

Management control systems package, corporate governance, and SME's performance in context of Malaysia

Irma Tyasari^{1*}, Imran Arshad², Supami Wahyu Setiyowati³

^{1,3}Fakultas Ekonomika dan Bisnis, Universitas PGRI Kanjuruhan Malang, Indonesia

²Salim Habib University, NC-24 Deh Dih, Pakistan

Abstract

The purpose of this research is to empirically explore the extent to which organisational learning and product innovation explain the relationship between MCS package, corporate governance, and organisational performance. This research used cluster sampling for data collection. Collected data from 369 managers/owners of small and medium enterprises (SME) in Malaysia were used to run partial least square (PLS) regression models and test research hypotheses. The deductive reasoning method is used to develop the theoretical framework. MCS package and corporate governance are positively associated with product innovation and organisational learning. Moreover, the results of this research reveal that MCS package, corporate governance, organisational learning, and product innovation are positively associated with organisational performance. Organisational learning and product innovation significantly mediate between the MCS package, corporate governance, and organisational performance. Owners/managers of SMEs Malaysia can use the results of current research in decision-making to enhance organisational performance. This research signifies those managers/owners of SME' in Malaysia that MCS package, corporate governance, organisational learning, and product innovation significantly determine organisational performance. The Malaysian government uses the outcomes of this research for the betterment of SMEs in Malaysia. Therefore, the current research highlights the constructs used here are significant for SMEs. In Malaysia, researchers have paid scant attention to the SME' area. Researchers paid scant interest in the MCS package, corporate governance, organisational learning, and product innovation to measure organisational performance. Thus, this research fills the gap and comes up with suggestions for future researchers.

Keywords: corporate governance; MCS package; organisational learning; organisational performance; product innovation

JEL Code: M11

Received and revised from: March 25, 2023; Accepted: April 16, 2024; Published: April 29, 2024

*Corresponding author

Email: irma.fe@unikama.ac.id



To cite this document:

Tyasari, I; Arshad, I. & Setiyowati, S. W. (2023). Management Control Systems Package, Corporate Governance, and SME's Performance in context of Malaysia. *BISMA (Bisnis dan Manajemen)*, 16(2), 256–286.

<https://doi.org/10.26740/bisma/v15n2.p139-157>

Introduction

In the development of any country, the researchers argue that their small and medium enterprises (SMEs) are critical, and these SMEs are considered the backbone of Asian countries (Cosenz & Noto, 2015; Heinicke, 2018; Nasir, Al Mamun, & Breen, 2017). A proven fact shows that for more than three decades, studies have focused on the significant role of SMEs' contribution to the economic development sector worldwide (Gamage, et al., 2020). It's also mentioned in the World Bank's report on 16 October 2019 that SMEs represent more than fifty percent of employment and ninety percent of business worldwide. Thus, the contribution of formal SMEs to emerging economies' GDP reaches 40%. It may be significantly higher if the informal SMEs are included. Malaysia is one of the emerging economies that may be a reflection of this. In the Malaysian economy, only 1.5% of large-scale organisations and the remaining organisations are SMEs that contribute 36.6% to GDP (SMEinfo, 2018). Few of the studies conclude that SMEs important for any economy but scant attention paid in the management accounting field particularly for SMEs (Chenhall & Langfield-Smith, 2003; Mitchell & Reid, 2000). Research from the perspective of SMEs increased but still there is a need to explore this area (López & Hiebl, 2015). It also stated that the major motive to work on SMEs is that inconsistent findings in different areas like entrepreneurship, accounting, and small business. There are some researchers focused on performance measurement systems (PMS) in terms of SMEs which find the family firms' particular aspects, other comprehensive resume of empirical research use, development and design, consequences of PSMs and influencing factors in SMEs (Heinicke, 2018; Pešalj et al., 2018). Moreover, few of the studies used management control systems (MCS) separately in SMEs and elucidates that outcomes of these studies are fragmented (Cooper et al., 2017; Malagueño, Lopez-Valeiras, & Gomez-Conde, 2018; Massaro et al., 2017). MCS in isolations widely used for joint-stock companies and scant attention paid on SMEs (Chalmeta, Palomero, & Matilla, 2012; Gschwantner & Hiebl, 2016). MCS takes a significant and essential part in the furtherance of SMEs (Garengo et al., 2005; Taticchi et al., 2012). SME's may get advantage by using sophisticated management control systems (Heinicke, 2018). However, the researchers ignore working over the MCS package for SMEs. This study focused on MCS package and data collected from SMEs).

The terms organisational control (OC), performance measurement systems (PMS), management accounting (MA), and MCS are sometimes used reciprocally (Chenhall, 2003). The MCS package is considered an essential resource for an organisation and boost their performance (Rehman, Mohamed, & Ayoup, 2019). MCS package is a combination of several organisational resources, including planning, cultural, automation (cybernetic), rewards and compensation, and administrative that organisations use in their daily life to get an advantage over their competitors by enhancing organisational performance (Rehman et al., 2019a). The current research focuses on the MCS package as it is beneficial for developed and developing countries to strengthen organisational performance (Rehman et al., 2019a). In this era, high competition exists in the market, and most organisations have enough finance to purchase similar resources that are using their competitors, but organisations can differentiate from others by using unique MCS packages. Most of the resources can be purchased at any cost, but there is no technology available yet that can copy the minds of people. Hence, organisations can hire competent people who plan well, improve governance structure, and make better policies and procedures.

Corporate governance means a group of systems and processes by which organisations are managed as well as controlled to align the interests of employees, society, and corporations as much as possible. Corporate governance is an indicator that is mostly used by large organisations in determining organisational performance (Chang et al., 2015; Das & Dey, 2016; Domadenik et al., 2016). Few of the researchers stated that corporate governance is not only useful for large organisations but also gives benefits to SMEs (Al-Najjar, 2018; Huang et al., 2016; Shahrier et al., 2018). Corporate governance is important for SME's effective strategies and best practices to access various resources and improve better management decision-making (Al-Najjar, 2018). Less observation has been made on corporate governance concerning SMEs in developing countries (Al-Najjar, 2018; Roudaki, 2018). Besides, most of the organisations in any economy represent SMEs, and innovation activities in these firms are less explored as compared to medium and large-scale organisations (Martínez-Román & Romero, 2013). Moreover, less attention has been paid to innovation in SMEs, and there is a need to further explore innovation activities in the future (Martínez-Román & Romero, 2013). Researchers paid scant attention to organisational learning to enhance organisational performance (Law & Chuah, 2015). Literature reveals that SMEs failed to realize the importance of organisational learning that influences on organisational performance (Zhu, Liu, & Chen, 2018).

The study objective is to determine MCS package and corporate governance influence on organisational performance with the mediating effect

of product innovation and organisational learning. Conforming to the resource-based view of Barney (1991), organisational capabilities (organisational learning and product innovation) explain between firm resources (MCS package and corporate governance) and organisational performance. Rehman et al. (2019a) stated that organisational performance is considered an important indicator for any kind of firm. For example, organisations that perform poorly consider that these organisations go to failure and vice versa. Malaysian SMEs face some major issues regarding innovation, such as variations in input prices, globalisation, increases the cost of production, and changes in customer preferences that constant pressure to seize sustainability and competitive advantage (Anuar & Yusuff, 2011). Furthermore, the author concludes that the Malaysian government provides an innovative ecosystem and that there are sufficient opportunities for manufacturing SMEs to enhance their practices (Anuar & Yusuff, 2011). Another observation conducted on Malaysian SMEs concludes that they lacked in technical and managerial expertise and undertook inadequate technological adoption (Hashim, 2000).

In Malaysia, SMEs faces issues regarding product innovation (Mamun, 2018), and organisational learning (Abdul-Halim et al., 2019) and there is a need to study these factors in determining SMEs performance. Hence, we propose that organisational learning and product innovation can mediate between MCS package, corporate governance, and organisational performance.

In the upcoming section, we develop proposed hypotheses by briefly reviewing the literature on MCS Package, corporate governance, product innovation, organisational learning, and organisational performance. Moreover, the research methodology for this research is introduced. The methodology plays a vital role in any type of research (Rehman et al., 2019a). This research is quantitative; data were collected by using questionnaires. Then, we empirically analyse the data and conclusions. Research implications, limitations, and future directions are explained in the final portion of this paper. This study is different than prior studies in terms of focusing on two mediators between MCS Package, corporate governance, and organisational performance in accordance with RBV theory.

RBV theory is used to develop a theoretical model. The theoretical framework is illustrated in figure 1. By proposing this theoretical framework, this study contributes in different ways. First, the current research use MCS Package, corporate governance, product innovation and organisational learning to measures organisational performance using RBV theory. Second, this study introduces two mediating variables in this model, attempting to additionally describe the correlation between the MCS Package, corporate governance, and organisational performance.

