

THE EFFECT OF ORGANIZATIONAL CULTURE ON FIRM PERFORMANCE: THE MEDIATING ROLE OF MANAGEMENT ACCOUNTING SYSTEMS

Ahmed Bani-Hani
Sofiah Md Auzair
Rozita Amiruddin

ABSTRACT

This paper reports the findings of a study that offers an explanation on the influence of organizational culture on the choice of management accounting systems (MAS) information and the impact on firm performance. Specifically, it is expected that the organizations' dominant value of either flexible or control culture will influence the choices of broad, timeliness, aggregated and integrated MAS information which in turn will contribute to organizational effectiveness. MAS therefore, is expected to have a mediating role in the relationship between culture and performance. A total of 376 questionnaires were distributed to managers of Malaysian manufacturing small and medium enterprises (SMEs). Results from the regression analysis indicated firms with dominant flexible culture positively affect choices of broad, timeliness, aggregated and integrated MAS information which in turn enhanced the organizational performance. Additional analysis revealed significant differences of these MAS information choices between firms with flexible and control dominant culture. In sum, MAS was found to have a mediating role in the relationship between organizational culture and their performance. The findings of this study provide understanding and knowledge on the link between organizational culture and choice of MAS information in SMEs in Malaysia. The study thus, confirmed the contingent role of organizational culture in a setting which is currently under investigated.

Key words: Organizational Culture, Organizational Performance, Management Accounting Systems, Malaysia

INTRODUCTION

In recent years, many authors have emphasized the influence of organizational culture on firms' performance (see Otley; 2016; Samad, Alghafis and Al-Zuman 2018). Organizational culture creates different values and beliefs shared by organizational members powerful enough to alter desired performance. Nevertheless, it was argued that the relationship between organizations' culture and performance is influenced by the way they search for information, particularly, management accounting information (Stoica et al. 2004; Agbejule 2011)

The management accounting system (MAS) adopted in organizations are capable of providing information necessary to motivate individuals' performance. MAS also serves an informational function whereby subordinates can gather, exchange, and disseminate information to facilitate their decision making process (Kren, 1992).

The study conducted by Amat, Blake & Wraith (2000) revealed several key factors including culture that explains why different countries design different management accounting practices. Simply adopting modern management control systems in developing countries may not be as valuable in developed countries due to several reasons; (1) the differences in national and organizational culture have significant impact towards imported techniques; (2) lack of cognitive similarities due to diverse cultural backgrounds slows down communication (Etemadi et al. 2009). Accordingly, managers' view on the work culture creates boundary to their work attitudes and understanding the influence of culture in organizations may provide necessary implications as to why an MAS proven effective in one situation becomes ineffective in others.

This study sought to examine the mediating role of MAS in the relationship between Malaysian manufacturing SMEs' organizational culture and their performance using a contingency approach. The manufacturing SMEs setting will provide a relatively focused insight into the management uses of MAS as a potential information system providing relevant monitoring and control mechanisms aimed towards enhancing effective economic performance. Additionally, the organizational culture has received scant attention in Malaysian SMEs studies despite evidence of the former effect on MAS (Henri 2006; Agbejule 2011).

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Early review on culture and management accounting literature, presented the work that refers to Hofstede's national culture dimensions (Chenhall 2003). In a more recent review, however, Otley (2016) suggested the importance of studying organizational culture and its impact on employee behavior and considers organizational culture as an important control mechanism. Relationships between organizational culture and Performance Measurement Systems (Henri 2006), the use of MAS (Agbejule 2011) and dynamics of change of MAS (Busco and Scapens 2011) were evidenced in the literature.

MAS of a firm provide adequate and essential business information to accomplish the firm's objectives and subsequently enhance performance (Laudon & Laudon 2015). Previous contingent based studies have provided evidence that high performing firms benefited from the appropriate match between firms MAS design and their contextual factors (Otley 2016). The studies on MAS has been associated with large, established organizations along the lines with the view that management accounting (MA) in SMEs would eliminate innovation. This view was challenged (Chenhall and Moers 2015) leading to recent interest into

understanding effective MAS informational dimensions in SMEs. The four dimensions of MAS by Chenhall and Morris (1986) was confirmed in a study on Portugal SMEs where the dimensions are distinct and interrelated (Pedroo and Gomes 2020). Accordingly, in this study, the management accounting systems will be examined based on broad scope, timeliness, aggregation, and integration concept while the organizational culture will be analyzed using the control value and flexibility value concepts.

