirements (Dibrell et al., 2008).

Past studies have highlighted the importance of financial resources in determining the small business success (Jasra et al., 2011; Bowen et al., 2009; Dyer et al., 2014). Small firms are often faced with restrictions in innovation activities due to restricted financial resources, hence limiting their business success. Nevertheless, in this study, the effect of financial resources is found to be non-significant to the responding firms' business success. A probable reason for this finding is that being a developing country, the small firms in Malaysia are largely dependent on the public sector to foster and sustain their growth (Muhammad et al., 2010; Hashim, 2012). For this study, FELDA intervention in providing funding could provide impetus for the small businesses to achieve business success. For example, FELDA has allocated RM100 million in interest free loans for the small businesses to purchase equipment and machinery (Aziz, Hassan, & Saud, 2012). Apart from that, FELDA has also cooperated with other agencies in providing training for human capital development in the area of business management, financial, marketing, and product development. With so much opportunities provided by FELDA, these small businesses may not perceive financial resources as limiting them to achieve business success.

While there are substantial researches that reported an association between business success and knowledge sharing (Egbu et al., 2005; Ngah & Jusoff, 2009; Chatzoudes et al., 2015), this study appears to have found insufficient empirical evidence to support this contention. This phenomenon occurs, perhaps due the low level of participation on such practice among employees of small firms (Durst & Runar Edvardsson, 2012). Moreover, due to the lack of financial resources and expertise, small firms' day-to-day business operations needed close attention, resulting in insufficient time available to resolve strategic issues. This situation may result in most knowledge being kept in the minds of the owner and some key employees instead of stored or shared with substitution arrangement or with the other employees (Durst & Wilhelm, 2012). While the use of technology in conducting business transactions is common among the small scale businesses under the FELDA scheme they do not possess systems in place like data warehouse and decision support system that make full use of the technology infrastructure (Aziz et al., 2011) to facilitate knowledge sharing practice. Therefore, it is unlikely for the responding firms to exploit the benefits.

Similar to knowledge sharing, this study also found non-significant effect of marketing capability on business success. This is probably because the sampling firms do not have the right characteristics; as a result generating the contradicting results. Since the responding firms consisted of small businesses, they may not even have a strategic marketing plan (Farhangmehr, 2015). In the context of FELDA, most of the entrepreneurs are more likely to focus on their day-to-day operations

(Jamak, Ali, & Ghazali, 2014). They prefer to venture into small scale businesses or undertake contract work that is within their settlement's perimeter. As a result, most of the products produced are similar, with basic packaging strategy. This factor may cause the business owners to have lesser concern for the marketing and product strategy plan.

## IMPLICATION AND CONCLUSION

This study offers theoretical and practical contributions by demonstrating the applicability of the RBV theory in determining the critical internal factors, that is, factors that may lead to FELDA small business success. Despite the various past studies on business success factors among small businesses, their results may not be easily generalised. This is due to the fact that small businesses often aim to achieve a variety of financial and non-financial goals, leading to reduced comparability of the findings across multiple firms. For example, in the context of FELDA, these firms are formed not only due to economic reasons, but also the formation is aimed at reducing social issues and migration of young generation to big cities. Hence, this research improves our understanding by uncovering the differences of critical success factors as a result of the different settings. Despite this limitation, this study has provided additional evidence to support the importance of entrepreneurial competency and technology usage as these factors are capable of enhancing business success of FELDA's small businesses.

In fact, the owners or managers of the businesses under the scheme have to recognise and thereafter consider the strategic role of technology as this can increase efficiency, performance, and competitiveness. Various technologies can be applied to enhance business activities such as inventory management, distribution, manufacturing, and even customer service. For example, the use of bar code systems in managing the retail operations could help the small businesses to identify products electronically, and facilitate inventory control and replenishment activities at the store level (De Marco, Cagliano, Nervo, & Rafele, 2012). Moreover, the IT tools are utilised to transmit, communicate, and share information within the business entity and supply chain partners. Therefore, IT needs to be capitalised effectively to support quality information and knowledge management.

The important role of entrepreneurial competency in ensuring successful business suggests a need for the government and FELDA to continue providing appropriate training and advice. For example, various training workshops to educate the business owners on the efficient utilisation of farming systems, watering regimes, pruning and harvesting machinery, as well as good supply chain practice provides

the opportunity to upskill the community. Apart from that, FELDA can also initiate the provision of training programmes that are aimed at developing entrepreneurial character building. This entrepreneurial competency acquired can assist firms in becoming proactive in terms of gaining first-mover advantages which can facilitate firms to acquire premium market segments and predict the market ahead of competitors. This is important to be exercised, particularly with the increasingly competitive global market. Lack of entrepreneurial competency among the business owners is not impactful; instead could result in the companies being excluded from the supply chain.

Despite the fact that this study is able to extend the relevant literature relating to critical success factors of small businesses, the present study contains some limitations. This is because our data was only confined to small firms under the FELDA scheme, this may limit the generalisability of the finding. Nevertheless, this study appears to provide first-hand information and approximation that enables one to better understand the internal success factors of FELDA's small businesses by applying the RBV theory. It has been our earnest hope that this study was able to provide empirical evidence with regards to small business critical success factors. The insights that have been gained from this study could facilitate industry practitioners to develop comprehensive business strategies and effective institutional policies to maintain the global competitiveness of small businesses, particularly those that are in the FELDA scheme.