Literature Review and Hypotheses Development

MCS package

According to [Simons \(1990\)](#), MCS means a formal, information-based routine, and approaches that organisation managers use in their decisions to maintain firms actions. MCS Package includes five elements such as planning, culture, automation (cybernetic), rewards and compensation, and administrative, developed by [Malmi & Brown \(2008\)](#). Even the idea regarding MCS Package existed more than 40 years ago ([Otley & Berry, 1980](#)) and literature regularly calls to study MCS Package ([Chenhall, 2003](#); [Rehman et al., 2019a](#)). Regardless of this, there have been few studies that empirically study MCS Package ([Alvesson & Kärreman, 2004](#)). [Rehman et al. \(2019a\)](#) conclude that organisations perform their functions but face several issues regarding the MCS Package, such as cultural, planning, rewards and compensation, policies and procedures, and cybernetic-related issues that decrease their performance. Prior researchers mainly studied MCS in isolations to determine organisational performance, and their focus was developed economies, but scant attention was paid to developing or emerging economies ([Herath, 2007](#); [Tsamenyi et al., 2011](#)). Literature reveals that there is a need to examine MCS Package in developing countries to determine the influence of MCS Package on organisational performance ([Rehman et al., 2019a](#)).

Planning controls are deemed significant indicators that an organisation's management used in their decision making. According to [Rehman et al. \(2019a\)](#), planning controls are divided into two major dimensions such as action or short-range planning and strategic or long-range planning in all kinds of organisations like small and large-scale organisations. Planning controls facilitate in directing employees behavior and play a crucial part in determining organisational performance ([Malmi & Brown, 2008](#); [Rehman et al., 2019a](#)). Moreover, planning controls should be a part of the organisation and cannot be ignored to determine firm performance ([Rehman et al., 2019a](#)). Cultural controls refer to a combination of symbols, attitudes, beliefs, norms, assumptions, rituals, practices, philosophies, behaviors, habits, characteristics, and shared values (persistence, honesty, avoid discrimination, loyalty, and diligence) that an organisation uses to attain competitive advantage. [Malmi and Brown \(2008\)](#) cover three things in cultural controls clans, value-based, and symbol-based, and the current study used these three dimensions for cultural controls. In organisations, sometimes management does not control the organisation's culture; instead, the employees of an organisation control ([Rehman et al., 2019a](#)). Moreover, organisations have some sub-cultures and these are called clans ([Clegg et al., 2019](#); [Malmi & Brown, 2008](#); [Rehman et al., 2019a](#)). The symbol-based culture showed visually like particular employees uniform or specific office design in the organisation ([Malmi &](#)

Brown, 2008). Value-based culture means formally communicating top management to low-level management (Segon & Booth, 2013).

Cybernetic control is defined as a system that evaluates standard as well as actual performance, then sees the difference between standard and actual performance and gives feedback that tells regarding variances. Rewards and compensation control include two-dimension such as intrinsic rewards and extrinsic rewards (Bonner & Sprinkle, 2002). Rewards and compensation control include two-dimensions such as intrinsic rewards and extrinsic rewards (Rehman et al., 2018). Incentive systems are used in organisations that are alternative to rewards and compensation controls to boost up employees and organisation performance (Rehman et al., 2019). Finally, administrative controls mean systems firms employ to provide a path to management behaviour in the attainment of specific objectives (Chhillar, 2013). Administrative controls include three components policies and procedures, organisation structure and design, and the final one is governance structure (Malmi & Brown, 2008; Rehman et al., 2019a).

MCS Package is considered an important resource for organisations in examining their capabilities and strengthening their performance (Rehman et al., 2019a). Simons (levers of control) signifies that the interactive use of MCS has an influence on product innovation (Bisbe & Otley, 2004). MCS Package is considered the most important resource for organisations that determines organisational performance (Chenhall, 2003; Ittner et al., 2003; Rehman et al., 2019). On the other hand, one of the studies confirms that MCS has a weak influence on organisational performance (Junqueira, et al., 2016). Therefore, there is a need for another variable that explains this relationship more clearly. This study uses organisational learning and product innovation as mediators between the MCS Package and organisational performance. Less attention has been paid to the MCS Package to measure organisational learning and product innovation because literature demonstrates that MCS isolation is used to measure these variables. This is the pioneer study that uses MCS Package to measure organisational performance with product innovation and organisational learning. This study proposed the following hypotheses:

H₁: MCS Package positively correlated organisational performance.

H₂: MCS Package positively correlated organisational learning.

H₃: MCS Package positively correlated product innovation.

H₄: Organisational learning meditates the correlation between MCS Package and organisational performance.

H₅: Product innovation meditates the correlation between MCS Package and organisational performance

Corporate Governance (CG)

Corporate governance is considered a system for firms in the enhancement of their performance. Ali (2018) concludes that researchers have focused highly on CG since the big scandal in two famous companies, Enron and WorldCom. There is a need to protect stakeholders and organisations; the controlling agencies try to depress wicked practices to execute rules and regulations prohibit wicked practices, and the significant practice in CG (Rankin et al., 2012). CG structure recognises a share of rights and duties among a range of participants within organisations, such as shareholders, the board of directors, and external auditors (Mansur & Tangl, 2018). A CG system is pivotal for an organisations success and due to weak CG system organisations faces failure (Arora & Sharma, 2016). Hence, organisations need to develop a good CG system to enhance organisational performance. This study covers five components of the CG system such as board size, board diversity, board independence, board meetings held in a year, and the number of board committees. The last few decades demonstrate that researchers give more importance to CG in examining organisational performance but scant attention paid in emerging or developing countries (Gompers et al, 2003; Pass, 2004). Findings in developed economies are different than findings in developing economies even with a similar framework and theory (Arora & Sharma, 2016). One of the recent studies concludes that CG and firm performance is the most vital topics, and these variables not conclusive and call further studies on this topic (Mardnly et al., 2018).

Board size means a total number of directors, including independent or external directors, and executive directors, which consist of managing directors or chief financial officers. Jensen and Meckling (1976) stated that agency theory concludes that a board size with smaller members has higher management control rather than a large board size. Moreover, a smaller board facilitates organisations in increasing their performance; it also shows that a larger board (at least seven members) creates lots of issues like lack of commitment, moral hazard, more control from the CEO side, and ineffective operations (Jensen, 1993). A reasonable board size is more effective rather than a large board in controlling organisational activities, and a large board size decreases organisational performance (García-Ramos & García-Olalla, 2011). Board independence refers to a situation where most of the board members are outsiders or independent and have no affiliation with top management and no or minimal business transactions with the organisation to avoid possible conflicts of interest. Board independence is considered an important factor that increases firm performance (Daily & Dalton, 1993). There are two theories, human capital theory (HCT) and resource dependency theory (RDT), that explain the relationship between board diversity and organisational

performance. RDT suggests that firms depend on their surroundings (Pfeffer, 1972). HCT highlights that the knowledge and skills of the board of directors influence the effectiveness and implementation of resource provision and observing roles (Hillman & Dalziel, 2003). The compatibility of RDT and HCT is based on the assumption that board diversity improves organisational performance (Kim et al., 2013). Vafeas (1999) made a first-person gives argument that board meetings are considered important in increasing firms' performance. The board of directors is normally considered a critical control mechanism that examines decision-making actions (Lam & Lee, 2012). Meanwhile, the monitoring of the board of directors could be increased by creating a board committee, the purpose of which is to highlight board responsibilities (Higgs, 2003). Furthermore, this committee provides better results when it includes non-executive directors (Lam & Lee, 2012). This study used organisational learning and product innovation to mediate variables between CG and organisational performance. This is the pioneer study that uses CG to examine organisational performance with product innovation and organisational learning. This study proposed the following hypotheses:

H₆: CG positively correlated organisational performance.

H₇: CG positively correlated organisational learning

H₈: CG positively correlated product innovation

H₉: Organisational learning meditates the correlation between CG and organisational performance.

H₁₀: Productive innovation meditates the correlation between CG and organisational performance.