Organizational Culture and Management Accounting System (MAS)

Accounting system can provide a way of coping with processes of organizational learning and change. Thus, the involvement of accounting practices in the creation, diffusion, maintenance and change of organizational culture has generally been acknowledged in the organizational-based accounting literature (Busco and Scapens 2011). For example, prior study by Henri (2006) suggested that a firm dominated by the control value culture reflects stability with clearly defined objectives and procedures.

A firm with dominant control culture adopt a value to promote stability, formality, rigidity and conformity (Henri, 2006). On the other hand, a firm is dominated by flexible culture when it refers to spontaneity, change, openness, adaptability and responsiveness (Henri, 2006). In general, there is an association between the use of MAS and organizational culture. Specifically, MAS facilitates effective communication, and increase coordination between various parts of the organization in organizational cultures dominated by control value (Agbejule 2011).

MAS and Organizational Performance

Management accounting system (MAS) can be viewed as a set of reutilized practices in day-to-day corporate life, which is reflected in the production and reproduction of organizational knowledge. The definition of MAS starts with management accounting (MA). MA refers to a series of practices in accounting that are collected or compiled. The practices mentioned including strategic management accounting, activity-based techniques, balanced scorecard, budgeting or product costing. The entire process of MA involves planning, controlling, decision-making, and communication. When this MA is used systematically in obtaining certain goals, it will be defined as MAS (Chenhall & Moers 2015). MAS according to this logic participates in processes of organizational change and performance (Busco and Scapens 2011). Hauriasi and Davey (2009) argued that MAS can enhance some forms of competition through raising efficiency and effectiveness to improve performance. Currently, MAS has become an integral part of the management process because MAS provides managers with financial and operational information that help them in decision-making, planning and control effectively. Thus, by using a well-designed and appropriate MAS, manager can improve organizations' efficiency and remain competitive, which in turn will consequently improve the organization's performance (Abdul Rasid, Isa and Ismail 2014). This is because, MAS operates dynamically to provide a means whereby information and opinions on potential areas for improvement can be visible and give directions to reinforce developing ideas (Chenhall and Morris, 1995).

Organizational Culture and Performance

Henri (2006) argued that to examine and understand performance from a holistic perspective, it is necessary to understand culture as a contingent factor that affects practically all aspects of organizational interactions. Previous studies that investigate the relationship between organizational culture and performance differ in terms of the performance dimensions that are used and the types of organization that were studied. This is because the performance dimensions generally relate to the extent to which goals relevant to the specific organization are attained (Lim 1995). For example, past studies proposed that organizational cultures lead to superior financial performance, and the performance is dependent on the degree to which the values of the cultures are widely shared and strong within the organization (Agbejule, 2011). The literature also argued that an organization is postulated to have a "strong culture", which when widely shared among employees, is considered as the strength with which the cultural values within an organization is a predictor of future organizational performance (Lee and Yu 2004). Notably, strong culture leads to employee commitment and motivation. In this point of view, culture is a determining factor in establishing the dedication to excellent performance that characterizes successful organizations (Hartnell, Kinicki, Lambert, Fugate, & Doyle Corner, 2016)

Management Accounting System as a Mediating Variable

Stoica et al. (2004) argued that the way organizations search for and use information such as management accounting information influence the relationship between culture and performance. Agbejule (2011) explains that dynamic tension created by the simultaneous use of high interactive and high diagnostic MAS help to: (i) provide the opportunity to debate vigorously opposing positions; (ii) prevent organizations that are continually seeking innovation from wasting resources on superfluous novelty; (iii) motivate constant dialogue and debate concerning strategic issues and encourage shared understanding; and (iv) provide incentives for different groups to pull together toward a common goal. Therefore, dynamic tension resulted from MAS uses can affect organizational culture dominated by flexibility values and performance.

Based on the preceding discussion the following framework is proposed to elaborate the relationship between organizational culture and SMEs performance. Coherently, the mediating role of MAS will be elaborated.

