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Strategic Management Accounting Practice as a Mediating Role between Strategy Formation Capability and Value Creation

Nik Herda Nik Abdullah[a*], Jamaliah Said[b], Ibrahim Kamal Abdul Rahman[c], Tuan Zainun Tuan Mat[d], [a]Taylor's Business School, Taylor's University, 47500 Subang Jaya, Malaysia, [b]Accounting Research Institute, Universiti Teknologi MARA, Shah Alam 40450, Malaysia, [c]Business School, Universiti Kuala Lumpur, 50250 Kuala Lumpur, Malaysia, [d]Faculty of Accountancy, Universiti Teknologi MARA, Puncak Alam Campus, 43200 Bandar Puncak Alam Malaysia, Email: [a*]nikherda.nikabdullah@taylors.edu.my

The purpose of this paper is to investigate the effectiveness of strategic management accounting practices (SMA) in enhancing the relationship between strategy formation capability and value creation in Malaysian Government Linked Companies (GLCs). At present, studies that emphasise the role of SMA practices in stimulating value creation is not widely obtainable. By using structural equation modelling and data collected from a sample of 215 questionnaires, the findings revealed that strategic management accounting practices play a significant role in mediating the relationship between strategy formation capability and value creation. This research extends the growing body of literature about SMA practices, value creation and strategy formation capability. The results will pave the way towards enhancing the understanding of successful SMA practices in Malaysian GLCs, which provides evidence on how to significantly improve value creation through the adoption of SMA techniques that improve competitiveness in the industry, business sustainability, and secure long-term performance.

Key words: *Strategic management accounting, value creation, strategy formation capability, government linked companies, dynamic capabilities.*

Introduction

Value creation is an important element in every organisation that wishes to achieve and sustain economic growth. Elements such as sustainability, competitive advantage, and enhanced organisational performance could be created by Government Linked Companies (GLCs) when applying value creation which would attract the interest of stakeholders. The success of value creation is marked by increases in share prices, as well as sales growth, reputation, profitability, customer satisfaction, product variation and brand loyalty (Abdullah, 2018; Abdullah & Said, 2015; Acharya, et al 2013; Fernandez, 2015; Sulaiman, 2016). Besides the effects mentioned above, value creation also affords GLCs greater responsibility and accountability due to the funds provided by the government. Past studies have provided evidence regarding factors that contribute to value creation such as strategy formation and management accounting practices (Ernst & Young, 2013; Kraaijenbrink & Spender, 2011; Sulaiman, Omar & Abdul Rahman, 2006; Sulaiman, 2016).

Strategy formation is the core of strategic management and is related to the effectiveness of the firm's strategy, which leads to better performance. An effective strategy formation capacity is valuable because it enables the firm to create strategies that increase its effectiveness or efficiency and when matching the firm's environment, it eventually leads to competitive advantage. Meanwhile, SMA practices comprise of a range of techniques which are very useful and relevant in creating the firm's value. These techniques include analyses for benchmarking, brand valuation, competitors, customers, market and others. SMA practices are very important to discover the firm's value creation by supporting organisation's decision making process and positioning its strategic plan (Abdullah, 2018; Cadez & Guilding, 2008). By incorporating these elements, the organisation can to achieve competitive advantage and sustain economic growth (Abdullah, 2018; Cadez & Guilding, 2008; Malleret, Villarmois & Levant, 2015; Sulaiman, 2016).

GLCs are privatised government business entities in which the government is the major shareholder. The main objectives for GLC are financial performance and maximisation of shareholder's wealth and they require increasing effectiveness, improved efficiency, and market-oriented culture (Arumugam, Guptan, & Shanmugam, 2011; Mokhtar & Sulaiman, 2012; Said, Alam, Zulkarnain, & Abdullah, 2016). Government Linked Companies (GLCs) present the quintessence of the Malaysian economy as their presence has a great impact on practically every aspect of the business sector in Malaysia, including transportation, energy, telecommunications, construction, oil and gas as well as the financial sector (Abdullah, 2018; Lau & Tong, 2008). It has been reported that GLCs contribute to 54% of the shares in Kuala Lumpur Composite Index (KLCI) and employ 5% of the total national workforce (PCG, 2016). Hence, it is expected that GLCs achieve a high return on investment that will benefit both the public and the government. Prior studies indicate that GLCs constitute a vital part of

the Malaysian economy and make up for nearly 49% of the market capitalisation of Bursa Malaysia in 2009 (Zin & Sulaiman, 2011), which slightly increased from 36% in 2005 (Mokhtar, 2005).