Organisational Learning and Product Innovation

Organisational learning refers to a procedure to create, keep, transfer, and deliver fresh knowledge in firms that significantly enhance organisational performance (Rehman et al., 2019b). Additionally, if top management works over organisational learning, then it can gain an advantage over competitors (Rehman et al., 2019b). Organisations ought to be more responsive and adaptive to keep learning in every strategic decision to anticipate the internal environment and overlook a competitive market (Pawirosumarto et al., 2017). The literature demonstrates that organisational learning significantly increases organisational performance in accordance with the RBV theory (Rehman et al., 2019b). Besides this, the researchers recommend that small organisations should focus on innovation (Martínez-Román & Romero, 2013). Besides this, the researchers recommend that small organisations should focus on innovation (Martínez-Román & Romero, 2013). Although not all innovations can instantly provide financial benefits to organisations, organisations can get benefits in the long run and attain a competitive advantage. Innovation and organisational

learning significantly increase financial performance (Henri, 2006). Followings are the proposed hypotheses;

H₁₁: Organisational learning positively associated with organisational performance.

H₁₂: Product innovation positively associated with organisational performance

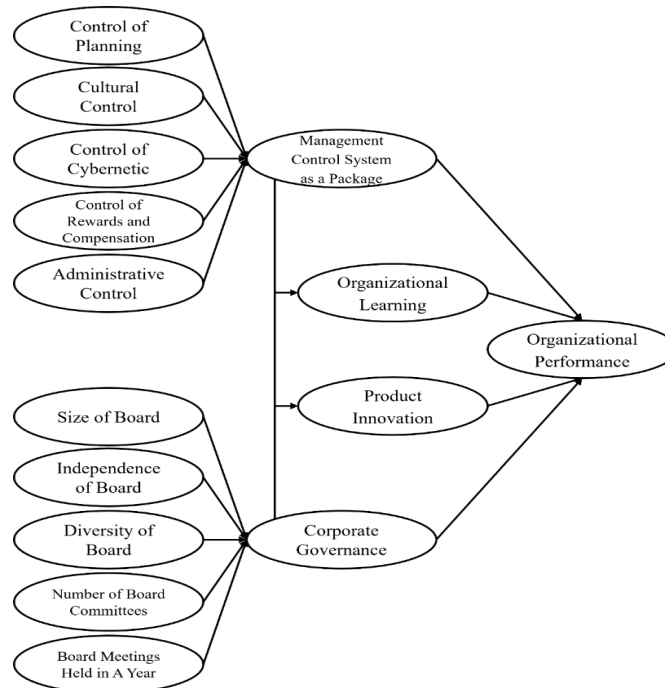
Methods

The term “research design” refers an order, strategy, and the procedure of finding answer of particular the problem of research (Bhatti & Rehman, 2019). For any kind of study, research methodology is considered a significant role in the eyes of the researchers in accomplishing research objectives (Rehman et al., 2019a). Besides this, a suitable research technique is required to answer practical and theoretical problems (Rehman et al., 2019a). Thus, this research follows a quantitative technique and data gathered from respondents by using questionnaires, since questionnaire is more legitimate and convenience method to collect data from a huge number of people within a period of time (Rehman et al., 2019a). The deductive reasoning approach is followed in a situation where the theoretical model of a study developed on the base of some existing well-established theories as suggested by Rehman et al. (2019b). The theoretical model developed in light of the RBV theory. Hence, this study followed the deductive reasoning approach rather than the inductive reasoning approach.

This study covers a total of 5 main constructs such as MCS as a package, organisational learning, corporate governance, product innovation, and organisational performance. The items are adapted from some prior studies regarding these variables to measure variables. MCS package five elements like cultural control 16 items (Sampe, 2012); control of planning 13 items, cybernetic control 8 items, and control of rewards and compensation 6 items (Hanzlick & Brühl, 2013); administrative control 9 items (Ramamurthy, 1991). Corporate governance five components such as size of board 5, independence of board 3, diversity of board 6, number of board committees 5, and board meetings held in a year 4 items (Honghui, 2017). Organisational learning 4 items adapted from Hult (1998); financial performance 3 items adapted from Henri (2006); and non-financial performance 8 items adopted from Teeratansirikool et al. (2013). The current research used production innovation 4 items (Jänkälä, 2010) that are similar to (Bisbe & Otley, 2004). The display of the main contracts as mentioned above, is described on the appendix.

Figure 1.

Theoretical Framework



Source: Data processed by Authors

Result and Discussion

Data Collection Procedure

The current research collects data using a structured questionnaire that developed with the help of some prior studies regarding MCS package, corporate governance, organisational learning, product innovation, and organisational performance. The questionnaires were distributed among SME's owners/directors in Malaysia by using personal administered and a postal survey.

Population and Sampling

The current study is on SMEs situated in Malaysia and the respondent is the owners/directors of SMEs. The aim to choose SMEs is that in Malaysian SMEs a lack of attention has been given over MCS package, corporate governance, organisational learning, and product innovation to measure organisational performance. The number of 907,065 SMEs recorded on Malaysian websites (SMEinfo, 2018). Malaysian SMEs are further divided into various heads such as construction, manufacturing, mining, services and quarrying, and the final one is agriculture. This study follows area cluster sampling because SMEs are situated in a wide range area in geographical terms as suggested by Sekaran and Bougie (2016). Clusters are formed on the basis of states. There are 16 states in Malaysia where the SMEs situated. Table 1 demonstrates the percentage of SMEs in Malaysia.

Every state is deemed as a cluster and a total of 08 clusters such as Kedah, Sarawak, Perak, Kuala Lumpur, Sabah, Pinang, Johor, and Selangor randomly selected because 79.4 % SME's are operating. [Sekaran and Bougie \(2016\)](#) stated that first define clusters then select the clusters randomly. There are several benefits to choose cluster sampling ([Sekaran & Bougie, 2016](#)). First, this research technique is more appropriate in a case where the population reaches over a broader region/scope. Second, this technique reduces data collection costs and covers a significant geographical area only in a short time.

Table 1.

SME's Percentage in States of Malaysia

State	%	State	%	State	%	State	%
Selangor	19.76	Kuala Lumpur	14.69	Johor	10.82	Perak	8.28
Pinang	7.38	Sarawak	6.66	Sabah	6.24	Kedah	5.41
Kelantan	5.14	Negeri Sembilan	3.57	Pahang	4.09	Malacca	3.53
Terengganu	3.23	Perlis	0.78	Labuan	0.33	Putrajaya	0.09

Sample Size

There are various categories of sample size presented by [Comrey and Lee \(1992\)](#). For instance, if sample size <50 is deemed weaker, in the range of 51 to 100 is deemed weak sample size, between 101 to 200 is adequate, within 300 is the sufficient sample size, then, 500 is very good, and 1000 is deemed to excellent sample. This research distributed a thousand questionnaires to managers/owners of SMEs.

The reason to select managers/owners because they are more educated (more than 90% respondents accomplished senior high school as can be seen in table 2) and know regarding MCS package, corporate governance, organisational learning, product innovation, and organisational performance. Out of 1,000 questionnaires, only 389 questionnaires received, 20 data were eliminated due to ambiguous values. The 369 questionnaires applied to final analysis that equals to 36.90% response rate. Here is the detail respondent's demographic profile.

Table 2.

Respondent's Demographic Profile

Description		Frequency	Percentage
Gender	Male	216	58,54
	Female	153	
Qualification	Secondary	9	2
	Intermediate	28	8
	Bachelors plus	266	72
	Masters and Doctorate	66	18

Data Analysis

The use of SmartPLS 3.2.8 in this study in order to determines the theoretical model because SmartPLS quickly raising 2nd generation software (Hair et al., 2017). The different rationale considered to choose SmartPLS such as this is useful for complex and simple models, no need for test of normality, and this technique is preferable to execute estimation rather than regression (Hair et al., 2017). Besides this, the literature reveals that PLS-SEM is superior as compared to the CB-SEM technique (Hair et al., 2017). SmartPLS have structural model and measurement.