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# 10

# THE INFLUENCE OF TRANSFORMATIONAL AND TRANSACTIONAL LEADERSHIP ON KNOWLEDGE SHARING: AN EMPIRICAL STUDY ON SMALL AND MEDIUM BUSINESSES IN INDONESIA

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**ABSTRACT**

*Knowledge sharing plays an important role in knowledge management. Knowledge sharing intends to optimise knowledge sources. Optimum knowledge sources enable particular businesses to become more innovative. However, knowledge sharing is not an easy and simple process, and therefore, it requires another factor. The existence of leadership is expected to be a factor that solves this problem. The goal of this research is to analyse and identify the function of the transformational and transactional leadership that an owner or manager of a Medium-Scale Business Unit can use to encourage knowledge sharing. A survey was conducted on small- and medium-scale business production sectors in the North Sulawesi Province of East Indonesia. The data used in this research included 176 samples. The collected data were then analysed by using a variant-based structural equation model or Partially Least Square (PLS-SEM). The data analysis results provide empirical evidence that a transformational leadership style, particularly in the individual consideration and individual inspirational dimensions, positively impacts knowledge sharing activities. However, other dimensions, namely, intellectual stimulation and inspirational motivation, do not significantly encourage activities related to knowledge sharing. Moreover, transactional leadership on the contingent reward dimension does not significantly impact knowledge sharing.*

**Keywords:** knowledge sharing, transformational leadership, transactional leadership

## INTRODUCTION

Knowledge resources have become essential to increasing the competitiveness of both small and large companies. Darroch (2005) states that a company that is capable of managing knowledge effectively will become a more innovative company. Effective knowledge management indicates that a company has taken measures to improve its knowledge resources. According to Argote et al. (1999, as cited in Srivastava, Bartol, & Locke, 2006), knowledge sharing is an

important component of knowledge management because it has a close relation to optimise knowledge resources.

Although knowledge sharing is essential to a company, one significant problem is that knowledge sharing does not emerge automatically. Szulanski (1996; 2000) emphasises that knowledge sharing is an intricately complicated process because of the different perceptions of knowledge givers and knowledge receivers. To overcome this difficulty, one approach proposes a leader to ensure effective knowledge sharing (Srivastava et al., 2006).

Previous empirical research has supported the idea that a leader functions as a main factor in accelerating knowledge sharing in one organisation (Xue, Bradley, & Liang, 2010; Singh, 2008; Srivastava et al., 2006). Studies conducted by Xue et al. (2010) and Srivastava et al. (2006) reveal that an empowering leader positively impacts knowledge sharing. Singh (2008) explains that supporting, consultative, and delegative leadership significantly influences knowledge management practices including knowledge sharing. Nevertheless, these studies have only focused on similar types of leadership. Bass (1985, as cited in Yukl, 2006) argues that transformational and transactional leadership suggests different styles but that these styles are perfectly blended in a leader.

Bass (1985, as cited in Yukl, 2006) explains that it is possible for one leader in an organisation to have different leadership styles (i.e., transformational and transactional), which become his/her innate characteristics. By using the model developed by Bass (1985), a researcher can explore the correlation between leadership style and knowledge sharing in a more specific and comprehensive manner. Many previous studies of transformational and transactional leadership emphasise transformational and transactional leadership style as a single variable. To the contrary, this research examines the inter-dimensional relationship between transformational and transactional leadership styles. Accordingly, this research provides a detailed description and specific information concerning the impact of transformational and transactional leadership styles on knowledge sharing.

Providing a credible answer to the research problems requires in-depth research of an organisation where the roles of leaders in business and organisational knowledge development become crucial. Therefore, the study was conducted on a Small- to Medium-Scale Business Unit because its management control is administered by one person who serves as both the owner and manager (Stanworth & Curran, 1976, as cited in Indarti, 2010). Therefore, these roles enable the owner or manager to be the most important actor in the development of employees and the company. This assumption is expected to better examine the leadership role compared with the management of large companies. Large

companies usually have more sophisticated organisational structures because they separate the roles of leaders in several departments. As a result, the roles of leaders in a large organisation overall are less dominant.

This article is divided into four sections. The first section discusses theories of knowledge sharing and transformational and transactional leadership, examines relevant empirical findings and develops hypotheses. The second section contains detailed information regarding the research method applied in this study. The final section comprises a discussion, conclusion, and limitations.

## THEORETICAL FRAMEWORK AND HYPOTHESIS

### Knowledge Sharing

According to Kamasak and Bulutlar (2010), knowledge sharing is inseparable from knowledge creation. Nonaka, Krogh and Voelpel (2006) defines knowledge creation as an incessant learning process through acquiring new context, perceptions and knowledge. Thus, knowledge sharing refers to a social activity (Dalkir, 2005) that requires supportive behaviour and motivation to accelerate it (Xue et al., 2010; Liao, Fei, & Chen, 2007). Without knowledge sharing, knowledge will be underutilised (Srivastava et al., 2006).

Knowledge sharing in an organisation can be defined tacitly or explicitly as a knowledge exchange process to create new knowledge (Hoof & Ridder, 2004). Knowledge sharing can occur through individual activities such as contributing ideas, suggestions, advice, information, experiences, and skills to other team members in an organisation (Hoof & Ridder, 2004; Bartol & Srivastava, 2002; Davenport & Prusak, 1998). Hoof and Ridder (2004) argue that knowledge sharing activities involve two dimensions: knowledge donation and knowledge collection. Knowledge donation refers to a process of providing knowledge by establishing communication among individuals. Knowledge collection, in contrast, is defined as a process of acquiring knowledge from other individuals by consultation, persuasion, and an invitation to other individuals to share the knowledge that they have.