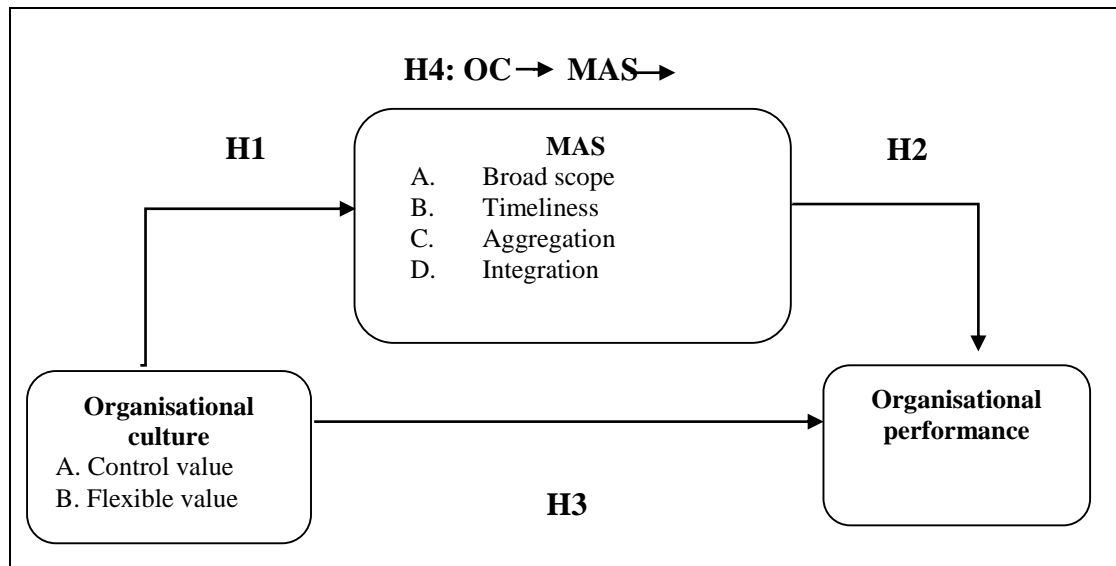


Figure 1: Conceptual Framework

Organizational Culture and MAS

Previous studies proved that MAS is associated with culture (e.g. Etemadi et al, 2009, Awasthi, Chow, & Wu, 1998). Tsui (2001) showed that culture was related to broad scope and timely MAS. In a review on contingency-based studies, Chenhall (2003) reveals that the variables of organisational culture could influence management control systems and performance. However, these studies did not specifically highlight the influence of culture on MAS practices in Malaysia SMEs. It would be interesting to understand if different culture would affect MAS differently since according to Flavius-Andrei (2016) accounting is parts of social construct which reflects the characteristics of a cultural group; for instance, the society in which a company is run. Furthermore, he also adds that culture is the product of the organization's history that can create either positive or negative references, Therefore, it is expected that:

Hypothesis 1 There is a significant relationship between organizational culture and management accounting system (MAS).

Organizational Performance and MAS

A study conducted by Al-Mawali (2013) analysed the usage of broad scope MAS such internal, external, financial and non-financial information towards improving the performance of an organisation. The findings deduce that MAS information which can be non-financial or financial, external and internal enables the management to utilise the proper strategies to attain optimum results, which in turn enhance the performance of the company. This is because MAS information enhances the executive management understanding of their duties and responsibilities', which is reflected in their ability to make proper and decisive decisions thus improving performance in the long run Ferris and Haskins, (1988). The following is proposed:

Hypothesis 2 MAS has a significant positive effect on organizational performance.

Organizational Culture and Performance

The research undertaken by Agbejule (2011) towards examining the role of MAS in regards to organisational culture and performance deduced that flexibility values of firms' culture tend to attain high performance when the management employs less diagnostic and high interactive management accounting systems. Flexibility value culture fosters innovation, creativity, and risk taking to confront the constantly changing environment (Amabile, 1988). Shahzad et al., (2012) illustrate that organisation culture has significant influence in various employees' attitude and organisational processes that enhances performance in the long run. Thus implying that that if employee are committed and having the same norms and value as per organisations have, can increase the performance toward achieving the overall organisation goals (Gallagher 2008). Following this discussion, it is hypothesized:

Hypothesis 3 Organizational culture has a significant positive effect on organisational performance.

MAS mediating role

The above discussion suggested direct relationship between 1) organizational culture and MAS and 2) MAS and organizational performance. Both relationships suggest MAS mediating role in the relationship between organizational culture and performance. Agbejule, (2011) recommended that managers utilising flexibility value are encouraged to use at elevated levels uses of MAS as either diagnostic or interactive to enhance performance in the organisation. This demonstrates that the levels of uses of MAS can mediate the relationship outcome between organisational culture and the performance of an entity. In lieu of the above literature the paper proposed the following hypothesis:

Hypothesis 4 MAS mediates the relationship between organizational culture and organizational performance.