In spite of the significant contribution of the GLCs to the Malaysian economy and financial markets, there are some GLCs that have performed poorly as early as 1990 (PCG, 2007), which has become a controversial issue since the Overview of 2011 National Audit Report Initiatives & Updates Related to State Owned Corporations which stated that 28.6% of GLCs showed losses amounting to RM1.720 billion and 11 GLCs suffered loss from 2008 until 2010 which is a large amount from the public's spending (The Overview of 2011 National Audit Report, 2011; PCG, 2007). A number of scholars have found that one of the factors causing this issue is the lack of value creation (Lau & Tong, 2008; Ting & Lean, 2012; Zin & Sulaiman, 2011). In 2004, the Government introduced the GLC Blue Book, which intended to assist value creation in GLCs by underlining the important drivers and performance indicators that need to be linked to the strategy and focused on all aspects of value creation within each GLC (Helmi, Ahmad, & Hung, 2009). Although the value creation effort was created in 2004, the issue has not been addressed yet. As such, this research intends to look at this problem from an accounting perspective by integrating SMA practices in relation to strategy formation capacity and value creation. Therefore, this study's specific objective is to examine the role of SMA practices in enhancing the relationship between strategy formation capability and value creation.

This research finding extends the growing body of literature about SMA practices, value creation, and strategy formation capability. The results will pave the way towards enhancing our understanding of successful SMA practices in Malaysian GLCs, which provides evidence about how to significantly improve value creation through the adoption of SMA techniques. The findings also demonstrate the role of SMA practices in enhancing the relationship between strategy formation capability and value creation in Malaysian GLCs which improve competitiveness in the industry, upgrade financial standings, and create avenues for gaining profit.

This paper is structured as follows: first, it includes an introduction to the background of the study presented. The second part consists of a literature review, which included a definition of each variable and hypotheses development, which is followed by the methodology findings. The last part contains the conclusion and limitations of the study, including the discussion of results.

Literature Review

Strategy formation capability

Despite various definitions of strategy, it has always been interpreted with a common theme, where it comprises of a deliberate set of guidelines that influence future decisions. On the other hand, different theories in different fields would have their own views. The game theory posits that strategy is a set of rules governing the players' moves. Furthermore, Chandler's (1962) interpretation of strategy, based on management theory depicts strategy as, "*the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals*" (p.13).

In this light, these definitions look at strategy as explicit, consciously and purposefully developed, and planned, ahead of making particular decisions to which it applies. In other words, strategy comprises of a "plan". However, Mitzberg (1978) believed that this definition is incomplete for an organisation and non-operational for researchers. It hides one crucial side of organisation's decisional behaviour that all aforementioned theorists would consider strategic. Therefore, restricting strategy definition to explicit and prior guidelines forces the researcher to study strategy formation as a perceptual phenomenon, which consequently, deduces his or her conclusions to abstract normative generalisations (Mitzberg, 1978).

Mitzberg (1978) posits that the literature on strategy formation is to a large extent theoretical but not empirical, and the usual definition of "strategy" encourages the concept of strategies, and recognizes them as ex post facto that are deliberate plans formulated ahead of making specific decisions. By defining a strategy as "a pattern in a stream of decisions," the research on strategy formation is able to conducted in a broad descriptive context. Strategy formation has been at the centre of strategic management for more than three decades (Mintzberg, 1973) and relates to the effectiveness of the strategy formed by firms (Slater et al., 2006). Barney (1991) stated that a strategy with increased effectiveness or efficiency, valuable, rare, and difficult to imitate will make the firm gain a competitive advantage compared to with firms.

Teece et al. (1997) posit that strategy formulation capacity can have a dynamic capability when matched to a firm's environment and leads to a competitive advantage which is an important element to sustain businesses. Past studies support the fact that strong strategy formulation has a tendency to adopt SMA practices that may lead to competitive advantages (Chenhall & Langfield-Smith, 1998; Cuganesan et al., 2012; Puolamaki, 2004; Wilson, 1995). For instance, Puolamaki (2004) maintains that successful development of strategy tends to adopt SMA practices with four technical roles of SMA to provide information for analysis, development, formulating, and monitoring strategy. These roles are not mutually

exclusive, and emphasis depends on the phase and nature in support of the strategy processes. Thus, this study, in line with Wilson (1995), states that the SMA has a clear perspective of strategy formation, clearly highlighting strategic issues and concerns, as a way to achieve sustainable competitive advantage.

Strategic management accounting practices

Since Simmonds coined the term SMA in his corner article at the start of the 1980s, several authors have followed in refining the SMA concept, and this focus on the SMA concept is due to strong evidence regarding SMA's connection in both management accounting and marketing management (Guilding, Cravens, & Tayles, 2000; Roslender & Hart, 2002; Dashtbayaz, Mohammadi, & Mohammadi, 2014). In 1981, Simmonds created the term SMA as a tool for analysis of management accounting data including information about the business and its competitors, with the purpose of developing and monitoring business strategy. In his work, Simmonds identified SMA by its external emphasis that focuses on competitor information.