Knowledge sharing is key to successfully translating individual learning to organisational capability (Frey & Oberholzer-Gee, 1997). However, Lam and Lambermont-Ford (2010) warn that knowledge sharing is difficult because it depends on the individual's willingness to share. Szulanski (1996; 2000) identifies this obstacle as *knowledge stickiness* because it becomes a social process that has complex difficulties and causal ambiguity. Many previous studies, both quantitative and qualitative, have provided evidence that knowledge

sharing has many benefits, such as increasing the innovation ability and accelerating the work performance of a team (Tsai, 2001; Dyer & Nobeoka, 2000; Darroch, 2005; Srivastava et al., 2006; Liao et al., 2007; Lin, 2007).

**Transformational Leadership and Knowledge Sharing**

Bass (1985, as cited in Yukl, 2006) further explains that transformational leaders strive to motivate their subordinates to achieve a work performance that exceeds the organisational expectation. Therefore, Yukl (2006) suggests a transformational leader uses the following methods to motivate his or her subordinates:

1. Encourage employees to have a deeper awareness of the importance of output;
2. Encourage employees to put group interests first; and
3. Uphold the higher needs of employees, such as pride and self-actualisation.

Bass (1985; 1990, as cited in Yukl, 2006) mentions four dimensions in transformational leadership: motivation sources, inspiration sources, individual consideration source, and intellectual stimulation.

Yukl (2006) and Northouse (1997) explain that an inspiration source, better known as a charismatic leader, refers to the type of leader who serves as a role model to all subordinates. This leader usually possesses high moral standards and is highly respected and trusted by subordinates. A transformational leader is a source of inspiration because this leader can be communicative in delivering a future vision. Intellectual stimulus is a part of transformational leadership and effectively encourages employees to be more creative and innovative. Leaders who have these characteristics will undoubtedly be able to motivate employees to develop new methods in solving problems in an organisation (Northouse, 1997). A consideration source is a leadership type that creates an encouraging work environment. This leader is willing to listen to employees' complaints and needs. This type of leader can act as a trainer, advisor, and consultant (Yukl, 2006; Northouse, 1997).

Trust is an important factor that supports the knowledge sharing process (Davenport & Prusak, 1998). When an individual has obtained trust, he or she is willing to share more easily, including share knowledge. An inspirational leader gains absolute trust from subordinates; thus, inspiration positively impacts knowledge sharing. Similarly, a leader serving as a motivational source will be communicative and excited in delivering his or her insights. When subordinates have been greatly affected by this leader's perceptions, they will share knowledge much more easily. As an intellectual stimulus, an inspirational leader fully

comprehends the importance of knowledge. As a result, this leader encourages subordinates to share knowledge. A good working environment also encourages knowledge sharing (Politis, 2004). A leader who becomes a consideration source can create a good working environment.

Deluga (1990) states that the transformational leadership style establishes an emotional bond in the leader and subordinate relationship, which is represented through trust and confidence in the influence and capability of the leader. A manager who has a transformational leadership style creates an environment where the subordinates feel a strong emotional bond with the leader.

A strong emotional bond between the leader and subordinates enables the owner or manager of a Small-Medium Business Unit to persuade the employees to develop knowledge for the benefit of the company. Through this emotional connection, employees are willing to share knowledge even without being asked.

From this statement, it can be concluded that the owners or managers of a Small-Medium Business Unit who possess transformational leadership have the ability to change the behaviour of their subordinates. These owners and managers establish knowledge-sharing activities with subordinates and encourage them to be receptive to knowledge. This view is reinforced by research conducted by Bryant (2003) and Crawford (2005), who demonstrate that the transformational leadership style positively affects knowledge management, including knowledge sharing activities.

Accordingly, the first hypothesis can be stated as follows:

H1: Overall, dimensions of transformational leadership positively affect knowledge sharing activities.

**Transactional Leadership and Knowledge Sharing**

According to Bass (1985, as cited in Yukl, 2006), transactional leadership can be defined as a transactional process between leaders and subordinates. A transactional manager encourages subordinates to work through the observance of an explicit and implicit agreement established between leaders and subordinates (Deluga, 1990). In transactional leadership, for example, the employees have been given a distinctive job target. If they achieve the target, these employees will receive a reward or incentive from the leaders. If the employees do not achieve the target, the manager will take evaluative action, such as imposing sanctions.

Bass (1985; 1990, as cited in Yukl, 2006) further explains that the transactional leadership style can be divided into two dimensions: contingent reward and exception management. Contingent reward refers to an exchange process between leaders and subordinates that involves a reward (Northouse, 1997). Northouse (1997) further explains that contingent reward enables the leader to establish an agreement with employees regarding what they must do and what they will gain if the agreed work is successfully completed. However, exception management is a form of correction or evaluation by leaders when an employee makes mistakes (Northouse, 1997; Bass, Avolio, Jung, & Berson, 2003).

Consistent with Northouse (1997), Yukl (2006) describes managers who have a transactional leadership style as having the following characteristics.