METHODOLOGY

This study is aimed at investigating the effect of organizational culture on MAS and organizational performance in Malaysian SMEs. Accordingly, this study requires a large number of respondents without repeated observation or extensive analysis of specific case. As such, quantitative method using survey questionnaires is considered most suitable. Following this, questionnaires were distributed to the top management of Malaysian small and medium manufacturing firms, whose experience in the company is expected to enable them to answer all aspects of the questionnaire. The small and medium firms are selected for this study due to the Small and Medium Enterprise (SME)’s importance in contributing 36.6% to the total Malaysian Gross Domestic Product (GDP) (Malaysian Economic Report, 2016). There were a total of 47,698 small and medium manufacturing companies in Malaysia (SME, 2018). Based on the sample size equation of Krejcie & Morgan (1970) the target sample size is 376. Thus, 376 questionnaires were distributed and all were returned.

Prior to distributing the questionnaire, a pre-test was undertaken by selecting five experts namely three researchers from Universiti Kebangsaan Malaysia (UKM) and two SME managers. Feedback from the pre-test allows minor revisions on the clarity of the survey questions and some questions were reworded as suggested.

Table 1 summarizes profile of companies involved in this study. The data demonstrate that majority or 55% of the respondents had between 75 to 200 employees. The annual revenue for majority of the respondents (60.1%) were between RM 15 million to RM 50 million. These criteria thus confirmed the size of the firms as small and medium according to the definition of SME Corp. In general, the sample covers a wide range of manufacturing industries with Chemicals and Transport Equipment on the top list.

Table 1: Profile of Sample Firms (N=376)

		Frequency	Percent
1	Number of full time employee		
	Less than 5	19	5.1
	Between 5 – 75	150	39.9
	Between 75 – 200	207	55.1
2	Annual Revenue		
	Between RM300, 000 to RM15 million	150	39.9
	Between RM15 million to RM50 million	226	60.1
3	Years of Established		
	Less than 5 years	41	10.9
	Between 5 to 10 years	275	73.1
	Between 11 to 20 years	60	16.0
4	Type of Business		
	Sole Proprietor	56	14.9
	Partnership	252	67.0
	Company	68	18.1

5	Type of Industry		
	Electrical and Electronic	44	11.7
	Chemicals	42	11.2
	Transport Equipment	41	10.9
	Iron and Steel	34	9.0
	Wood Products	33	8.8
	Rubber Products	30	8.0
	Food and Beverages	29	7.7
	Non-Metallic Mineral Products	28	7.4
	Fabricated Metal Products	26	7.0
	Plastic Products	24	6.4
	Textiles and Apparel	23	6.1
	Machinery and Equipment	22	5.9

Table 2 presents profiles of the respondents for this study. With respect to ownership, 301 (80.1%) of the respondents are non-owner. In reference to job designation, 246 (65.4%) were managers. With respect to academic qualifications, most of the respondents have Bachelor degree (43.4%) and 137 or 36.4% have professional qualification.

Table 2: Profile of Respondent (N=376)

		Frequency	Percent
1	Ownership		
	Owner	75	19.9
	Non Owner	301	80.1
2	Job Designation		
	Director	75	19.9
	Senior Manager	55	14.6
	Manager	246	65.4
3	Academic Qualification		
	Secondary School	15	4.0
	Diploma Certificate	38	10.1
	Bachelor Degree	163	43.4
	Professional Qualification	137	36.4
	Postgraduate Degree	23	6.1

Measurement of Variables

MAS instrument was adopted from Chenhall and Morris (1986) where the instrument has been widely adapted by subsequent studies including Agbejule (2005) and Bouwens and Abernethy (2000). It measures the extent to which the firms use MAS in terms of breadth of scope, levels of aggregation, its integrative nature and timeliness. The measure for organizational culture dimensions is adopted from Henri (2006) and Agbejule (2011) where shared values pertain to dominant organizational attributes, importance of control, and the nature of information flow. Respondents were asked to indicate scores to attributes of flexible and control culture. To measure organizational performance, this study uses instrument adopted from Henri (2006), Agbejule (2011) and Ismail (2009). This study combines these measurements to adjust with the population of the study which is manufacturing company. The respondents were asked to indicate the extent to which their organizations have been successful in achieving their performance targets.

FINDINGS

Table 3 displays the correlation matrix for all variables. Examination of the correlations indicates no correlations greater than 0.70 between the variables, thus suggesting that multicollinearity is unlikely to be a problem.

