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Management accounting practices of SMEs: The impact of organizational DNA, business potential and operational technology

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ABSTRACT

Changes in global business environment have driven transformation in Small and Medium-size Enterprises (SMEs) to move toward sustainability by focusing on cost efficiency. Management accounting literature continues to suggest the benefits of adopting Management Accounting Practices (MAPs) in improving business sustainability. MAPs provide various tools, techniques and valuable internal information including for budgeting, profit planning and performance evaluation. MAPs are also shaped by management accounting information system. Variations in its application among businesses are common since the management accounting practices are not standardized. This study contributes to the existing gap in management accounting literature particularly from the view of a developing economy by examining the current stage of MAPs development and the impact of three factors (i.e., organizational DNA, business potential, and operational technology) on the MAPs in Malaysia. Since MAPs are organizational-specific, contingency theory was used in this study. A total of 310 questionnaires were sent to SMEs in the east coast of Malaysia and 110 were returned. However, 8 of them were incomplete and thus, excluded from the final analyses. The study suggests that these SMEs adopt the first 2 of the 4 stages of MAPs development based on Nishimura (2003) framework. Furthermore, the regression results show that only operational technology has a positive impact on the MAPs (p-value = 0.005). The other two variables (i.e., organizational DNA and business potential) do not significantly influence the MAPs. These findings are inconsistent with the results documented for large companies and thus, future studies are needed to further explore the MAP issues.

1. Introduction

Over the past few decades, global business management and accounting researchers demonstrate consistent effort in investigating the Small and Medium-sized Enterprises (SMEs). This sector plays a crucial role in the economic growth in both developing and developed countries (Mitchell & Reid, 2000). Globally, SMEs represent 99% of the business population. As for Malaysia, SMEs represent 97.3% of its registered businesses and contributing 36% of the nation's gross domestic product. Similarly, the existence of SMEs plays a significant role in the economic development in most countries. Thus, this sector has become one of the interesting subjects for business and management accounting research.

Similar to large organization, SMEs also face issues related to business sustainability as a result of among others, globalization, size, technology advancement, intensified market competition, change in management and constraints in capital funding (Davilla, 2005; Davilla & Foster, 2007; Nandan, 2010; Tuan Mat, 2010; Ahmad, 2012; Sleihat, Al-Nimer, & Almahamid, 2012; Fasesin, Salman, & Dunsin, 2015; Messner, 2016). According to Senftlechner and Hiebl (2015), for businesses to survive and remain sustainable, they need to take into account financial information as well as non-financial information. For this particular reason, Management Accounting (MA) can be regarded as value-added accounting knowledge for SMEs in order to assist them in improving their managerial functions since MA incorporates and emphasizes both financial and non-financial information. Thus, management accounting is indeed important to support the business functions (Davilla, 2005; Lavia Lopes & Hiebl, 2015).

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The importance of management accounting knowledge to managers has been reported by many researchers including Reid and Smith (2002). They state that firms can gain access to financial and non-financial information to help improve their current operations through the use of Management Accounting Practices (MAPs). Similarly, Ahmad (2012) also reports that MAPs can enhance business profitability through continuous waste reduction and effective resource utilization.

International Federation of Accountant (1998) defines MA as a specialized field of accounting which focuses on information for managerial planning, evaluating, and controlling in organizations. MAPs, a subset of MA and refer to tools and techniques specifically designed to support the management functions in improving operational efficiency and achieving optimal performance. Thus, innovations in MAPs occur in line with the evolution of MA (Davilla & Foster, 2005). According to Nishimura (2003), MA evolution can be divided into four main stages where every stage has its own objectives and focus. The variations in objectives and focuses also reflect the importance of the different stages in assisting businesses. Table 1 presents the objectives and focus of each stage in the MA evolution based on Nishimura (2003) framework.