Bromwich (1990) defined SMA as the provision and analysis of financial information about the company product markets, competitor costs, cost structures, and the monitoring of strategies of the enterprise and its competitors over a period of time. According to Bromwich, SMA extends beyond simply collecting data about the business and its competitors by seeking to evaluate the organisational competitive advantage or value added relative to that of the competitors and to evaluate the benefits to the organisation over a long-term period .

Guilding et al. (2000) provided an original set of SMA techniques. They also described the criteria for considering particular accounting techniques as "strategic." It is noted that much of the conventional management accounting was based on a one-year period and the focus tends to be predominant. These characteristics do not match strategic orientations. The main characteristics of SMA as a strategy imply a long-term future orientation period and an externally focused perspective. Consequently, the authors argued that such characteristics could be a useful tool in determining accounting techniques suitable for SMA. A more recent study completed by Cadez and Guilding (2008) drew sixteen SMA techniques from previous works and classified these techniques into five broad categories namely (1) costing, (2) planning, control, and performance measurement, (3) strategic decision making, (4) competitor accounting, and (5) customer accounting.

Cadez and Guilding (2008) suggested that SMA has a significant impact on business performance in a positive manner. SMA practices play a role in providing the managers with appropriate, precise, and reliable information on the critical success factors within and outside of the organisation for an extended period of time (Cadez & Guilding, 2008).

Rahman, et al. (2012) posited that the use of SMA improved business operations and decision-making functions, could lead to wealth and value creation. Therefore, successful SMA practices will create sustainable competitive advantage and value creation in a never ending-cycle.

Value Creation

Value creation is about value added to the firms from the activity that they have created which represents a source of long-term performance and sustainable competitive advantage (Basso, de Oliveira, Kimura, & Braune, 2015). Regarding value creation, many scholars have agreed on the purposes of the business to create value (Abdullah, 2018; Abdullah & Said, 2015; Chen, et al. , 2016; Sulaiman, 2016). In fact, corporate engagement in society is attracting more attention as companies realise that creating shared value could benefit society and boost competitiveness (Bockstette & Stamp, 2011; Husted & Allen, 2009). For instance, Chen et al. (2016) discovered that value creation has a significance influence on market positioning. While, Laursen and Svejvig (2016) highlighted the significance of value creation on return on investment and Du and Boateng (2015) emphasised the importance of value creation on the market share.

The challenge and responsibility of business is to ensure the survival and the wellness of all its constituents to safe guard the business. As part of the existence of explicit vision and robust strategy, it is imperative for business tools and practices as a delivery of value creation to embed the paradigm shift and evolution of value creation in their operation (Sulaiman, 2016). Conventionally, value creation ensures shareholders and other stakeholders' interest about a legitimate or moral right to claim on the value created by the firm (Hoque, 2006). However, the new idea of value creation focuses on financial, social and environmental sustainability and the survival of business value creation instead of emphasis on shareholder, customer and economic interests (Sulaiman, 2016).

Nonetheless, value creation analysis is a critical process developed through new products and services (Fuller, 2001; Miller & Floricel, 2004). The creation of value is crucial to start a business and functions as the heart of the organisation's strategy. Formulating a company's value is a good way to make business opportunities feasible and realistic (Sanchez-Canizares, Munoz, & Lopez-Guzman, 2007). Recent studies have emphasised the association between value creation and strategy (Husted et al., 2012; Kraaijenbrink & Spender, 2011; Rohrbeck & Schwarz, 2013). However, the adoption of SMA practices as a tool to improve the relationship between strategy formation capability and value creation have been subject to extensive empirical investigation which is the main focus of this study.

Strategy Formation Capability – Strategic Management Accounting Practices – Value Creation

Past studies have shown that some techniques related to SMA could help a business to gain a competitive advantage such as a competitors' analysis to identify strategies (Rickwood et al., 1990; Lord, 1996), value chain, and cost driver analysis (Tomkins & Carr, 1996). The literature on SMA has largely presumed strategy formulation to be a formal and structured process and prominent researchers have called for investigating the SMA as part of the strategic process and approaches (Bhimani & Langfield-Smith, 2007). Jorgensen and Messner (2010) found that accounting emphasised the importance of profitability as well as specific rules used to frame the strategic process. In this way, as others note accounting mediates diverse strategic interests (Miller & O'Leary, 2007; Cuganesan et al., 2012).