Table 3: Pearson Correlations

Variables	1	2	3
1. Organizational Culture	1		
2. Management Accounting System	-.232**	1	
3. Organizational Performance	-.085	.282**	1
	.099	.000	

N=376

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

Hypothesis 1 predicted that there is a significant relationship between organizational culture and MAS, whereby, due to the measures of culture, positive relationship indicate emphasis on control culture and negative relationship indicate emphasis on flexible culture. As seen from Table 4, there is a negative and significant relationship between organizational culture and MAS (B=-0.6140, t=7.9419, p<0.000). The result indicates that flexible culture is associated with the use of MAS in Malaysia manufacturing SMEs. Thus, hypothesis 1 is supported.

Table 4: Summary results with MAS as dependent variable

	Coefficients		T	Sig.
	B	Std. Error		
(Constant)	5.789	.1166	49.635	.000
culture	-.6140	.0773	7.9419	.000

R-Squared = 0.1443

Hypothesis 2 proposed a positive relationship between MAS and performance while hypothesis 3 predicted significant relationship between organizational culture and performance. Results exhibited in Table 5 shows a positive and significant relationship between MAS and SMEs performance (B=0.3735, t =5.0667, p<0.01). The data thus, indicate support for hypothesis 2.

Contrary to expectation, however, the data shows no support for hypothesis that predicted significant relationship between organizational culture and SMEs performance. Table 5 shows a coefficient of B= .1624 with p=.1735 (t =1.3635).

Table 5: Summary results with Performance as Dependent Variable

	Coefficients		T	Sig.
	B	Std. Error		
(Constant)	3.1808	.4580	6.9446	.000
MAS	.3735	.0737	5.0667	.000
Culture	.1624	.1191	1.3635	.1735

R-Squared= 0.0653

Hypothesis 4 proposed a mediating role of MAS on the relationship between organizational culture and performance. To test the hypothesis, three paths need to be examined in Process Macros. All the three paths must be significant to indicate the mediating effect. The paths are (1) the effect of independent variable (IV) on mediating variable (MV), (2) the effect of MV on dependent variable (DV) and (3) the indirect effect of IV on DV through MV. It is a partial mediating when the direct effect of IV to DV is

significant and its coefficient value decreasing compared to the coefficient of the third path. It is a full mediating when the direct effect of IV on DV is not significant. Figure 2 summarizes the result of mediating hypothesis testing.