1. Leaders know what the employees want and explain that the employees will obtain it if their achievements fulfil the expectations of the company.
2. Leaders exchange employees' efforts with rewards.
3. Leaders are responsive to the needs of their employees as long as it equals the value of the work that the employees have performed.

According to Deluga (1990), managers with a transactional leadership style consider the leader and subordinate relationship to be work relationships or an employment agreement in either implicit or explicit ways. Deluga (1990) also explains that employees receive rewards when obeying this employment agreement. Alternatively, employees who violate this agreement could receive sanctions.

Unlike the transformational leadership style, the transactional leadership style makes the leader-subordinate relationship a joint-venture relationship or agreement, not an emotional bond. With the transactional leadership style, the leader assumes that the employees' knowledge belongs to the company. Petigrew and Mechanic (1972; 1962, as cited in Deluga, 1990) indicate that the information and expertise of subordinates may be subject to negotiations to reach an agreement.

Bock and Kim (2002) argue that knowledge sharing activity is closely related to economic exchange theory. This argument means that knowledge sharing depends on the benefits and costs incurred by the employee. In addition to this opinion, Bartol and Srivastava (2002) explain that management should provide a good system to provide extrinsic rewards, such as salary increases, bonuses and incentives, to encourage knowledge sharing activities. Bartol and Srivastava (2002) believe that these activities can be useful in providing stimuli for employees to improve the company's development of knowledge through

knowledge sharing activities. Higher employee participation in knowledge sharing means that a higher reward can be received.

A transactional leadership style can expand its influence through rewards such as salary increases or promotions or through sanctions if the employee makes a mistake (Yukl, 2006). Providing rewards and sanctions is expected to encourage employees to collect and donate new knowledge gained. Bock and Kim (2002) explain that the practices of rewards and sanctions are common for companies to encourage knowledge sharing activities. This argument can be analogised as a relationship between teacher and pupil. When a teacher assigns homework, students will finish it to receive a good score and avoid any punishment that the teacher may give if the students do not complete the homework.

Based on the opinions and examples above, the employees expect that the expectation from management can be fulfilled as long as they believe that they can earn additional income, obtain a promotion and the opportunity to develop themselves and avoid sanctions (Yukl, 2006; Bass et al., 2003). This expectation also includes knowledge. This statement can be formulated in the following hypotheses:

H2: The entire dimension of transactional leadership positively affects knowledge sharing activities.

## CONCEPTUAL MODEL

The explanation of these theories with the development of the hypothesis can be summarised in Figure 1.

## RESEARCH METHOD

A survey was conducted in Small-Medium Business Units in Indonesia. To represent Indonesia, we choose the North Sulawesi Province. The research was conducted in the North Sulawesi Province, Indonesia because of its fascinating development. North Sulawesi is considered to be one of the regions experiencing the highest economic growth. According to the data obtained from the North Sulawesi Statistical Bureau, the growth of North Sulawesi's economy is even higher than Indonesia's economic growth, which is only 6.3%.

This research faces obstacles because the data gained from SME agencies of the North Sulawesi Province do not reflect reality. Therefore, the choice of using a

non-random purposive sampling method is wise. The samples taken must meet the following two criteria.

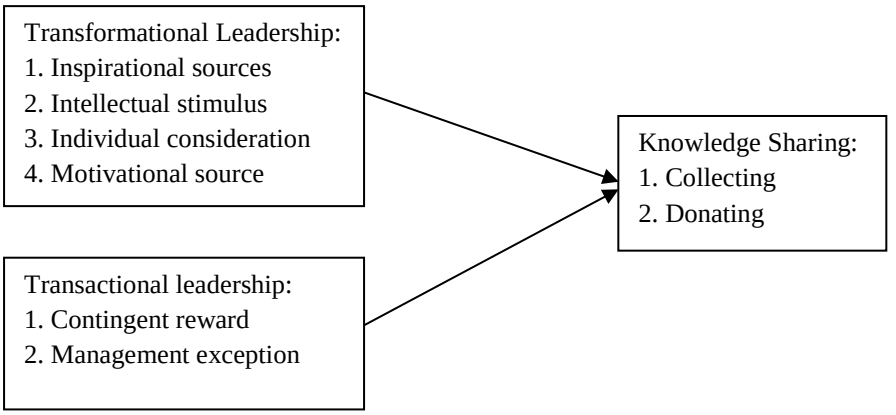


*Figure 1.* The conceptual model

1. Small businesses must have been established for a minimum of three years because this length of time is assumed to give sufficient time for leaders and/or managers to have better knowledge concerning their organisation.
2. SMEs must have fewer than 100 employees (Indonesia statistics bureau or BPS criteria).

**Measurement**

The instruments used in this research were also used in previous research. Every construct was measured by using several questions. The questionnaire instruments were measured using 5-point Likert scales (1 = seldom/rarely to 5 = very often/almost always).

Transformational and transactional leadership styles were measured using the self-report research instrument MLQ-1995. According to Bass et al. (2003), MLQ is perfectly applicable for leaders from the employees' perspective and for self-analysis. Transformational leadership style inspirational sources, intellectual stimulus, individual consideration and motivational sources were tested using 4-item questions for each dimension. A transactional leadership style of contingent reward and management exception (active and passive) were tested using 4-item questions for each dimension.