Measurement Model

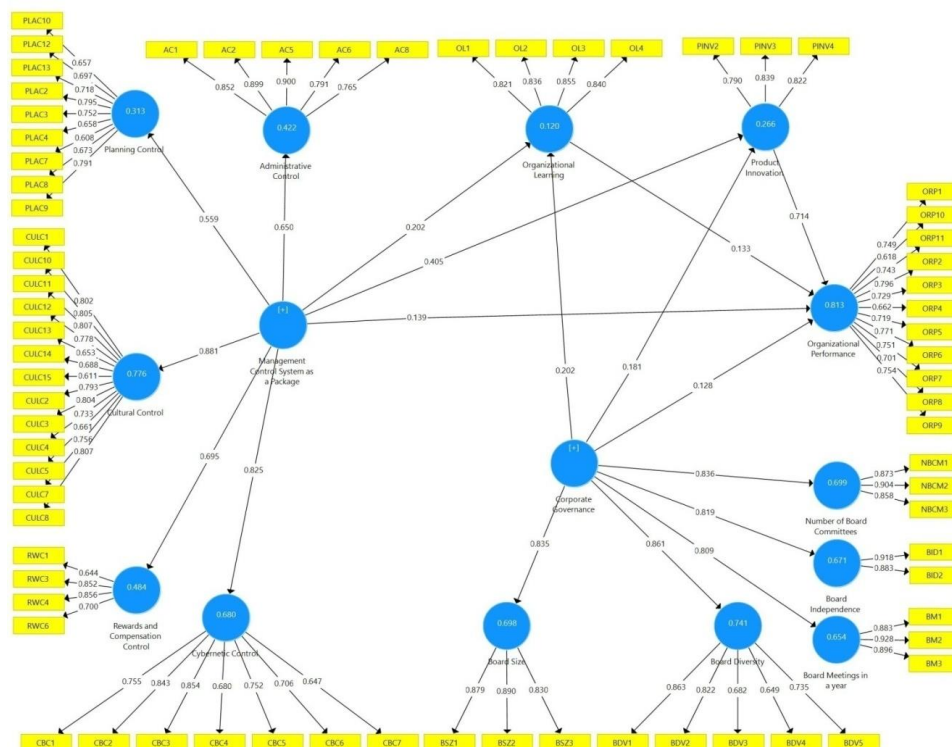
The models of measurement cover convergent, as well as, discriminant validity as stated by [REDACTED].

Convergent Validity

This validity attributes a situation where researchers observe that specific items of variable measure that specific one (Rehman et al., 2019b). Fornell and Larcker (1981) mentioned that factors loading, composite reliability (CR), and average variance-extracted (AVE) required to compute convergent validity. The factors loading value, CR, and AVE should be equals to or higher than 0.50, 0.60 and 0.50 respectively (Hair et al., 2017).

Figure 2.

Measurement Mode



One of the studies confirms that eliminate all items having loading of factors less than 0.50 to attain good results of both CR and AVE (Hayduk & Littvay, 2012). When the researchers deleted the items that have loadings of factor less than 0.50 this activity strengthen the theoretical framework (Rehman et al., 2019). Nunnally (1978) stated that the value of Cronbach's alpha higher than 0.60. Table below describes, the current research meets the criteria of convergent validity.

Discriminant Validity

Discriminant validity defines as a position where the researchers confirm that 2 indicators vary in terms of statistics (Rehman et al., 2019a). Besides, it explains the degree to which a construct varies from other variables on some empirical gauges (Hair et al., 2017). This research measures discriminant validity to use one of the approach presented by Fornell and Larcker (1981). Firstly, compares the values of AVE with the squared correlations.

Table 3.

Discriminant validity (HTMT)

Variables	MCSP	CG	OL	PINV	ORP
Corporate Governance					
Management Control System as a					
Package (MCSP)	0.487				
Organisational Learning	0.331	0.341			
Organisational Performance	0.537	0.647	0.453		
Product Innovation	0.430	0.590	0.316	0.802	

Secondly, compare the AVE square root with correlation. This research utilised the second method to measure discriminant validity. According to Rehman et al. (2019a), upper diagonal values in the discriminant validity table should be greater than beneath values. In recent research, the researchers validate that traditional metric of discriminant validity that proposed Fornell-Larker is not suitable for discriminant validity. For instance, Henseler et al. (2015) stated that Fornell-Larker criterion for discriminant validity does not present well, primarily when all indicators has the loadings with a smaller differentiation like factor loadings between 0.65 to 0.85. Heterotrait-monotrait ratio (HTMT) of correlation replace used to measure discriminant validity on the replacement of Fornell-Larker (Henseler et al., 2015). The HTMT's value should be smaller than 0.85 for variables that are highly distinct as suggested by Henseler et al. (2015). Moreover, the value of HTMT can be at most 0.90 for those constructs that are conceptually similar. Table 3 and appendix 3 demonstrates that there is no issue of discriminant validity.

Structural (inner) Model and The Testing of Hypotheses

The inner model consists of an algorithm of PLS and the technique of bootstrapping. The researchers should run bootstrapping with the 5,000 subsamples to get better results (Hair et al., 2017). This research has 8 and 4 direct and indirect hypotheses sequentially.

Results

Table four reveals that the MCS package increase organisational performance as ($\beta=0.148$, $t=3.989$, $p=0.000$) H_1 supported. MCS package enhance organisational learning as ($\beta=0.346$, $t=4.971$, $p=0.000$) and accepted H_2 . MCS package significantly enhances product innovation as ($\beta=0.478$, $t=8.522$, $p=0.000$) and H_3 supported.

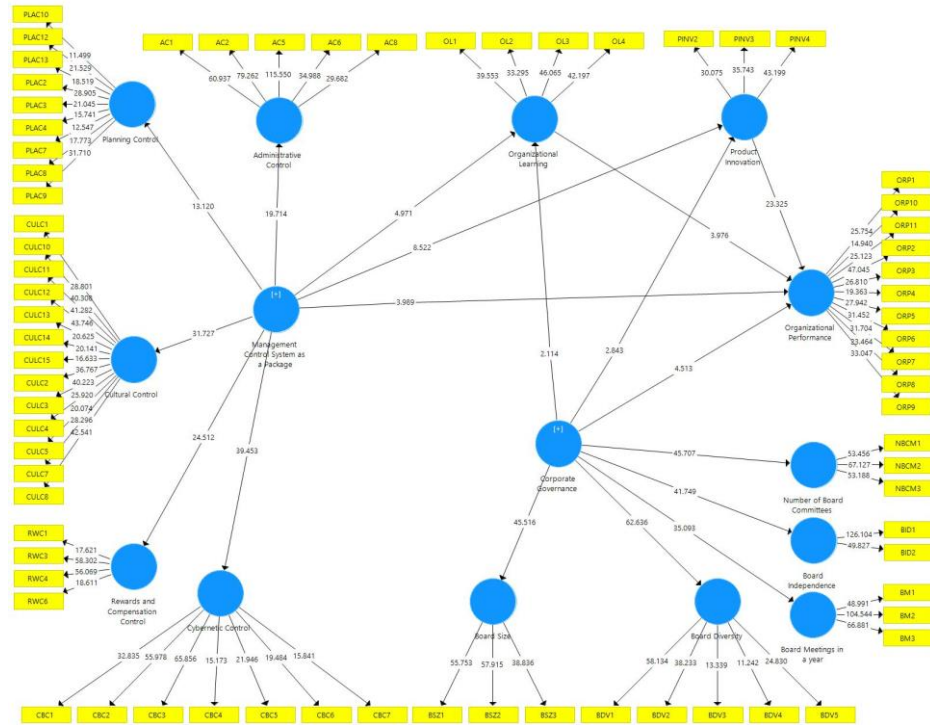
Organisational learning and product innovation mediate between MCS package and organisational performance. Thus, support H_4 and H_5 . Corporate governance significantly increases performance ($\beta=0.135$, $t=4.513$, $p=0.000$) and accepted H_6 . Corporate governance significantly improves organisational learning ($\beta=0.136$, $t=2.114$, $p=0.035$) and supported H_7 . Corporate governance significant influence on product innovation ($\beta=0.151$, $t=2.843$, $p=0.005$) supported H_8 . Organisational learning and product innovation significantly mediate between corporate governance and performance. Hence, support H_9 and H_{10} . Organisational learning and product innovation significantly enhance organisational performance. Hence, support H_{11} and H_{12} .

The predictive relevant of research model

For predictive relevance of this study framework, required R-square (R^2) and cross-validated redundancy (Q^2) (Geisser, 1974; Stone, 1974). R^2 refers explanation of endogenous construct by all endogenous variables. This study shows 12% and 26.6% of organisational learning and product innovation enlighten MCS package and corporate governance. While 81.3% organisational performance explains all exogenous variables (see appendix 2). According to Cohen (1988), R^2 divided into different categories like weak (0.02 to 0.13), moderate (0.13 to 0.26), and substantial where R^2 greater than 0.26.

Hence, organisational learning falls under small. Product innovation and organisational performance lie in the substantial. The researchers used Q^2 to examine theoretical framework quality. For this purpose, researchers use the blindfolding. This technique eliminates data that includes missing values. The literature demonstrates that the value of $Q^2 > \text{zero}$ (Chin, 1998). Appendix 1 reveals this study fulfills the requirement.

Figure 3.
Structural Model



Source: Data processed by Authors

The Effect side of the model

The term effect size means an individual exogenous variable influence over an endogenous variable. Cohen (1988) mentioned, effect size is large ($f^2=0.35$), medium ($f^2=0.15$), and small ($f^2=0.02$). It means that MCS package, corporate governance, and organisational learning small effect size 0.067, 0.074, and 0.057 in that order. Product innovation has a large effect of 1.779.