Tomkins and Carr (1996) incorporated two additional tools-value chain analyses, cost driver analysis and competitive advantage analysis, and found that the most successful group of firms focus the majority of their attention on the value chain and analysis of competitive advantage, and they actually pay less attention to any financial calculus as compared to poor performers. Meanwhile, other studies have linked business strategy with strategic planning, SMA practices, and performance (Aksoylu & Aykan, 2013; Cadez & Guilding, 2012; Cinquini & Tenucci, 2009; Carlsson-Wall, Kraus, & Lind, 2015). For instance, Carlsson-Wall et al. (2015) highlighted the need to link more explicitly strategic decision-making with the current interest in the role of SMA. Meanwhile, Cinquini and Tenucci (2009) found that there is a significant relationship between SMA practices and business strategy that affects a firm's strategic success and in turn influences performance. Similarly, Cadez and Guilding (2012) claimed that business strategy and SMA practices are associated with similar organisational performance levels.

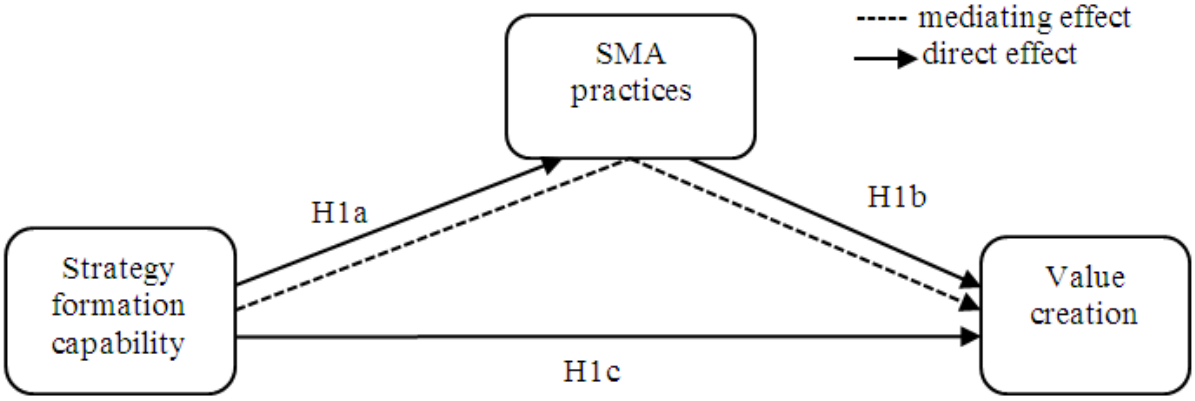
Within the framework of the International Federation of Accountants (IFAC) (1998), at the Value Creation stage, the organisations mentioned are expected to adopt management accounting information as a strategic tool so that the goal of value creation can be achieved (Sulaiman et al., 2006; Sulaiman, 2016). This model shows that the present transformation of management accounting includes value creation and managing resources as well as applying SMA techniques.

Meanwhile, Chenhall and Langfield-Smith (1998) found that various strategic orientations will affect the performance and organisation that run the same strategic priorities, [and] performance tends to be higher where the management accounting practices are in line with the strategy. As discussed above, the greater adoption of SMA techniques will lead GLCs to a greater capacity to form an effective strategy that creates competitive advantage, which in

turn enhances value creation in GLCs. Hence, the hypotheses and the model (Figure 1) in this study are as follows:

Hypothesis 1: *SMA practices mediate the relationship between strategy formation capability and value creation.*
Hypothesis 1a: *Strategy formation capability has a significant and positive effect on SMA practices.*
Hypothesis 1b: *SMA practices have a significant and positive effect on value creation.*
Hypothesis 1c: *Strategy formation capability has a significant and positive effect on value creation.*

Figure 1: Hypothesised Path Model



Methodology

Data Collection

Data is collected using a questionnaire survey distributed by mail to 455 state and federal level GLCs in Malaysia. This study uses the total population as a sample distribution to increase response rate (Arumugam et al., 2011; Kadir, Abidin, Ramli & Surbaini, 2014). The respondents are chosen through purposive sampling which is based on the characteristics of the respondents and their position . The database contains the organisation's name, full business address, contact numbers, and the respondents' details are obtained from respective websites and phone calls. The respondents include the Chief Finance Officer (CFO), Chief Accountant, or Chief/Financial Controller and Management Accountant (Guilding & Cadez, 2008; Cinquini & Tenucci, 2010; Spraakman, et al. , 2018; Tan, 2014). Those holding these positions normally who oversee the organisations' finances and their decision has a direct impact on all senior managers involved with the accounting decision (Ge, Matsumoto, & Zhang, 2011; Spraakman et al., 2018). Furthermore, the unit analysis for this study is the organisation. The response rate for the study is 47%, as there are 215 valid and completed questionnaires received from the GLCs (see Table 1). The rates of responses are within the

range of recent mail surveys in the same academic research field (Chenhall et al., 2011; Amir et al., 2010).