Knowledge sharing activities were measured using 10 items. This instrument was adapted from Hoof and Ridder (2004), who determined that it was suitable for either individual or organisational analysis. This research measurement focuses on how many times the leader practices transformational and transactional leadership styles in his/her organisation and how active knowledge sharing activities collect knowledge from his/her employees. This research measurement also focuses on how active knowledge sharing activities make employees willing to donate their knowledge to the organisation as it is perceived by the owner of a Small-Medium Business Unit. We can conclude the measurement focus is to understand how leaders perceive themselves according to their own perception regarding knowledge sharing activities in a company.

This self-report measurement may result in social desirability bias; thus, this research involves several approaches to control such bias. The first approach provides a solid rationale for the use of self-analysis (see Conway & Lance, 2010). In the Small-Medium Business, the owner or managers are the main factor in charge of and responsible for the firm's growth and knowledge development, and all information goes to these people (Stanworth & Curran, 1976, as cited in Indarti, 2010; Tidd & Bessant, 2005). Therefore, by studying the owner/managers' perceptions, information is obtained on the entire organisation. The second approach is to conduct an informal interview. The questionnaire was directly sent to selected respondents and asked them to provide direct answers. Though this method requires good communication skills, it minimises bias because the surveyor, by using his/her personal approach, can help respondents provide more honest answers and avoid merely beneficial answers. The last approach protects respondents' anonymity and ensures that there is no correct answer. According to Podsakoff, McKenzie, Lee, and Podsakoff (2003), these procedures should reduce people's evaluation apprehension and make respondents less likely to edit their response to be more socially desirable and consistent with what the researcher wants.

This research instrument was translated from its original language, and the researcher consulted several scholars from two reputable universities in the North Sulawesi Province. In addition, this research involved competent experts on Small-Medium Business Units in the North Sulawesi Province to justify the research instrument. After consulting with scholars and experts, some of business owners were asked to conduct pretest of the research instrument. Based on the results of the discussions with experts and small business practitioners, one method to adjust the research instrument was changing the word 'I' to 'we'. For example, the original statement from MLQ-1995 stated "I look for different ways to solve problems". We changed this statement to "we look for different ways…". This change aims to make respondents feel as though they were the organisation

instead of involving personal feelings in answering questions on the questionnaire.

**Data Collection**

Two hundred fifty (250) questionnaires were directly distributed to respondents. The number of questionnaires is adequate because PLS-SEM has good statistical power, although the number size of the samples is limited (see Hair, Tatham, & Black, 2010; Hair, Sarstedt, Ringle, & Mena, 2011). One hundred seventy-six (176) completed questionnaires were returned that qualified for analysis; the remaining 74 questionnaires were not used in the analysis because they omitted more than 15% of the missing data. Based on Heir et al. (2010) missing data more than 10% should drop from the data analysis.

**Respondent and Business Profiles**

Based on the data presented in Table 1, most of the owners or managers (69.31%) of a Small-Medium Business Unit who participated in this research are male. Most of these owners or managers are 36–40 years old (54%), and the rest are over 40 years old (22.7%). The educational background of most owners of Small-Medium Business Units (40.90%) is High School. Table 1 also reveals that the respondents have good experience because they have run the business for approximately 15 years. Most Small-Medium Business Units in the production sector are located in rural areas (60.79%), and the employees come from the village where these Small-Medium Business Units conduct their activities.

The average number of full-time employees is 11 people, and the average number of part-time employees is 13 people. From the number of employees, it can be concluded that most businesses are classified as small-scale businesses (BPS Qualification). Respondents from Small-Medium Business Units in the production sector possess assets of approximately 5 to 50 million rupiah (50.56%). Further, the average amount of monthly onset of Small-Medium Business Units in the production sector is below 50 million rupiah (61.71%). The amount of onset and income of respondents indicate that Small-Medium Business Units in the production sector in the North Sulawesi Province are classified as micro or small-scale businesses (see Law no. 20/2008).

Table 1
*Respondent and business profiles*

| Dimension | Category | The number of respondents | Percentage |
|---|---|---|---|
| Sex | a. Male | 122 | 69.31 |
| | b. Female | 54 | 29.54 |
| Age range | a. < 25 years | 13 | 7.4 |
| | b. 26–30 years | 12 | 6.8 |
| | c. 31–35 years | 16 | 9,1 |
| | d. 36–40 years | 95 | 54 |
| | e. > 40 years | 40 | 22.7 |
| Education background | a. Elementary School | 32 | 18.18 |
| | b. Junior High School | 31 | 17.61 |
| | c. Senior High School | 72 | 40.90 |
| | d. Bachelor | 8 | 4.54 |
| | e. S1 (Undergraduate) | 32 | 18.18 |
| | f. Others (S2) | 1 | 0.56 |
| Business unit | a. Craft Industries | 52 | 29.54 |
| | b. Chemical & Construction | 16 | 9.09 |
| | c. Metal & Electronics | 34 | 18.89 |
| | d. Food Processing | 44 | 19.31 |
| | e. Clothing & Leather | 30 | 17.04 |
| Location | a. Village | 107 | 60.79 |
| | b. City | 57 | 32.86 |
| | c. Suburban | 12 | 6.81 |
| Average employees (continuously scaled) | a. Full Time | 11 | |
| | b. Part Time | 13 | |
| The amount of asset (last two years) | a. Less than 5 million | 59 | 33.52 |
| | b. 5 million to 50 million | 89 | 50.56 |
| | c. > 50 to 100 million | 13 | 7.38 |
| | d. > 100 to 150 million | 5 | 2.84 |
| | e. > 150 million | 10 | 5.68 |
| Income per month | a. < 50 million | 108 | 61.71 |
| | b. > 50 to 100 million | 37 | 21.02 |
| | c. > 100 to 150 million | 21 | 11.93 |
| | d. > 150 million | 10 | 5.68 |

*Source:* This processed data has been obtained by author in 2013.