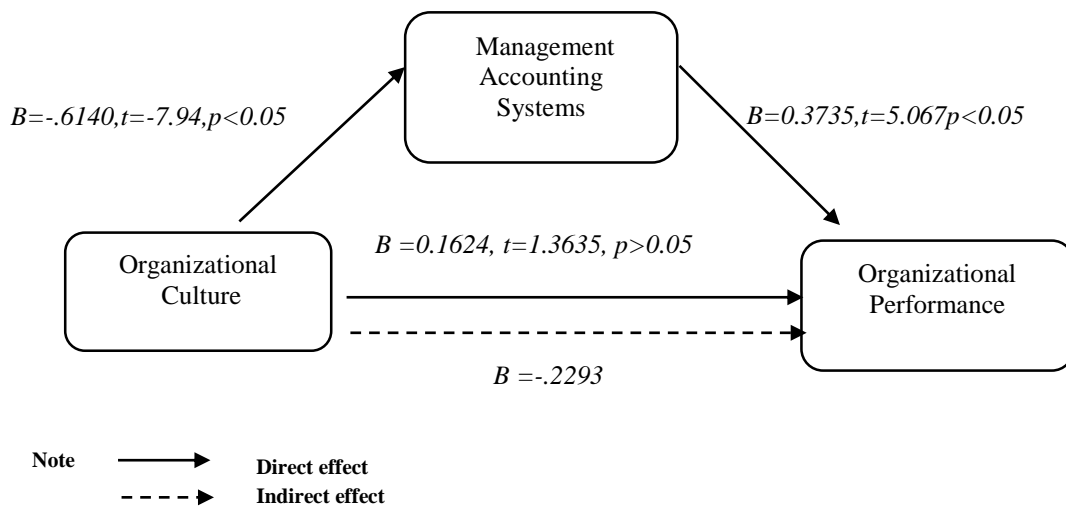


Figure 2: Final Model

Figure 2 shows that culture was a significant predictor of MAS ($B = -.614$, $p < .05$), and that MAS positively predict performance, ($B = .3735$, $p < .05$). Organizational culture was no longer a significant predictor of performance after controlling for the mediator, MAS, ($B = .162$, $p > .05$). Approximately 6.5% of the variance in performance was accounted for by the predictors ($R\text{-squared} = .0653$). The indirect effect was tested using a percental bootstrap estimation approach with 10000 sampels, implemented with PROCESS macro Version 3 (Hayes, 2017). These results indicated the indirect coefficient was significant, ($B = -.229$ SE = .053, 95% LLCI = -.3395, ULCI = -.1335). The more the organizational culture dominated by flexibility, the higher the organizational performance when using MAS. As the direct effect of organizational culture is not significant on organizational performance, the mediating effect of MAS is considered, a full mediating. Thus, hypothesis 4 is supported.

As there has been little evidence on the relationship between organizational culture and MAS in SMEs, let alone SMEs in Malaysia, it would be interesting to know if different culture would emphasize different MAS design. Being dominant in flexible culture indicates that SMEs promote spontaneity, change, openness, adaptability and responsiveness and dominant in control culture indicates SMEs emphasize stability, formality, rigidity and conformity (Henri, 2006). Thus, it is expected that flexible dominant SMEs would place more emphasis on broad scope, timely, aggregated and integrated use of MAS compared to those SMEs with control dominant culture.

Table 6: MAS of Emphasis of Flexible and Control Firms

Dimension	Culture	N	Mean	SD	T	df	Sig. P																																
Broadscope	Flex	216	5.53	0.65	27.589	370.46	0.000																																
	Control	160	3.84	0.53				Timeliness	Flex	216	4.78	1.23	2.36	374	0.019	Control	160	4.46	1.36	Aggregation	Flex	216	4.94	1.15	2.096	285.191	0.037	Control	160	4.64	1.51	Integration	Flex	216	5.4	0.83	0.847	374	0.397
Timeliness	Flex	216	4.78	1.23	2.36	374	0.019																																
	Control	160	4.46	1.36				Aggregation	Flex	216	4.94	1.15	2.096	285.191	0.037	Control	160	4.64	1.51	Integration	Flex	216	5.4	0.83	0.847	374	0.397	Control	160	5.33	0.81								
Aggregation	Flex	216	4.94	1.15	2.096	285.191	0.037																																
	Control	160	4.64	1.51				Integration	Flex	216	5.4	0.83	0.847	374	0.397	Control	160	5.33	0.81																				
Integration	Flex	216	5.4	0.83	0.847	374	0.397																																
	Control	160	5.33	0.81																																			

The MAS emphasis of dominant flexible and control culture SMEs was shown to be significantly different, for dimensions broadscope, timeliness and aggregation (see Table 4). However, SMEs with a dominant flexible and control culture appear to place similar emphasis on integrated MAS. The additional analysis thus, revealed the association between cultural orientation and MAS information emphasized by small and medium manufacturing firms under study.

CONCLUDING DISCUSSION

In this study, MAS in SMEs was investigated, highlighting its mediating role in the relationship between organizational culture and organizational performance. MAS was found to fully mediate the relationship, thus suggesting that organizational culture while on its own, may not be associated to firm performance, but the culture in organizations sturdily shapes the MAS information needed for effective firm performance. In other words, culture that is shared among employees is able to predict future organizational performance. The mediating role of MAS found in this study is consistent with Agbejule (2011), suggesting that both MAS information and MAS style of use have significant role in organization.

This study contributes to the contingency theory of management accounting as the findings provide evidence on the influence of culture in providing necessary implications for effective MAS in small and medium firms. The findings on SME setting extend the contingency-based management control literature that was previously undertaken by Chenhall (2003) and Otley (2016) mostly based on evidence of practices in large organizations. Additionally, further analysis of the data, revealed that SMEs in Malaysia emphasize a flexible control culture which indicates responsiveness and adaptability, some conditions necessary for survival of the industry.

In interpreting the results of this study, several limitations should be considered. First, the findings of the study are based on a single-perception response on behalf of the firm which may not be a true representation for the entire firm. It would be interesting to take a group of individuals from within the firm and average their scores to be used. This study also assumes unidirectional relationship between organizational culture and MAS, while it is possible that the relationship is in the opposite direction or reciprocal. In future, this type of relationship could be evaluated in case study approach.