Table 1: Industry classification of the sampled GLCs

Industry	Frequency	Percentage
Agriculture	18	8.3
Banking and Investment	28	13
Construction	35	16.2
Healthcare	29	13.4
Manufacturing	38	17.6
Service	47	21.8
Oil and Gas	7	3.2
Others	14	6.5
Total	215	100

Variables measurement

SMA practices

Regarding SMA practices, this study adopts measures by Cadez and Guilding (2008) which comprise of 16 techniques. These SMA techniques are listed together accordingly in the Likert-scale ranging from "1" (not being practiced at all), to "10" (practiced to a great extent). Subsequently, they are grouped into five categories namely Costing (attribute costing, life-cycle costing, quality costing, target costing, value-chain/activity costing), Planning, control and performance measurement (benchmarking, integrated performance measurement), Strategic decision-making (strategic costing, strategic pricing, brand valuation), Competitor accounting (competitor cost assessment, competitive position monitoring, competitor performance appraisal), and Customer accounting (customer profitability analysis, lifetime customer profitability analysis, and valuation of customers as assets). The respondents were required to indicate the extent of their organisation's use of each technique.

Value creation

The measurements of value creation are presented according to financial and non-financial dimensions. The measures for value creation were developed in the GLC context through two rounds of the Delphi technique, which involved three panel experts from the top management level in other GLCs (Abdullah & Said, 2016). By using the Likert scale ranging from "1" (below average), to "10" (above average), the respondents indicate their level of agreement of value creation in their respective organisations for the last three years, compared with similar organisations in the same industry. Measurements under the financial dimension included

stock price, market value, sales growth, price-earnings ratio, market share, return on investment, and market positioning; meanwhile, non-financial dimensions referred to business risk, business opportunities, workforce, brand and reputation.

Data Analysis

Data analyses were performed using structural equation modelling (SEM). SEM is capable of simultaneously estimating a series of inter-relationships among latent constructs in a model. This technique is also the most efficient method to handle the Confirmatory Factor Analysis (CFA) for measurement models, analyse the causal relationships among latent constructs in a structural model, estimate their variance and covariance and test the hypotheses for mediators and moderators in a model (Awang, 2014).

In order to use the SEM technique, this study employed the AMOS graphic software version 21 to analyse the model in SEM. AMOS, an acronym for Analysis of Moments Structure, is the software developed for analysing the SEM. The advantage of AMOS compared with other software in its class is its graphics representation of the model (Awang, 2014). In addition, by using AMOS, the empirical model was tested against the hypothesized model for fit by assessing validity and reliability. Apart from being a measurement model, AMOS can identify which factor loading does not fit or belong to the original model and the modification to the model that can be fixed in order to improve the hypothesised model. Therefore, by using the SEM technique in the AMOS Graphic software, the study aims can be achieved after testing the hypothesised model.

Results

Validity and Reliability

The validity and reliability of the data are obtained through confirmatory factor analysis (CFA). the data needs to achieve the Fitness Indexes for the measurement model, the factor loading for each item, and correlation between constructs. The Fitness Indexes consist of three categories namely Absolute Fit, Incremental Fit, and Parsimonious Fit which reflect the Construct Validity (Awang, 2014) (Appendix A). Consequently, the final review of the new measurement model for pooled construct exhibited that all the three categories of fitness indexes have been achieved after 1 item 'Competitive intensity' under variable strategy formation capability was deleted from the model due to redundancy. All constructs have factor loading of above the minimum threshold value of 0.6 (Henseler et al., 2009; Awang, 2014), which indicates the importance of the respective item in measuring its construct. The correlation between the constructs show a value less than 0.85 that indicates the degree to which an independent variable is explained by other independent variables (Awang, 2014).

Table 2 indicates that the value of Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach Alpha are above the minimum threshold value which concludes that the convergent validity and composite reliability for all constructs in the pooled CFA have been achieved. The minimum threshold value for AVE is 0.5, while the minimum threshold value for CR and Cronbach Alpha is 0.6 (Henseler et al., 2009; Awang, 2014).