Discussion

The current research tries to determine MCS package and corporate governance influence on organisational performance with the mediating role of organisational learning and product innovation. The outcomes elucidate that the MCS package significantly enhances organisational performance. The findings show that SMEs Malaysia provides importance to MCS package to measure organisational performance. The outcomes are consistent with (Chenhall, 2003; Ittner et al., 2003; Rehman et al., 2019a) that the MCS package advances firm's performance. However, another finding argues that not all the practice of management control found to be relevant in isolation are relevant when studied simultaneously as a package (Bedford, Malmi & Sandelin, 2016).

MCS package enhances organisation learning and product innovation. It means that SMEs Malaysia provides importance to the MCS package for the improvement in organisation learning and product innovation. Researchers paid scant attention over the MCS package to determine organisation learning and product innovation. This is pioneer research that measures organisation learning and product innovation with the support of the MCS package. Organisational learning and product innovation significantly mediate between the MCS package and organisational performance. In reference to RBV theory, organisational capabilities (organisation learning and product innovation) significantly describe the firm's performance.

Corporate governance significantly enhances organisational performance. The outcomes show that Malaysian SMEs give importance to corporate governance in determining organisational performance. In prior studies, the researchers determine a firm's performance through corporate governance elements one by one but not in one bundle. This study used five elements of corporate governance in a single study to decide the performance of a firm. The results demonstrate that Malaysian SMEs give importance to corporate governance in their decision-making regarding organisational performance. In addition, corporate governance boosts up organisational learning and product innovation. This is also pioneer research that measures organisational learning and product innovation by using corporate governance. Organisational learning and product innovation significantly mediate between corporate governance and organisational performance. RBV theory supported these findings that organisational capacities (organisational learning and product innovation) significantly mediate between organisational assets (corporate governance) and organisational performance. Finally, organisational learning, as well as production innovation, significantly boosts the performance of Malaysian SMEs. The results are in accordance with Henri (2006) that organisational learning, product innovation significantly elevate organisational performance.

Conclusion and Suggestion

Conclusion

The research reveals that MCS package, corporate governance, organisational learning, and product innovation significantly increase the organisational performance of SME's Malaysia. Besides this, the current research reveals that organisational learning and product innovation explain the MCS package, corporate governance, and the performance of a firm. This examination implicates the literature on MCS package, corporate governance, organisational learning, product innovation, and organisational performance. Organisational learning and product innovation significantly enlighten the

MCS package, corporate governance, and firm's performance as recommended by the RBV theory.

Theoretical Implication

The study contributes in theory to examine the mediating effect of organisational learning and PINV between MCS package, corporate governance, and the performance of a firm as previous studies ignored. By incorporating the MCS package, corporate governance, organisational learning, product innovation, and performance of firm in a theoretical framework, this study calls for more studies in the future. Besides, organisational learning and product innovation can be used in the future to clarify between MCS package, corporate governance, and organisational performance for any kind of organisation. This is the pioneering research that used organisational learning and product innovation between MCS package, corporate governance, and organisational performance by using the theory of RBV.

Practical Implication

This research has a variety of practical contributions and facilitates owners/managers of SME's Malaysia in improving organisational performance. This study reveals that MCS package, corporate governance, organisational learning and product innovation enhance a firm's performance. This research suggests that owners/managers should focus on MCS package, corporate governance, organisational learning, and product innovation if they want to boost the performance of a firm. For example, by considering financial and non-financial performance. The findings demonstrate organisational capabilities (organisational learning and product innovation) significantly mediate between firm resources (MCS package, corporate governance) and organisational performance. The findings can be used by the government of Malaysia in their decision making to increase SME's performance, for example by providing easy access or simple procedure to obtain the working capital as well as providing training and consultancy program.

Limitations and suggestions

This research has various limitations. First, this study is conducted in SME's sector and the researchers are required to work on these variables in the future in large scale organisations. Secondly, this study is carried out in Malaysia and future researchers can carry out another study on the similar theoretical framework in other countries. Third, the current research used MCS package and corporate governance to measure a firm's performance in light of mediator's organisational learning and product innovation. Therefore, in the

future, the researchers can use the moderating variable (organisational capabilities and business strategy) between MCS package, corporate governance, and organisational performance considering resource orchestration theory in any country

Acknowledge

The study for this paper was conducted in Malaysia and made possible by support and assistance from our Pakistani, Malaysia and Indonesia Ph.D. fellows at Universiti Utara Malaysia (UUM) who are always generous to share their knowledge, information and experience. We are also deeply indebted to our universities for giving us a chance to scale up our competency. My gratitude also goes to the blind-reviewers who have greatly improved the paper.

Author contribution

The current research used MCS package and corporate governance to measure a firm's performance in light of mediator's organisational learning and product innovation. Therefore, in the future, the researchers can use the moderating variable (organisational capabilities and/ or business strategy) between MCS package, corporate governance, and organisational performance considering resource orchestration theory in any country

Declaration of interest

We declare that there have no financial or non-financial interest which may consider as potential conflict of interest

References

- Abdul-Halim, H., Ahmad, N. H., Geare, A., & Thurasamy, R. (2019). Innovation Culture in SMEs: The Importance of Organisational Culture, Organisational Learning and Market Orientation. *Entrepreneurship Research Journal*, 9(3), 1-14. <https://doi.org/10.1515/erj-2017-0014>
- Al-Najjar, B. (2018). Corporate governance and audit features: SMEs evidence. *Journal of Small Business and Enterprise Development*, 25(1), 163-179. <https://doi.org/10.1108/JSBED-08-2017-0243>
- Ali, M. (2018). Impact Of Corporate Governance On Firm's Financial Performance (A Comparative Study Of Developed And Non Developed Markets). *Economic Research*, 2(1), 15-30.
- Alvesson, M., & Kärreman, D. (2004). Interfaces of control. Technocratic and socio-ideological control in a global management consultancy firm. *Accounting, organisations and society*, 29(3-4), 423-444. [https://doi.org/10.1016/S0361-3682\(03\)00034-5](https://doi.org/10.1016/S0361-3682(03)00034-5)
- Anuar, A., & Yusuff, R M.. (2011). Manufacturing best practices in Malaysian small and medium enterprises (SMEs). *Benchmarking: An International Journal*, 18(3), 324-341. <https://doi.org/10.1108/14635771111137750>

- Arora, A., & Sharma, C. (2016). Corporate governance and firm performance in developing countries: evidence from India. *Corporate governance*, 16(2), 420-436. <https://doi.org/10.1108/cg-01-2016-0018>
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Bedford, D. S., Malmi, T., & Sandelin, M. (2016). Management control effectiveness and strategy: An empirical analysis of packages and systems. *Accounting, Organisations and Society*, 51, 12-28. <https://doi.org/10.1016/j.aos.2016.04.002>
- Bhatti, A., & Rehman, S. U. (2019). Perceived benefits and perceived risks effect on online shopping behavior with the mediating role of consumer purchase intention in Pakistan. *IJMS*, 26(1), 33-54. <https://doi.org/10.32890/ijms.26.1.2019.10512>
- Bisbe, J., & Otley, D. (2004). The effects of the interactive use of management control systems on product innovation. *Accounting, organisations and society*, 29(8), 709-737. <https://doi.org/10.1016/j.aos.2003.10.010>
- Bonner, S. E., & Sprinkle, G. B. (2002). The effects of monetary incentives on effort and task performance: theories, evidence, and a framework for research. *Accounting, organisations and society*, 27(4-5), 303-345. [https://doi.org/10.1016/s0361-3682\(01\)00052-6](https://doi.org/10.1016/s0361-3682(01)00052-6)
- Chalmeta, R., Palomero, S., & Matilla, M. (2012). Methodology to develop a performance measurement system in small and medium-sized enterprises. *International Journal of Computer Integrated Manufacturing*, 25(8), 716-740. <https://doi.org/10.1080/0951192X.2012.665178>
- Chang, C.-S., Yu, S.-W., & Hung, C.-H. (2015). Firm risk and performance: the role of corporate governance. *Review of Managerial Science*, 9(1), 141-173. <https://doi.org/10.1007/s11846-014-0132-x>
- Chenhall, R. H. (2003). Management control systems design within its organisational context: findings from contingency-based research and directions for the future. *Accounting, organisations and society*, 28(2-3), 127-168. [https://doi.org/10.1016/S0361-3682\(01\)00027-7](https://doi.org/10.1016/S0361-3682(01)00027-7)
- Chenhall, R. H., & Langfield-Smith, K. (2003). Performance measurement and reward systems, trust, and strategic change. *Journal of management accounting research*, 15(1), 117-143. <https://doi.org/10.2308/jmar.2003.15.1.117>
- Chhillar, P., & Banerjee, P. (2013). Management control systems and corporate governance: a theoretical review. *Asia-Pacific Management Accounting Journal*, 10 (2). 103-128.
- Chin, W. W. (1998). Commentary: Issues and Opinion on Structural Equation Modeling. *MIS Quarterly*, 22(1), 7-16.
- Clegg, S. R., Kornberger, M., & Pitsis, T., Mount, M. (2019). *Managing and organisations: An introduction to theory and practice*: Sage.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*: Routledge. <https://doi.org/10.4324/9780203771587>
- Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis*: Psychology Press. <https://doi.org/10.4324/9781315827506>