## DATA ANALYSIS AND RESULTS

The data analysis method applied in this research is the variant-based *Structural Equation Model* (SEM) or *Partially Least Square* (PLS-SEM) with the SmartPLS 2.0 program. PLS-SEM is chosen as a suitable data analysis method because it is robust toward the classical assumption problem and suitable for the measurement problem (Hair et al., 2011). Validation using PLS covers the construct validity test (convergent validity and discriminant validity) and composite reliability. Then, hypothesis justification can be conducted.

### Validity and Reliability

The validity tests intend to determine the extent to which the measurement instruments reflect theoretical constructs, as indicated by empirical evidence (Hair et al., 2010; Cooper & Schindler, 2008). The result of validation finally shows that among the 28 questions, 12 questions must be excluded from the measurement; thus, only 16 questions can be used in this study. Some of the questions should be excluded because the factor loading value cannot reach the minimum limit to be considered valid (0.5) and/or because they have a cross loading problem (Hair et al., 2010). From this research, it is clearly observed that the only valid dimension of transactional leadership is contingent reward. However, the factor loading values of the dimensions of exception management are below the minimum limit of 0.5, or these dimensions have a cross loading problem. As a result, such variables should be eliminated from hypothesis testing.

A convergent validity test is conducted to determine the correlation among research constructs. The indicators used in the convergent validity are the factor loading values that accumulated in the construct and AVE values. AVE values are considered good if they reach minimum of 0.5 score (Hair et al., 2010; 2011). Hair et al. (2011) reveal that the most appropriate method in the reliability test in PLS-SEM to measure the internal consistency is composite reliability because it reflects the true value of research constructs reliability. The ideal value for composite reliability is $\geq 0.7$ (Hair et al., 2011). The overall results of convergent validity and reliability testing can be observed in Table 2.

Table 2 shows that all of the research variables have valid and ideal factor loading values, i.e., they are greater than 0.5 (Hair et al., 2010). The entire value

Table 2

*Convergent validity and composite reliability*

| Variable | Item | Convergent Validity | | Composite Reliability |
|---|---|---|---|---|
| | | Loading factor | AVE | |
| Inspiration sources (INDV) | 2 | 0.742–0,851 | 0.637 | 0.777 |
| Intelectual stimulus (ISTM) | 2 | 0.729–0,842 | 0.620 | 0.765 |
| Motivation source (MOTV) | 3 | 0.762–0,859 | 0.639 | 0.841 |
| Individual consideration (ICON) | 2 | 0.824–0,914 | 0.757 | 0.861 |
| Contingent reward (CR) | 2 | 0.778–0,884 | 0.692 | 0.817 |
| Knowledge sharing (KS) | 5 | 0.717–0,802 | 0.570 | 0.869 |

of the AVE of each construct is greater than the requirement described by Hair et al. (2010; 2011), i.e., greater than 0.5. The reliability tests also showed good results. Table 2 shows that all of the variables have composite reliability values greater than 0.7.

Chin (1998) in Hair et al. (2011) notes that discriminant validity should include each indicator that has the highest load and that each indicator must be measured. Each indicator must have no cross loading problem. In this research, the 176 remaining questionnaires have no cross loading problem. The constructs among variables of the study are different; therefore, these constructs are considered acceptable for discriminant validity. Thus, the result of the construct validity test reveals that the instruments in the study have met good construct validity and that it is feasible to conduct a hypothesis test.

## RESEARCH RESULTS

Hypothesis testing is conducted to analyse the cause-effect relationships (causality) among the variables in the model based on the value of the critical ratio (CR). In terms of PLS-SEM, CR is known as the *t*-stat value. If *t*-stat values higher than 1.96 (sig. 5% two-tailed) and has positive relationship (see hypothesis) means that the hypothesis is supported. The results of hypothesis testing can be observed in Figure 2.

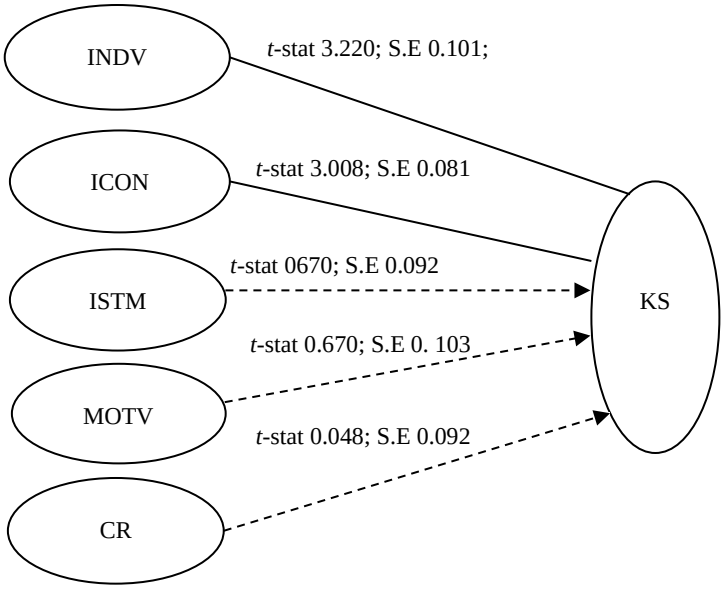


*Figure 2.* Hypothesis result

Figure 1 shows that the first hypothesis, which reveals that the all dimensions of transformational leadership had positive effects on knowledge sharing, was only partially supported. Only individual inspiration and individual considerations were supported because their t-stats are higher than 1.96, whereas the intellectual stimulus and source of motivation has a *t*-stat value below 1.96. Hypothesis two is also not supported because the CR value is less than 1.96 for the contingent rewards variable.