Table 2: CFA Results for Measurement Model

Construct	Sub-Construct	Factor Loading	Cronbach Alpha	CR	AVE
VC	VC01 (Financial)	0.86	0.790	0.788	0.651
	VC02 (Non-financial)	0.75			
SMA	SMA01 (Costing)	0.88	0.935	0.937	0.748
	SMA02 (Planning, control and performance measurement)	0.82			
	SMA03 (Strategic decision-making)	0.92			
	SMA04 (Competitor accounting)	0.87			
	SMA05 (Customer accounting)	0.83			
SFC	SF01 (Technological turbulence)	0.80	0.917	0.918	0.651
	SF02 (Market turbulence)	0.79			
	SF03 (Mission/goal clarity)	0.81			
	SF04 (Situation analysis)	0.83			
	SF05 (Comprehensiveness)	0.81			
	SF06 (Strategy formation process)	0.80			

The Discriminant Validity Index Summary is presented in Table 3. It is achieved if the diagonal values (in bold) are higher than any other values in its row and column (Awang et al., 2015; Kashif et al., 2016). The study concludes that Discriminant Validity for all constructs is achieved. Finally, the study satisfies the requirement for normality distribution of all items measuring constructs. Since SEM employs the parametric statistical approach of modelling, the study needs to assess the normality distribution of all accepted items measuring constructs. The values of skewness for all variables in the model fall within the range of -1.0 and 1.0 which means that their distribution does not depart from normality (Awang, 2014; 2015; Kashif et al.; 2016).

Table 3: Assessment of Discriminant Validity among Constructs

Construct	SFC	SMA	VC
SFC	**0.81**		
SMA	0.78	**0.86**	
VC	0.71	0.74	**0.81**

Descriptive Analysis

Tables 4, 5, and 6 present the mean and standard deviation of the three variables used in the model namely strategy formation capability, SMA practices, and value creation. All variables record a mean ranging from 7.18 to 8.12, while standard deviations of variables range from 1.109 to 1.482. Table 4 indicates that among the 6 items, 'Mission/goal clarity' produced the highest mean score (mean = 8.12, std. dev. = 1.186). Table 5 reveals that the SMA technique of "Integrated performance measurement" appears as the most popular technique in the Malaysian GLCs with a mean of 7.76. With reference to value creation, the item 'Business opportunities' and 'Brand and reputation' produced high score values with a mean of 7.69.

Table 4: Descriptive Statistics for Strategy Formation Capability

Item	Statement	N	Mean	Std. Dev.
SF01	Technological turbulence	215	7.70	1.150
SF02	Market turbulence	215	7.67	1.188
SF03	Mission/goal clarity	215	8.12	1.186
SF04	Situation analysis	215	7.72	1.249
SF05	Comprehensiveness	215	7.77	1.193
SF06	Strategy formation process.	215	7.68	1.186

Table 5: Descriptive Statistics for SMA Practices

Item	Statement	N	Mean	Std. Dev.
SMA_1	**Costing**		**7.57**	**1.229**
SM01	Attribute costing	215	7.59	1.384
SM02	Life-cycle costing	215	7.51	1.482
SM03	Quality costing	215	7.56	1.348
SM04	Target costing	215	7.61	1.365
SM05	Value-chain/activity costing	215	7.55	1.452
SMA_2	**Planning, control and performance measurement**			**7.75 1.152**
SM06	Benchmarking	215	7.74	1.277
SM07	Integrated performance measurement	215	7.76	1.285
SMA_3	**Strategic decision-making**		**7.61**	**1.115**
SM08	Strategic costing	215	7.61	1.266
SM09	Strategic pricing	215	7.67	1.263
SM10	Brand valuation	215	7.55	1.376
SMA_4	**Competitor accounting**		**7.28**	**1.184**
SM11	Competitor cost assessment	215	7.26	1.285
SM12	Competitive position monitoring	215	7.33	1.217
SM13	Competitor performance appraisal	215	7.25	1.260

SMA_5	**Customer accounting**		**7.28**	**1.190**
SM14	Customer profitability analysis	215	7.39	1.232
SM15	Lifetime customer profitability analysis	215	7.25	1.269
SM16	Valuation of customers as assets	215	7.20	1.271

Table 6: Descrtiptive Statistics for Value Creation

Item	Statement	N	Mean	Std. Dev.
	VC_1 Financial		**7.35**	**1.040**
V01	Stock price	215	7.18	1.259
V02	Market value	215	7.35	1.217
V03	Sales growth	215	7.54	1.345
V04	Price-Earnings (PE) ratio	215	7.32	1.189
V05	Market share	215	7.33	1.167
V06	Return on investment	215	7.44	1.202
V07	Market positioning	215	7.33	1.143
	VC_2 Non-Financial		**7.53**	**1.004**
V08	Business risk	215	7.28	1.138
V09	Operational performance	215	7.60	1.109
V10	Business opportunities	215	7.69	1.156
V11	Workforce	215	7.41	1.180
V12	Brand and reputation	215	7.69	1.192

Correlation Analysis

The relationship between strategy formation capability, SMA practices, and value creation is investigated using the Pearson product-moment correlation coefficient. Preliminary analyses are performed to ensure no violation of assumptions of normality, linearity, and homoscedasticity have taken place(Pallant, 2010). There is a strong, positive correlation between variables as shown in Table 7.