- Cooper, D. J., Ezzamel, M., & Qu, S. Q. (2017). Popularizing a management accounting idea: The case of the balanced scorecard. *Contemporary Accounting Research*, 34(2), 991-1025. <https://doi.org/10.1111/1911-3846.12299>
- Cosenz, F., & Noto, L. (2015). Combining system dynamics modelling and management control systems to support strategic learning processes in SMEs: a Dynamic Performance Management approach. *Journal of Management Control*, 26(2-3), 225-248. <https://doi.org/10.1007/s00187-015-0208-z>
- Daily, C. M., & Dalton, D. R. (1993). Board of directors leadership and structure: Control and performance implications. *Entrepreneurship theory and practice*, 17(3), 65-81. <https://doi.org/10.1177/104225879301700305>
- Das, A., & Dey, S. (2016). Role of corporate governance on firm performance: a study on large Indian corporations after implementation of Companies' Act 2013. *Asian Journal of Business Ethics*, 5(1-2), 149-164. <https://doi.org/10.1007/s13520-016-0061-7>
- Domadenik, P., Prašnikar, J., & Svejnar, J. (2016). Political connectedness, corporate governance, and firm performance. *Journal of Business Ethics*, 139(2), 411-428. <https://doi.org/10.1007/s10551-015-2675-4>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>
- García-Ramos, R., & García-Olalla, M. (2011). Board characteristics and firm performance in public founder-and nonfounder-led family businesses. *Journal of Family Business Strategy*, 2(4), 220-231. <https://doi.org/10.1016/j.jfbs.2011.09.001>
- Garengo, P., Biazzo, S., & Bititci, U. S. (2005). Performance measurement systems in SMEs: A review for a research agenda. *International journal of management reviews*, 7(1), 25-47. <https://doi.org/10.1111/j.1468-2370.2005.00105.x>
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, 61(1), 101-107. <https://doi.org/10.1093/biomet/61.1.101>
- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices. *The quarterly journal of economics*, 118(1), 107-156. <https://doi.org/10.1162/00335550360535162>
- Gschwantner, S., & Hiebl, M. R. (2016). Management control systems and organisational ambidexterity. *Journal of Management Control*, 27(4), 371-404. <https://doi.org/10.1007/s00187-016-0236-3>
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd edition ed.). Thousand Oaks: Sage Publications.
- Hanzlick, M., & Brühl, R. (2013). Management Control Systems as a package.
- Hashim, M. K. (2000). Distinctive capabilities and performance: empirical evidence from Malaysian SMEs. *Malaysian Management Review*, 4(1/2), 51-64.
- Hayduk, L. A., & Littvay, L. (2012). Should researchers use single indicators, best indicators, or multiple indicators in structural equation models? *BMC medical research methodology*, 12(1), 159. <https://doi.org/10.1186/1471-2288-12-159>

- Heinicke, A. (2018). Performance measurement systems in small and medium-sized enterprises and family firms: A systematic literature review. *Journal of Management Control*, 28(4), 457-502. <https://doi.org/10.1007/s00187-017-0254-9>
- Henri, J.-F. (2006). Management control systems and strategy: A resource-based perspective. *Accounting, organisations and society*, 31(6), 529-558. <https://doi.org/10.1016/j.aos.2005.07.001>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>
- Herath, S. K. (2007). A framework for management control research. *Journal of Management Development*, 26(9), 895-915. <https://doi.org/10.1108/02621710710819366>
- Higgs, D. (2003). *Review of the role and effectiveness of non-executive directors: Stationery*
- Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management review*, 28(3), 383-396. <https://doi.org/10.5465/amr.2003.10196729>
- Honghui, L. (2017). *The effect of Corporate Governance on Performance of firms listed on the nairobi securities exchange*. [Master thesis, School of business, University of Nairobi] University Nairobi Research Archive
- Huang, W., Boateng, A., & Newman, A. (2016). Capital structure of Chinese listed SMEs: an agency theory perspective. *Small Business Economics*, 47(2), 535-550. <https://doi.org/10.1007/s11187-016-9729-6>
- Hult, G. T. M. (1998). Managing the international strategic sourcing process as a market-driven organisational learning system. *Decision Sciences*, 29(1), 193-216. <https://doi.org/10.1111/j.1540-5915.1998.tb01349.x>
- Ittner, C. D., Larcker, D. F., & Meyer, M. W. (2003). Subjectivity and the weighting of performance measures: Evidence from a balanced scorecard. *The accounting review*, 78(3), 725-758. <https://doi.org/10.2308/accr.2003.78.3.725>
- Jänkälä, S. (2010). Role of Interactive Control Systems and Foresight in Competitive Dynamics of Businesses. Available at SSRN 1592412. <https://dx.doi.org/10.2139/ssrn.1592412>
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The journal of finance*, 48(3), 831-880. <https://doi.org/10.1111/j.1540-6261.1993.tb04022.x>
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Junqueira, E., Dutra, E. V., Zanquetto Filho, H., & Gonzaga, R. P. (2016). The Effect of Strategic Choices and Management Control Systems on Organisational

- Performance. *Revista Contabilidade & Finanças* 27(72).
<https://doi.org/10.1590/1808-057x201601890>
- Kim, I., Pantzalis, C., & Park, J. C. (2013). Corporate boards' political ideology diversity and firm performance. *Journal of Empirical Finance*, 21, 223-240.
<https://doi.org/10.1016/j.jempfin.2013.02.002>
- Lam, T.-y., & Lee, S.-k. (2012). Family ownership, board committees and firm performance: evidence from Hong Kong. *Corporate Governance: The international journal of business in society*, 12(3), 353-366.
<https://doi.org/10.1108/14720701211234609>
- López, O. L., & Hiebl, M. R. (2015). Management accounting in small and medium-sized enterprises: current knowledge and avenues for further research. *Journal of management accounting research*, 27(1), 81-119.
<https://doi.org/10.2308/jmar-50915>
- Law, K. M., & Chuah, K. B. (2015). Organisational learning as a continuous process, *DELO PAL driven organisational learning: Theory and practices* (pp. 7-29): Springer. https://doi.org/10.1007/978-3-319-18014-4_2
- Malagueño, R., Lopez-Valeiras, E., & Gomez-Conde, J. (2018). Balanced scorecard in SMEs: effects on innovation and financial performance. *Small Business Economics*, 51(1), 221-244. <https://doi.org/10.1007/s1187-017-9921-3>
- Malmi, T., & Brown, D. A. (2008). Management control systems as a package—Opportunities, challenges and research directions. *Management accounting research*, 19(4), 287-300. <https://doi.org/10.1016/j.mar.2008.09.003>
- Mamun, A. A. (2018). Diffusion of innovation among Malaysian manufacturing SMEs. *European Journal of innovation management*, 21(1), 113-141.
<https://doi.org/10.1108/EJIM-02-2017-0017>
- Mansur, H., & Tangl, A. (2018). The Effect of Corporate Governance on the Financial Performance of Listed Companies in Amman Stock Exchange (Jordan). *Journal of Advanced Management Science*, 6(2), 97-102. doi:
<https://doi.org/10.18178/joams.6.2.97-102>
- Mardnly, Z., Mouselli, S., & Abdulraouf, R. (2018). Corporate governance and firm performance: an empirical evidence from Syria. *International Journal of Islamic and Middle Eastern Finance and Management*, 11(4), 591-607.
<https://doi.org/10.1108/IMEFM-05-2017-0107>
- Martínez-Román, J. A., & Romero, I. (2013). About the determinants of the degree of novelty in small businesses' product innovations. *International Entrepreneurship and Management Journal*, 9(4), 655-677.
<https://doi.org/10.1007/s11365-013-0269-0>
- Massaro, M., Moro, A., Aschauer, E., & Fink, M. (2017). Trust, control and knowledge transfer in small business networks. *Review of Managerial Science*, 1-35. <https://doi.org/10.1007/s11846-017-0247-y>
- Mitchell, F., & Reid, G. C. (2000). Problems, challenges and opportunities: the small business as a setting for management accounting research. *Management accounting research*, 11(4), 385-390.
<https://doi.org/10.1006/mare.2000.0152>