## DISCUSSION AND CONCLUSION

The results of this research both confirm and revise the previous research. Several credible arguments confirmed by the results of or research are as follows. According to Yukl (2006), transformational leadership is more effective because it is sufficiently powerful to establish long-term relationships between employees and employers. However, a transactional leadership style is only capable of building short-term relationships between employees and employers. Gorelick, Milton and Apri (2004) state that a charismatic, powerful, symbolic, exciting, and strong-willed leader who has a strong future vision will become the most suitable leader for developing and managing organisational knowledge as a primary resource. Similarly, Bryant (2003) explains that an effective transformational leadership style affects activities in sharing knowledge. Deluga (1990) and Xue et al. (2010) also strongly emphasise that a transformational leadership style can

establish emotional bonds between superiors and subordinates, which also encourages the behaviour and attitudes of employees to share knowledge. Different from previous research, this research explains the detailed dimensions of transformational leadership that directly influence knowledge sharing.

This research emphasises the idea that in Indonesia, particularly in the North Sulawesi Province, an emotional bond to encourage knowledge sharing is possible if the leader is capable of becoming an individual or charismatic inspiration so that subordinates respect their leader. Moreover, a leader must consider individuals, create a supportive working atmosphere and act as a counsellor (Yukl, 2006) to establish an emotional bond to preserve and create a knowledge sharing environment.

This condition may occur because most respondents are business owners who have been involved in the business sector for years and run a business that has been passed down for generations. Family ties in Indonesia, particularly in North Sulawesi, are strong. Therefore, giving respect and upholding the business owner, whom others consider a "senior", emphasise that individual inspiration plays a significant role in influencing knowledge sharing. The individual consideration factor refers to a leader who is capable of creating an encouraging and good working atmosphere (Yukl, 2006). This dimension significantly influences knowledge sharing activities because of the existence of family ties. Most subordinates working in the business are the owner's relatives or belong to the same race (most respondent is Minahasan). As a result, the working environment becomes more convenient because employees share the same culture. According to Davenport dan Prusak (1998), when people must transfer knowledge, the method must always suit the culture. In this case, the employees need relatively no adjustment to the culture because they have the same cultural background.

Conversely, the motivational source dimension did not significantly impact knowledge sharing. In this case, this result was possible because the owners and managers of small-medium businesses were not sufficiently communicative in delivering the vision of their organisation. Therefore, it may be that the intent and purpose of the vision did not reach their employees. It is even possible that leaders in the Small-Medium businesses in Indonesia (e.g., in the province of North Sulawesi) are unclear concerning their own vision. For example, it is even possible that the old famous Indonesian idea that "the important think, is still be able to eat tomorrow" (the meaning of the idea is running business were only for fulfill physical need) is still in practice. Instead, business owners and managers think one step ahead for their business progress.

A similar result occurred to the intellectual stimulus variable. One possible explanation is that the owners of Small-medium business in Indonesia (e.g.,

North Sulawesi) are less innovative or have not yet obtained sufficient knowledge to transfer to the organisation. Thus, learning through knowledge sharing could not properly occur. In the previous section, it is noted that owners or managers of small-medium businesses are central to developing their organisational knowledge. Therefore, if an owner or manager does not have sufficient knowledge, the learning process will be halted. The results of this research can be well-explained through the level of education (Table 1), which shows that the level of education is still relatively low. According to Vinding (2000, in Indarti, 2010), the level of education could be the influencing factor in absorbing knowledge. Therefore, if the leader does not have an adequate level of education or sufficient knowledge and is less innovative, how can someone who is considered a leader have the ability of intellectual stimulus?

The transactional leadership dimension, which is contingent reward, produces the same result as do the two transformational leadership dimensions that fail to make a positive contribution. Kohn (1993) revealed that there is a strong relationship between imposing sanctions and contingent reward. He explained that anticipating a reward from Management is one form of sanction. Further, Kohn explains that rewarding could make it difficult for an employee to differentiate whether he/she receives punishment if he/she fails to achieve the target. Kohn also clarifies that contingent reward can undermine good relationships between leaders and followers and create disharmony if not carefully accomplished. Lin (2007) confirmed there is a possibility that a reward system cannot positively impact knowledge sharing.

Most of the respondents live in villages (Table 1). That fact could explain why contingent reward does not significantly affect knowledge sharing. People who live in villages usually live together in harmony and are closely related to one another. People in North Sulawesi have a famous culture known as *Mapalus*, which means mutual aid. Most *Mapalus* are more prevalent in rural communities rather than in the city. Based solely on this reason, emotional ties and kinship occur relatively more frequently among villagers than in urban society. Therefore, the employee relationship between the leader and his/her followers (superior and subordinate) will be based on an emotional bond.