Table 7: Pearson correlations between strategy formation capability, SMA practices and value creation

Scale	**1**	**2**	**3**
1. SFC	-	.746**	.607**
2. SMA		-	.647**
3. VC			-

** p < 0.01 (2-tailed).

Hypotheses Testing

As mentioned, the aim of this study is to determine the mediating effect of SMA practices on the relationship between strategy formation capability and value creation. Consequently, strategy formation capability is hypothesised to be associated with SMA practices (H1a) which are then associated with value creation (H1b). By combining the earlier developed hypothesis, SMA practices mediate the relationship between strategy formation capability on value creation based on the propositions of Baron and Kenny (1986). In addition, to assess the degree of mediation, the direct relationship of strategy formation capability and value creation must be verified (H1c).

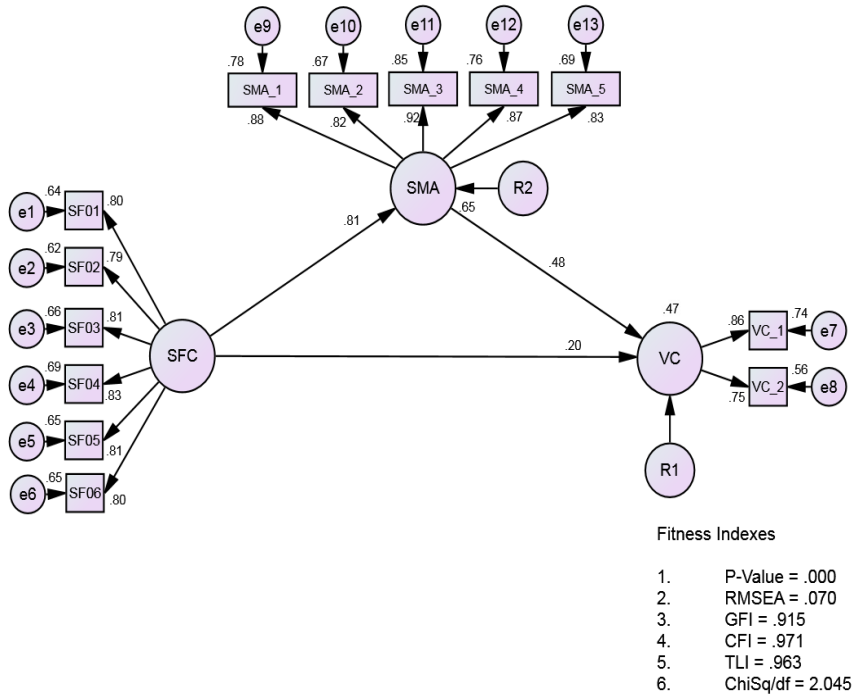
The AMOS results, as shown in Figure 2, illustrate that the strategy formation capability is significant and positively associated with SMA practices (0.81, $p<0.001$) which in turn are also associated with value creation (0.48, $p<0.001$). Meanwhile, strategy formation capability (0.2, $p>0.05$) has no direct impact on value creation when SMA practices enter into the relationship. Thus, H1a and H1b are supported, while H1c is not , hence SMA practices are deemed to have a "Full Mediation" role on the relationship between strategy formation capability and value creation. In other words, SMA practices play an important role in mediating the relationship between strategy formation capability and value creation.

The results also reveal that the squared multiple correlation (R^2) for value creation is 0.47. In other words, it is estimated that the predictors of value creation, strategy formation capability, and SMA practices explain 47 percent of its variance. Hence, the error variance of value creation is approximately 53 percent of the variance of value creation itself. Meanwhile, the R^2 for SMA practices is 0.65 which shows that the predictor of SMA practices, that is strategy formation capability, can explain 65 percent of its variance while error variance is 35 percent.

Table 8: Summary of the regression weights

Endogenous	Path	Exogenous	Estimate	S.E.	C.R.	P	Decision
SMA	<---	SFC	1.027	.087	11.820	***	Significant
VC	<---	SMA	.478	.111	4.292	***	Significant
VC	<---	SFC	.169	.085	1.991	.061	Insignificant

Figure 2: Structural Equation Modelling



Conclusion

This study's hypotheses proposed that SMA practices mediate the relationship between strategy formation capability and value creation in GLCs. The results of the hypothesis testing indicate that increased adoption of SMA practices in GLCs leads to a greater relationship between strategy formation capability and value creation with a full mediation effect. In other words, SMA practices play an important role in enhancing the relationship between strategy formation capability and value creation in GLCs.