- Nasir, W. M. N. b. W. M., Al Mamun, A., & Breen, J. (2017). Strategic Orientation and Performance of SMEs in Malaysia. *SAGE Open*, 7(2), 2158244017712768.
- Gamage, S. K. N., Ekanayake, E. M. S., Abeyrathne, G. A. K. N. J., Prasanna, R. P. I. R., Jayasundara, J. M. S. B., & Rajapakshe, P. S. K. (2020). A review of global challenges and survival strategies of small and medium enterprises (SMEs). *Economies*, 8(4), 79. <https://doi.org/10.3390/economies8040079>
- Otley, D. T., & Berry, A. J. (1980). Control, organisation and accounting. *Accounting, organisations and society*, 5(2), 231-244. [https://doi.org/10.1016/0361-3682\(80\)90012-4](https://doi.org/10.1016/0361-3682(80)90012-4)
- Pass, C. (2004). Corporate governance and the role of non-executive directors in large UK companies: an empirical study. *Corporate Governance: The international journal of business in society*, 4(2), 52-63. <https://doi.org/10.1108/14720700410534976>
- Pawirosumarto, S., Setyadi, A., & Khumaedi, E. (2017). The influence of organisational culture on the performance of employees at University of Mercu Buana. *International Journal of Law and Management*, 59(6), 950-963. <https://doi.org/10.1108/IJLMA-03-2016-0030>
- Pešalj, B., Pavlov, A., & Micheli, P. (2018). The use of management control and performance measurement systems in SMEs: A levers of control perspective. *International Journal of Operations & Production Management*. <https://doi.org/10.1108/IJOPM-09-2016-0565>
- Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organisation and its environment. *Administrative science quarterly*, 17(2), 218-228. <https://doi.org/10.2307/2393956>
- Ramamurthy, K. (1991). Role of environmental, organisational and technological factors in information technology implementation in advanced manufacturing: An innovation adoption-diffusion perspective [Doctoral dissertation] University of Pittsburgh
- Rankin, M., Ferlauto, K., McGowan, S. C., & Stanton, P. A. (2012). *Contemporary issues in accounting*: Wiley Milton
- Rehman, S.-u., Bhatti, A., & Chaudhry, N. I. (2019). Mediating effect of innovative culture and organisational learning between leadership styles at third-order and organisational performance in Malaysian SMEs. *Journal of Global Entrepreneurship Research*, 9(1), 1-24. <https://doi.org/10.1186/s40497-019-0159-1>
- Rehman, S.-u., Mohamed, R., & Ayoup, H. (2018). Cybernetic Controls, and Rewards and Compensation Controls Influence on Organisational Performance. Mediating Role of Organisational Capabilities in Pakistan. *International Journal of Academic Management Science Research (IJAMSR)*, 2(8), 1-10.
- Rehman, S.-u., Mohamed, R., & Ayoup, H. (2019). The mediating role of organisational capabilities between organisational performance and its determinants. *Journal of Global Entrepreneurship Research*, 9(1), 1-23. doi: 10.1186/s40497-019-0155-5

- Rehman, S. U., Bano, T., & Bhatti, A. (2019). Factors Influencing Online Purchase Intention with The Mediating Role of Customer Satisfaction. *International Journal of Economics, Management and Accounting*, 27(1), 235-252. <https://doi.org/10.31436/ijema.v27i1.653>
- Roudaki, J. (2018). Corporate governance structures and firm performance in large agriculture companies in New Zealand. *Corporate Governance: The international journal of business in society*, 18(5), 987-1006. <https://doi.org/10.1108/CG-07-2018-0241>
- Sampe, F. (2012). The influence of organisational learning on performance in Indonesian SMEs. [Master thesis] Southern Cross University
- Segon, M., & Booth, C. (2013). Values-Based Approach to Ethical Culture: A Case Study *Ethics, Values and Civil Society* (pp. 93-118): Emerald Group Publishing Limited. [https://doi.org/10.1108/S1529-2096\(2013\)0000009011](https://doi.org/10.1108/S1529-2096(2013)0000009011)
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*: John Wiley & Sons.
- Shahrier, N. A., Ho, J. S. Y., & Gaur, S. S. (2018). Ownership concentration, board characteristics and firm performance among Shariah-compliant companies. *Journal of Management and Governance*, 24. 365-388. <https://doi.org/10.1007/s10997-018-9436-6>
- Simons, R. (1990). The role of management control systems in creating competitive advantage: new perspectives. *Accounting, organisations and society*, 15(1-2), 127-143.
- SMEinfo. (2018). Here's why SME matters in Malaysia. Retrieved August 23, 2018, from <https://smeinfo.com.my/profile-of-smes>
- Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society: Series B (Methodological)*, 36(2), 111-133. <https://doi.org/10.1111/j.2517-6161.1974.tb00994.x>
- Taticchi, P., Balachandran, K., & Tonelli, F. (2012). Performance measurement and management systems: state of the art, guidelines for design and challenges. *Measuring business excellence*, 16(2), 41-54. <https://doi.org/10.1108/13683041211230311>
- Teeratsirikool, L., Siengthai, S., Badir, Y., & Charoenngam, C. (2013). Competitive strategies and firm performance: the mediating role of performance measurement. *International Journal of Productivity and Performance Management*, 62(2), 168-184. <https://doi.org/10.1108/17410401311295722>
- Tsamenyi, M., Sahadev, S., & Qiao, Z. S. (2011). The relationship between business strategy, management control systems and performance: Evidence from China. *Advances in Accounting*, 27(1), 193-203. <https://doi.org/10.1016/j.adiac.2011.05.001>
- Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of financial economics*, 53(1), 113-142. [https://doi.org/10.1016/S0304-405X\(99\)00018-5](https://doi.org/10.1016/S0304-405X(99)00018-5)
- Zhu, C., Liu, A., & Chen, G. (2018). High performance work systems and corporate performance: the influence of entrepreneurial orientation and organisational learning. *Frontiers of Business Research in China*, 12(1), 4. <https://doi.org/10.1186/s11782-018-0025-y>

Appendix 1.

Direct and indirect relationships

Hypotheses	Paths	Beta value	Std. Dev.	T-values	P-values	Results
H ₁	MCSP --> ORP	0.148	0.037	3.989	0.000	Significant
H ₂	MCSP --> OL	0.346	0.070	4.971	0.000	Significant
H ₃	MCSP --> PINV	0.478	0.056	8.522	0.000	Significant
H ₄	MCSP-> OL-> ORP	0.040	0.013	2.989	0.003	Significant
H ₅	MCSP-> PINV-> ORP	0.336	0.039	8.539	0.000	Significant
H ₆	CG --> ORP	0.135	0.030	4.513	0.000	Significant
H ₇	CG --> OL	0.136	0.065	2.114	0.035	Significant
H ₈	CG --> PINV	0.151	0.053	2.843	0.005	Significant
H ₉	CG-> OL-> ORP	0.016	0.009	2.882	0.003	Significant
H ₁₀	CG-> PINV-> ORP	0.106	0.037	2.871	0.004	Significant
H ₁₁	OL --> ORP	0.114	0.029	3.976	0.000	Significant
H ₁₂	PINV --> ORP	0.703	0.030	23.325	0.000	Significant

MCSP= Management control system as a package; CG= Corporate governance; OL= Organisational learning; PINV=Product innovation; ORP=Organisational performance.

Appendix 2.

Predictive relevance of the model

Total	R ²	SSO	SSE	Q ² (=1-SSE/SSO)
Organisational learning	0.120	1476.0	1362.4	0.077
Product Innovation	0.266	1107.0	923.16	0.166
Organisational Performance	0.813	4059.0	2492.4	0.386

Appendix 3.