REFERENCES

- Abdul Rasid, S. Z., Abdul Rahim, A. R., Wan Ismail, W. H. 2011. Management accounting systems in Islamic and conventional financial institutions in Malaysia. *Journal of Islamic Accounting and Business Research*, 2(2): 153- 176.
- Abdul Rasid, Z., Isa, C. R. & Ismail, K. (2014). Management accounting systems, enterprise risk management and organisational performance in financial institutions. *Asian Review of Accounting*, (22)2, 128-144
- Agbejule, A. (2005). The relationship between management accounting systems and perceived environmental uncertainty on managerial performance: a research note. *Accounting and business research*, 35(4), 295-305
- Agbejule, A. (2011). Organisational culture and performance: the role of management accounting system. *Journal of Applied Accounting Research*, (12)1, 74-89, [https:// doi.org/10.1108/09675421111130621](https://doi.org/10.1108/09675421111130621)
- Almawali, H., Zainuddin, Y., Kader Ali, N., 2012. "Customer accounting information usage and organisational performance," *Business Strategy Series*, Vol.13 (5), pp.215-23
- Amat, O., Blake, J., Wraith, P. 2000. Developing a New National Management Accounting Framework – the Spanish Case. *European Business Review*. 12(3): 122-128.
- Badri, M. A., Attia, S. T., &Ustadi, A. M. 2008. Testing the not so obvious models in healthcare quality. *Int. J Qual healthcare*, (21): 159-174.
- Baines, A. & Langfield-Smith, K. (2003). Antecedents to management accounting change: a structural equation approach. *Accounting, Organisations and Society*, (28)7/8: 675-98.
- Baird, K.M., Harrison, G.L. and Reeve, R.C. (2004), "Adoption of activity management practices: a note on the extent of adoption and the influence of organisational and cultural factors", *Management Accounting Research*, Vol. 15 No. 4, pp. 383-99.
- Barney, J. B. (1986). "Organisational Culture: Can It be a Source of Sustained Competitive Advantage?" *Academy of Management Review*, 11 (3): 656-665.
- Bouwens, J. & Abernethy, M. A. (2000). The consequences of customization on management accounting systems design. *Accounting, Organisation, and Society*, 25(3): 221-242.
- Busco, C. & Scapens, R. W. (2011). Management accounting systems and organisational culture: Interpreting their linkages and processes of change. *Qualitative Research in Accounting & Management*, (8)4, 320-357
- Busco, C., Quattrone, P. and Riccaboni, A. (2007), "Management accounting: issues in interpreting its nature and change", *Management Accounting Research*, Vol. 18 No. 2, pp. 125-49.
- Busco, C., Riccaboni, A. and Scapens, R.W. (2006), "Trust for accounting and accounting for trust", *Management Accounting Research*, Vol. 17 No. 1, pp. 11-41.
- Cameron, K., & Quinn, R. (2011). *Diagnosing and changing organisational culture: Based on the competing values framework (3rded.)*. San Francisco, CA: Jossey-Bass
- Chenhall, R. H. & Morris, D. 1986. The impact of structure, environment, and interdependence on the perceived usefulness of management accounting systems. *Accounting Review*, 61(1): 16-35.
- Chenhall, R. H. & Moers, F. (2015). The role of innovation in the evolution of management accounting and its integration into management control. *Accounting, Organisations and Society*. 1-13.