**Research Implications**

The findings indicate that individual consideration and inspiration are important dimensions of transformational leadership. It can be concluded that these two leadership qualities must be enhanced. The findings also show that there exists a lack of quality leadership on motivational source, intellectual stimulus and contingent reward. The findings can provide information that small business units in Indonesia, specifically in North Sulawesi, still need help, particularly

concerning the availability of information and knowledge access. Therefore, small business owners must retain the individual leadership qualities and inspiration that they already possess while continuing to learn from sources of information and knowledge. As their knowledge increases, the knowledge that can be transferred or shared to his/her employees also increases. Therefore, the leadership qualities that are capable of acting as an intellectual stimulus will increase. Increasing knowledge could also encourage business owners to have the motivation to move forward and have a future business outlook that is broader than simply a narrow view. Motivation is expected to be passed on to their offspring.

Although the results show that contingent rewards do not significantly affect knowledge sharing, the rewards could not be easily eliminated. The practice in the world of small businesses may need to be improved. Rewards in businesses are still often practiced to support employee motivation. However, as Kohn described, and according to the results obtained by Politis (2004) and the opinions of Northouse (1997), transformational and transactional leadership is similar to a pendulum where the contingent reward dimension is closest to the transformational leadership style. Therefore, the proper and wise use of rewards lead to avoiding tension among employees in the future and is a strategy that must be executed. The subsequent expectation is the creation of a reward system that is harmonised to support the transformational leader and results in the encouragement of the knowledge sharing process in small businesses.

Knowledge sharing is the inevitable element that every business owner must perform. Previous research reveals that knowledge sharing in an organisation enables it to be more innovative (Liao et al., 2006; Lin, 2007; Indarti, 2010; Wuryaningrat, 2013). The research also expresses that knowledge sharing is not an easy process that can be conducted in one organisation (Szulanki, 1996; 2000). Further, this research also explains that in the small business environment in developing countries, such as Indonesia, the role of leadership plays an important role to encourage knowledge sharing.

**Research Limitations and Future Research**

Similar to any other empirical study, this research has its limitations. The first limitation lies in the choice of a cross-sectional survey. A cross-sectional survey is considered to have drawbacks because leadership and knowledge sharing refers to a continuous learning process. Therefore, the selection of a cross-sectional survey may be unable to explain the phenomena as a whole because the data are obtained only at a certain time. Thus, a cross-sectional survey needs longitudinal studies to establish the causal relationship among constructs of interest in this research.

The second limitation of this study is that the construct is based solely on the subjective perceptions of Small-medium business owners and managers. Although this approach was the most suitable in the research context, it may lead to bias. Although several procedures were conducted to reduce this bias, the procedures cannot eliminate 100% of the bias that may occur.

Another limitation of this study lies in the fact that Indonesia is a country that has a vast territory rich with cultural, ethnic and religious diversity and a large number of people. Therefore, the research was conducted only in the province of North Sulawesi, and the number of samples is only 176. As a result, the results may not be able to describe the real conditions of small-medium businesses in Indonesia. In future studies, the research should examine other areas so the results of the research can be generalised.

The results of this study also provide interesting aspects for subsequent research, particularly to further confirm what occurs, such as why the intellectual stimulus dimension and motivational source have no significant effect on knowledge sharing. The reasons expressed in this research are based on data and facts that were successfully recorded in this study. In the future, qualitative research with ethnographic approaches should be conducted.

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 Every chapter published in this book has been scrutinized by our experts. Their significance has been extensively debated. The topics covered herein carry significant findings which will fuel the growth of the discipline. They may even be implemented as practical applications or may be referred to as a beginning point for another development.

The contributors of this book come from diverse backgrounds, making this book a truly international effort. This book will bring forth new frontiers with its revolutionizing research information and detailed analysis of the nascent developments around the world.

We would like to thank all the contributing authors for lending their expertise to make the book truly unique. They have played a crucial role in the development of this book. Without their invaluable contributions this book wouldn't have been possible. They have made vital efforts to compile up to date information on the varied aspects of this subject to make this book a valuable addition to the collection of many professionals and students.

This book was conceptualized with the vision of imparting up-to-date information and advanced data in this field. To ensure the same, a matchless editorial board was set up. Every individual on the board went through rigorous rounds of assessment to prove their worth. After which they invested a large part of their time researching and compiling the most relevant data for our readers.

The editorial board has been involved in producing this book since its inception. They have spent rigorous hours researching and exploring the diverse topics which have resulted in the successful publishing of this book. They have passed on their knowledge of decades through this book. To expedite this challenging task, the publisher supported the team at every step. A small team of assistant editors was also appointed to further simplify the editing procedure and attain best results for the readers.

Apart from the editorial board, the designing team has also invested a significant amount of their time in understanding the subject and creating the most relevant covers. They scrutinized every image to scout for the most suitable representation of the subject and create an appropriate cover for the book.

The publishing team has been an ardent support to the editorial, designing and production team. Their endless efforts to recruit the best for this project, has resulted in the accomplishment of this book. They are a veteran in the field of academics and their pool of knowledge is as vast as their experience in printing. Their expertise and guidance has proved useful at every step. Their uncompromising quality standards have made this book an exceptional effort. Their encouragement from time to time has been an inspiration for everyone.

The publisher and the editorial board hope that this book will prove to be a valuable piece of knowledge for researchers, students, practitioners and scholars across the globe.

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