In Nishimura (2005) the author further explained that the changes in MAPs were due to challenges faced by businesses, both internally and externally. Various studies were conducted to examine the possible internal and external factors which can influence the MAPs changes as well as its usage in organizations. Among them include Davilla (2005), Davilla and Foster (2005; 2007), Tuan Mat (2010), Ahmad (2012), Alsoboa and Aldehayyat (2013), Hiebl, Feldbauer-Durstmuller, and Duller (2013), Lay (2014) and Messner (2016). The study by Davilla (2005) and Davilla and Foster (2005; 2007) which specifically focus on the impact of internal factors (i.e., size and change in top management personnel), reports a positive impact of the selected factors on the use of Management Control Systems (MCS) in growing or small firms in the United States (US). The study concludes that as the size of firms expands (proxied by the number of employees), the need for having formal interactions between higher and lower management personnel increases and thus, it is crucial to install MCS in the firms. Davila's finding is later supported by Hiebl et al. (2013). The research reveals a similar finding where the additional number of headcount (employees) significantly influenced the MA used by the firms. This finding explains the need to have a formal control between the higher and lower level personnel in order to achieve optimal performance.

In terms of external forces, Amat, Carmona, and Roberts (1994) discloses a positive impact of market competition on the use of MA in SMEs in Spain. The result indicates that as competition in the market becomes intense, the usage of MA also increases. This is because the competition indirectly puts pressures on the organizations to acquire more information, not only financial but also non-financial matters to ensure they remain competitive (cited in Lavia López & Hiebl, 2015). Ahmad (2012) who also examines the impact of external factors (i.e., advanced manufacturing technology) concludes that the implementation of MAPs in Malaysian manufacturing firms is significantly associated with the selected contingent factors. Since all of the studies mentioned was conducted in the different study settings (in terms of geographical region or industry), the results documented might be varied. This is consistent with the notion acknowledged by Messner (2016) who clearly state that the industry plays a crucial role in influencing the outcome of the study.

The contingency theory was adopted as this study aims to determine the impact of organizational DNA (consists of size, competitive strategy and decentralization), business potential (consists of customer's power, technology advancement and market competition) and operational technology (consists of complexity of processing systems, advanced manufacturing technology and total quality management) on the use of MAPs. The theory supports the idea that there is no universally appropriate accounting system that applies equally to all organizations in all circumstances (Otley, 1980).

Despite the managerial benefits provided by MAPs, at present there is still a lack of exposure on MAPs especially among Malaysian SMEs (Ahmad, 2012). This may be due to the lack of specific training in MAPs and the fact that MA is not a mandatory practice. Thus, the present research is designed to achieve the following objectives: (i) to examine the current stage of MAPs among Malaysian SMEs, and (ii) to determine the impact of organizational DNA, business potential and operational technology on MAPs. This study is also expected to add more empirical evidence on MA from developing countries to close the gap which had been highlighted by Lavia López and Hiebl (2015). The research questions for this study are as follows:-

1) What is the extent of MAPs practiced by Malaysian SMEs?
2) What is the impact of organisational DNA on the MAPs?
3) What is the impact of business potential on the MAPs?
4) What is the impact of operational technology on the MAPs?

2. Data, methodology and empirical results

2.1. Data and methodology

This study focuses on SMEs on the east coast of Malaysia represented by three states which are: (i) Kelantan; (ii) Terengganu; and (iii) Pahang. The selection of these areas as the sample of the study was due to the fact that they had received several investments incentives under the East Coast Economic Region (ECER) Empowering Program introduced by the Malaysia Government (East Coast Economic Region (ECER), n.d.). A survey questionnaire was used for data gathering. The population of the study comprises of the SMEs in the SME Corp's 2013 Directory where a total of 2104 SMEs were listed. A pilot test was performed on 20 SMEs located in

Table 1
The evolution of MA.

Stage	Focus and Techniques or Tools
Stage 1	Focus: Management and control decision through the use of actual costing and past financial data.
(Drifting MA)	Techniques or Tools: Financial ratios and comparative business analysis.
Stage 2	Focus: Efficient MA through the utilization of scientific management.
(Traditional MA)	Techniques or Tools: Cost-Volume-Profit (CVP) and responsibility accounting.
Stage 3	Focus: Controlling the planning process and forecasting the business future.
(Quantitative MA)	Techniques or Tools: Economic Order Quantity (EOQ) and inventory management.
Stage 4	Focus: Integration of management accounting and organizational management.
(Integrated MA)	Techniques or Tools: Target costing and lean production.

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