The higher adoption of SMA techniques such as benchmarking and integrated performance measurement for planning, control and performance measurement enable GLCs to perform situation analysis, which analyses their internal and external environment and help GLCs to generate and evaluate alternative strategies . This improves value creation in GLCs by enhancing their business opportunities and reducing business risks with a comprehensive strategy. Besides , the extent of strategic costing, strategic pricing, and brand valuation used for strategic decision-making will guide the GLCs to form strategy processes from informal and emergent to a formal strategy. This could be accomplished through deliberation of the

selected strategies, which will enhance value creation by improving operational performance and efficiency. Consequently, this will create competitive advantage, as other rivals cannot easily imitate the newly formed .

The extensive use of customer profitability analysis, lifetime customer profitability analysis and valuation of customers as assets, together with value-chain costing in GLCs can lead to a greater ability to adapt to rapid changes in the process of transforming inputs to outputs. Furthermore, the delivery of these outputs to meet customer needs and make suitable changes based on customer preferences will increase the firm's sales growth and ROI, as well as improve the firm's brand and reputation, market value, and positioning in the market.

The results of this study fully support the contention of past studies on the mediating role of SMA practices on strategy and value creation (Rickwood et al., 1990; Lord, 1996; Tomkins & Carr, 1996; Jorgensen & Messner, 2010; Miller & O'Leary, 2007; Cuganesan et al, 2012). For instance, Rickwood et al. (1990) and Lord (1996) discovered that competitor analysis facilitates a business to gain competitive advantage by identifying strategies, while Tomkins and Carr (1996) found that value chain costing and cost driver analysis used in strategy formation have an impact on performance. The findings are also consistent with Bhimani and Langfield-Smith (2007) who stated that SMA practices have largely presumed strategy formulation to be a formal and structured process that relates to competitive advantage. Therefore, in general, accounting emphasises the importance of profitability as well as specific rules used to frame a strategising process and strategic interest. In this way, SMA practices are found to fully mediate the relationship between strategy formation capability and value creation in GLCs.

These SMA techniques are very important in order to discover a firm's value creation by supporting an organisation's decision making process and positioning their strategic plan. By using these elements, the Organisation can achieve competitive advantage and sustain economic growth. The most important implication arising from this research that affects both practitioners and researchers concerns the importance of SMA practices in creating value through its strategy formation capabilities. The research indicates that the GLC's top management has a better understanding of SMA practices and believes that it could create value in their organisations. In addition,, it can also assist GLCs to meet the global challenges in product markets, and to allow them to focus on the firm's value creation relative to its customers and competitors. Moreover, the firm's top management and management accountants have been urged to evaluate the emerging role of SMA in establishing value creation based on the practical guidance provided by this research.

Limitations of the Study

Despite the significant contribution of this study related to SMA practices , it contains the following limitations. Firstly, the sample was taken from Malaysian GLCs. Hence, it is not certain if the findings can be generalised to other sector replications which would be useful for future studies to replicate results in other sectors in order to address the question of generalisability. Thirdly, this study used self-reports on the variables, hence the use of top management as a respondent could minimise the bias of perceptual measure and further studies might consider other sources of evidence to overcome this concern with annual reports and archival data. Regardless of the limitations stated above, the findings of this study provide valuable knowledge about the impact of SMA practices concerning the relationship between strategy formation capability and value creation.

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APPENDICES

Appendix A: The Fitness Indexes (Awang, 2014)

Name of category	Name of index	Level of acceptance
1. Absolute fit	**Chisq** (Discrepancy Chi Square)	P < 0.05
	RMSEA (Root Mean Square of Error Approximation)	RMSEA < 0.08
	GFI (Goodness of Fit Index)	GFI > 0.90
2. Incremental fit	**CFI** (Comparative Fit Index)	CFI > 0.90
	TLI (Tucker-Lewis Index)	TLI > 0.90
3. Parsimonious fit	**Chisq/df** (Chi Square/Degrees of Freedom)	Chi square/df < 5.0

Appendix B: SPSS Output on Pearson correlation analysis

Correlations				
		SFC	SMA	VC
SFC	Pearson Correlation	1	.746**	.607**
	Sig. (2-tailed)		.000	.000
	N	215	215	215
SMA	Pearson Correlation	.746**	1	.647**
	Sig. (2-tailed)	.000		.000
	N	215	215	215
VC	Pearson Correlation	.607**	.647**	1
	Sig. (2-tailed)	.000	.000	
	N	215	215	215

**. Correlation is significant at the 0.01 level (2-tailed).