Convergent Validity

1 st Order Constructs	2 nd -Order Construct	Items	Factor Loading	AVE	CR	R ²	Cronbach's Alpha
Controls of Planning		PLAC 10	0.657	0.501	0.900		0.875
		PLAC 12	0.697				
		PLC 13	0.718				
		PLC 2	0.795				
		PLC 3	0.752				
		PLC 4	0.658				
		PLC 7	0.608				
		PLC 8	0.673				
		PLC 9	0.791				
Cultural Control		CLC 1	0.802	0.561	0.943		0.934
		CLC 10	0.805				
		CLC 11	0.807				
		CLC 12	0.778				
		CLC C 13	0.653				
		CLC 14	0.688				
		CLC 15	0.611				

		CLC 2	0.793				
		CLC 3	0.804				
		CLC 4	0.733				
		CLC 5	0.661				
		CLC 7	0.756				
		CLC 8	0.807				
Cybernetic Control		CBC 1	0.755	0.565	0.900		0.871
		CBC 2	0.843				
		CBC 3	0.854				
		CBC 4	0.680				
		CBC 5	0.752				
		CBC 6	0.706				
		CBC 7	0.647				
Rewards' Control and Compensation		RWC 1	0.644	0.591	0.851		0.764
		RWC 3	0.852				
		RWC 4	0.656				
		RWC 6	0.700				
Administrative Control		AC 1	0.852	0.711	0.924		0.897
		AC 2	0.899				
		AC 5	0.900				
		AC 6	0.791				
		AC 8	0.765				
	Management Control System as a Package	Control of Planning	0.559	0.535	0.849		0.939
		Cultural Control	0.881				
		Cybernetic Control	0.825				
		Rewards' Control and Compensation	0.695				
		Administrative Control	0.650				
Organisational Learning		OL 1	0.821	0.703	0.904	0.120	0.859
		OL 2	0.836				
		OL 3	0.855				
		OL 4	0.840				
Product Innovation		PINV 1	0.790	0.668	0.858	0.266	0.751
		PINV 3	0.839				
		PINV 4	0.822				
Board Size		BSZ 1	0.879	0.751	0.900		
		BSZ 2	0.890				0.834
		BSZ 3	0.830				
Diversity of Board		BRV 1	0.863	0.569	0.867		
		BRV 2	0.822				
		BRV 3	0.682				0.814
		BRV 4	0.649				

Number of Board Committees	BRV 5	0.735			
	NBCM 1	0.873	0.772	0.910	
	NBCM 2	0.904			0.852
Board Independence	NBCM 3	0.858			
	BID 1	0.918	0.812	0.896	0.769
	BID 2	0.883			
Board Meetings in a Year	BM 1	0.883	0.815	0.930	
	BM 2	0.928			0.886
	BM 3	0.896			
Corporate Governance	Size of Board	0.835	0.693	0.918	
	Diversity of Board	0.861			
	Number of Board Committees	0.836			
	Board Independence				0.930
	Board Meetings in a Year	0.819			
		0.809			
Organisational Performance	OGP 1	0.749	0.530	0.925	0.813
	OGP 10	0.618			
	OGP 11	0.743			
	OGP 2	0.796			
	OGP 3	0.729			
	OGP 4	0.662			0.911
	OGP 5	0.719			
	OGP 6	0.771			
	OGP 7	0.751			
	OGP 8	0.701			
	OGP 9	0.754			

Appendix 4.

The Main's Construct of the Study

Organisational Performance		
Financial Performance	1.	The organisation profit increase gradually within the last three years. (Henri, 2006)
	2.	The organisation sales volume increases gradually within the last three years.
	3.	The organisation return on investment increase gradually within the last three years.
Non-Financial Performance	1.	The number of new products in my organisation increase within the last three years (Teeratsirikool et al., 2013)
	2.	The organisation market share increases significantly within the last three years
	3.	The organisation market development increase significantly within the last three years

-
4. The organisation quality of product/services of organisation increase within the last three years
 5. The organisation employee commitment or loyalty to the organisation increases within the last three years
 6. The organisation employee productivity increase within the last three years
 7. The organisation personnel development increases the last three years
 8. The organisation employee job satisfaction increases the last three years

Management Control Systems

Planning Control

(Hanzlick & Brühl, 2013)

1. My organisation planning control has vision, strategic intent, new markets, and new technologies.
 2. My organisation planning control focuses on EVA (economic value added), ROCE (return on capital employed), sales turnover, market share, brand value.
 3. My organisation planning control clearly outlined the organisation aims and how to proceed.
 4. My organisation planning control accurate (e.g., implementation/ achievement can be decided with confidence).
 5. My organisation planning focus on the organisational objectives.
 6. My organisation planning gives emphasis to build strong competitive advantages.
 7. My organisation subordinates short-term plan contains information about Progress in activities.
 8. My organisation subordinate short-term plan contains about coordinating activities.
 9. My organisation short-term plan contains information about financial resource requirements.
 10. My organisation short-term plan contains information about human resource requirements.
 11. My organisation short-term plan contains information about skills and competency requirements.
 12. My organisation short-term plan contains information about information technology-resource requirements.
- My organisation focuses attention on strategic uncertainties (i.e. threats and opportunities)

Cybernetic Control

1. My organisation identifies crucial performance variables that indicate progress towards strategic objectives.
 2. My organisation set targets for crucial performance variables.
 3. My organisation monitor's progress in order to correct deviations from pre-set performance targets (diagnostic use).
 4. My organisation provides a recurring and frequent agenda for top management activities.
 5. My organisation provides a recurring and frequent agenda for subordinate activities.
 6. My organisation enables continual challenge of fundamental data, assumptions and plans of action with subordinates.
 7. My organisation allocates resources efficiently among different units
-

(Hanzlick & Brühl, 2013)

in an organisation.

8. My organisation encourages and facilitates dialogue/discussion and information sharing with subordinates (interactive use)

Rewards and Compensation Control

1. My organisation uses financial reward to increase commitment of the staffs. (Hanzlick & Brühl, 2013)
2. My organisation uses financial reward to motivate staff.
3. My organisation uses financial reward to direct the attention of staffs toward goals achievement.
4. My organisation uses non-financial reward to increase commitment of the staffs
5. My organisation uses non-financial reward to motivate staff
6. My organisation uses non-financial reward to direct the attention of staffs towards goals achievement

Cultural Control

1. My organisation all decision-making is prepared through a rational process. (Sampe, 2012)
2. My organisation examines the impact of decisions on workers morale.
3. My organisation prepares systems to measure gaps between current and expected performance.
4. My organisation all members share a common sense of mission that most think is worth striving to achieve.
5. My organisation co-operation amongst departments.
6. Innovation is the most important goal or achievement of the organisation
7. My organisation culture to receive new ideas from organisational customers.
8. The structure supports its strategic direction.
9. My organisational culture is innovative.
10. My organisational structure allows workers to work effectively.
11. My organisation has built a culture of trust amongst workers.
12. My organisation has developed operational procedures to help workers to work efficiently

Administrative Control

1. Decisions on the introduction of new products/services are made only at the level of top management. (Ramamurthy, 1991)
2. In addition to smaller investments, decisions about the capital budget are usually made only at the level of top management.
3. Pricing is adopted only at the level of top management.
4. Decision to enter a new market is made at the level of top management.
5. Decision of important changes in the production process is made at the level of top management.
6. Decisions on personnel policy usually bring top management.
7. The rules and procedures are clearly documented.
8. A lot of reliance on the rules and procedures in order to meet operational needs.
9. Violations documented procedures are not tolerated

Organisational Learning

1. Ability to learn is the key improvement (Hult, 1998)
 2. Basic values include learning as a key to betterment
 3. Once we quit learning, we endanger our future
 4. Employee learning is an investment, not an expense
-

Product Innovation

1. For the last 3 years, we have launched more new products in the market than the average of industry. (Jänkälä, 2010)
2. The organisation is more often first-in-market with new products compared with the average of industry.
3. The percentage of new products launched in the product portfolio is much higher than the average of industry.
4. The organisation has probably more new products at the developmental phase to be launched next year than the average of industry

Corporate Governance

Size of Board

(Honghui, 2017)

1. Smaller board enhance firm performance
 2. Larger size of board is more adept in the resources' provision
 3. Large board of directors are given to more conflicts among board members which makes it more difficult to achieve agreement
 4. The firm benefit from larger boards since they provide effective oversight of management and escalate or rise resource availability in the organisation which lead to the improvement of organisational performance
- A large board will bring more expertise and experience to the board

Independence of Board

1. The number of executive directors is higher than that of non-executive directors
2. The board is more independent when the portion of outside directors' increase

Executive directors are better placed in handling the affairs of the organisation since they have a deeper understanding of the organisation's operations.

Diversity of Board

1. Appointment of board members has always considered a mix of skills required in the stewardship of the organisation
 2. The organisations board appointment process has been political
 3. A member academic qualification has been considered before for appointment of the organisation board
 4. All stakeholders have been involved in the board's appointment
 5. The board has been composed of both gender
- The board members have been relevant industry experience required to steward the organisation

The meeting of Board held in a year

1. There is poor attendance in board meetings
2. All the board meetings have been relevant to the organisations mandate
3. The meetings of board have been chaired by board members with the relevant qualifications
4. There have been other members attending board meetings even when they are not gazette as its members

The total of board meetings has an influence on firm performance

Number of board committees

1. There is an audit committee established on the board
-

2. Independent committee would focus on improving the company competitive and performance
 3. Audit committee are not effective against risk they are just overloaded
 4. The existence of independent committee enhances financial performance of the organisation
-