- Chenhall, R. H. 2003. Management control systems design within its organisational context: finding from contingency-based research and directions for the future. *Accounting, Organisations and Society*, 28(2): 12-168.
- Chenhall, R. H., & Langfield-Smith, K. (1998). Adoption and benefits of management accounting practices: an Australian study. *Management Accounting Research*, 9(1), 1-19.
- Chenhall, R. H. & Langfield-Smith, K. 2007. Multiple perspectives of performance measures. *European Management Journal* 25(4): 266-282.
- Chenhall, S. D. & Morris, D. (1995). Organic Decision and Communication Processes and Management Accounting Systems in Entrepreneurial and Conservative Business Organisations. *Omega, International journal of Management sciences*, (23)5, 485-497.
- Dent, J.F. (1991), "Accounting and organisational cultures: a field study of the emergence of a new organisational reality", *Accounting, Organisations and Society*, Vol. 16, pp. 705-32.
- Etemadi, Hossein, Zahra Dianati Dilami, Mohammad S. Bazaz & Ravi Parameswaran. 2009. Culture, Management Accounting and Managerial Performance: Focus Iran. *Advances in Accounting, incorporating Advances in International Accounting* 25(2), 216-225.
- Ghasemi, R., Mohamad, N. A., Karami, M., Bajuri, N. H. & Asgharizade, E. (2016). The mediating effect of management accounting system on the relationship between competition and managerial performance. *International Journal of Accounting and Information Management*, (24) 3, 272-295
- Ghazemi, et al. 2015. The Relationship among Strategy, Competition and Management Accounting Systems on Organisational Performance. *European Online Journal of Natural and Social Science*. 2015. 4(33): 565-581.
- Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. 2017. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. 2nd Ed. Thousand Oaks, CA: Sage
- Hartnell, C. A., Kinicki, A. J., Lambert, L. S., Fugate, M., & Doyle Corner, P. (2016). Do similarities or differences between CEO leadership and organisational culture have a more positive effect on firm performance? A test of competing predictions. *Journal of Applied Psychology*, 101(6), 846.
- Hauriasi, A. & Davey, H. (2009). Accounting and culture: The case of Solomon Islands. *Pacific Accounting Review*, 21(3), 228-259
- Henri, J. (2006). Organisational culture and performance measurement systems. *Accounting, Organisations and society*, (31), 77-103
- Hoque, Z. 2011. The relations among competition, delegation, management accounting systems change and performance: A path model. *Advances in Accounting*, 27(2): 266-277.
- Hoque, Z. 2004. A contingency model of the association between strategy, environmental uncertainty and performance measurement: impact on organizational performance. *International Business Review* 13(4): 485-502.
- Ismail, N. A. (2009). Factors influencing AIS effectiveness among manufacturing SMEs: Evidence from Malaysia. *The Electronic Journal of Information Systems in Developing Countries*, 38(1), 1-19.
- Ismail, K. and Isa, C.R. (2011). The role of management accounting systems in advanced manufacturing environment. *Australian Journal of Basic and Applied Sciences*, (5)9, 2196-2209
- Ismail, K., Isa, C. R., & Mia, L. (2018). Evidence on the usefulness of management accounting systems in integrated manufacturing environment. *Pacific Accounting Review*, 30(1), 2-19.
- Kren, L. 1992. Budgetary Participation and Managerial Performance: The Impact of Information and Environmental Volatility. *The Accounting Review*. 67(3), 511-526.
- Laudon, K. C., & Laudon, J. P. (2015). *Management information systems* (Vol. 8): Prentice Hall.
- Lim, B. (1995). Examining the organisational culture and organisational performance link. *Leadership & Organisation Development Journal*, (16)5, 16-21
- Lee, S. K. & Yu, K. (2004). Corporate culture and organisational performance. *Journal of Managerial Psychology*, 19(4), 340-359
- Nunnally, J. C. (1967). *Psychometric theory*. New-York: McGraw-Hill.
- Otley, D. (2016). The contingency theory of management accounting and control: 1980-2014. *Management Accounting Research*, (31)4, 45-62
- Pedroso, E., & Gomes, C. F. (2020). The effectiveness of management accounting systems in SMEs: a multidimensional measurement approach. *Journal of Applied Accounting Research*
- Rasid, S. Z. A., Rahman, A. R. A., Ismail, W. K. W., Osman, M. H. M., & Amin, M. (2011, June). The Mediating Effect of Management Accounting Systems on the Relationships between Contextual Variables and Organisational Performance. In *Global Business and Social Science Research Conference*, Radisson Blu Hotel, Beijing, China (pp. 20-21).
- Samad, Sarminah, Rasha Alghafis & Abad Al-Zuman. 2018. Examining the Effects of Strategic Management and Organizational Culture on Organizational Performance. *Management Science Letters* 8(12): 1363-1374.
- Shannon W. Anderson & Sally K. Widener. (2007). Doing Quantitative Field Research in Management Accounting. *Handbook of Management Accounting Research* 1 : 319-341.
- SMECORP. (2018). SME DEFINITION. Retrieved 27-11-2018, from <http://www.smecorp.gov.my>
- Stoica, M., Jianwen, L. & Welsch, H. (2004). Organisational culture and patterns of information processing: the case of small and medium sized enterprises. *Journal of Developmental Entrepreneurship*, 9(3), 251-66

Ahmed Bani-Hani
Faculty of Economics and Management
National University of Malaysia
Bangi, Selangor

Sofiah Md Auzair
Faculty of Economics and Management
National University of Malaysia
Bangi, Selangor
Email: sofiah@ukm.edu.my

Rozita Amiruddin
Faculty of Economics and Management
National University of Malaysia
Bangi, Selangor