A Framework of Contingencies Factors, Government Support and Management Accounting Practices in Malaysian Small and Medium-Sized Enterprises

Nik Herda Nik Abdullah^{a*}, Nur Maisara Arif Mirza^a, Shamala Krishnan^a, Azliza Azrah Mohd Zakaria^b, Grace Morris^b

^aSchool of Accounting and Finance, Taylor's University, 47500 Subang Jaya, Malaysia

^bFaculty of Business, Communications and Law, INTI International University, 71800 Nilai, Malaysia.

* nikherda.nikabdullah@taylors.edu.my

Article Info	Abstract
Received : 2021-07-13 Accepted : 2022-01-12 Published : 2022-01-31	Small and medium-sized enterprises (SMEs) are critical in developing countries, as they create significant job opportunities and contribute to global economic development. Numerous Malaysian SMEs are struggling to survive in the aftermath of the COVID-19 outbreak. As a result, the adoption of management accounting practices (MAPs) plays an important role in supporting decision making, which aids in the sustainability of SMEs' economic growth and leads to long-term performance. However, there is limited research on MAPs being used in SMEs across various industries. This paper aims to propose a conceptual framework for the factors affecting MAPs in Malaysian SMEs from a contingency theory perspective. This paper employs a qualitative approach by reviewing all pertinent literature on the subject from various databases and relating it to the current environment, which attempts to bring the entire concept of MAPs into focus based on the findings of previous research and a proposed conceptual framework that can be used for future research. This research has contributed to the literature by providing a conceptual framework for MAPs from the perspective of contingency theory, with an addition on government support, which can improve industry competitiveness, business prosperity, and long-term performance. Based on the proposed framework, further empirical study is needed to examine whether the factors that contribute significantly to the adoption of MAPs in SMEs.
Keywords: contingency theory; government support; management accounting practices; small and medium-sized enterprise	

INTRODUCTION

Small and medium-sized enterprises (SMEs) are critical in developing countries, as they create significant job opportunities and contribute to global economic development (World Bank, 2020). Malaysia, as a developing country, has over a million SMEs, accounting for 98.5 percent of total business across a wide range of sectors (DOSM, 2020). SMEs contributed to 38.9 percent of Malaysia's GDP and employed 48.4 percent of the country's workforce in 2019 (DOSM, 2020). This demonstrates that SMEs are critical to Malaysia's economic growth and employment generation. Despite this, a persistent divide exists between small and large businesses, impeding potential growth and income distribution (The Star, 2020a). Additionally, SMEs are impacted by the globalization of the business economy, which results in issues such as business discontinuity and survival struggles (Ahmad, 2014). Hence, effective policies that enable SMEs to grow and innovate are required to empower SMEs to participate in the global economy, innovate, and grow (The Star, 2020a). This explains the government's enormous support for SMEs. Numerous Malaysian SMEs are struggling to survive in the aftermath of the COVID-19 outbreak. Malaysia's government announced a RM110 billion stimulus package, and

the Central Bank of Malaysia enhanced existing financing facilities by providing RM5 billion in relief at a 3.5 percent interest rate to assist SMEs in sustaining business operations and ensuring job retention for two-thirds of Malaysians (SME Corp, 2020). Thus, by providing management with relevant, accurate, and reliable information on the firm's critical success factors, management accounting techniques and analysis can assist SMEs in ensuring business continuity and sustaining economic growth.

Management accounting is regarded as value-added accounting knowledge since it integrates financial and non-financial data that will assist SMEs in improving managerial functions (Azudin & Mansor, 2018). According to a study of Japanese SMEs, global competition and intense pressure from the capital market have compelled SMEs to adopt management accounting practices (MAPs) such as cost management systems like those used by larger firms to become more profit oriented. This is because failure to do so results in a decrease in the survival rate of SMEs (Hopper et al., 1999). Additionally, Nandan (2010) concluded that SME failure and underperformance are frequently associated with a failure to use appropriate management accounting tools. MAPs assist SMEs in managing their resources, which results in increased value for customers and managers. Furthermore, the use of financial and non-financial data generated by MAPs improves a firm's ability to deal with environmental uncertainties and competition, thereby improving performance (Reid & Smith, 2002). While effective MAPs are not a guarantee of a firm's success, their absence or poor implementation significantly reduces a firm's competitive advantages. Thus, SMEs cannot rely solely on government incentives; they must also manage their resources efficiently, which can be accomplished using MAPs (Tuan Mat & Smith, 2011). As a result, SMEs, like larger firms, require adequate and appropriate management accounting tools.

Despite the benefits that MAPs provide for businesses and the increased interest in SMEs, MAPs in developing countries are still in initial stages, and manufacturing organizations in several countries have not effectively utilized MAPs (Azudin & Mansor, 2018). In Malaysia, SMEs in manufacturing industries have widely adopted basic management accounting techniques (Ahmad, 2014). However, research on the factors affecting the use of MAPs in Malaysian SMEs is still lacking. Nair and Tan (2018) previously focused on factors affecting Malaysian businesses, whereas Ahmad (2014) and Ahmad and Mohamed (2015) used a sample of Malaysian SMEs in manufacturing industries, which limiting the generalizability of the findings to all Malaysian SMEs. Given the significance of SMEs to the Malaysian economy, this paper aims to determine the extent to which MAPs are used in SMEs across various industries and to identify possible factors affecting MAP use in Malaysian SMEs from a contingency theory perspective.

In the context of management accounting, the contingency theory assumes that there is no one-size-fits-all accounting system that applies equally to all organizations in all situations (Otley, 1980). This implies that the characteristics of a particular accounting system are determined by the environment in which the organization operates (Otley, 2016; Shahzadi et al., 2018). Due to the simplicity of the SME environment, previous research on Malaysian SMEs has focused on a limited number of contingency factors, such as organization size, market competition intensity, advanced manufacturing technology, and accounting staff qualification level. Thus, the existing research and phenomena leave a gap in studies that are related to government initiatives and could be enhanced by integrating those elements together with MAPs.

As a result, this research added a contingent factor to the framework, namely government support. This is because SMEs are synonymous with government intervention to ensure the growth and sustainability of small businesses. From a government and policymaker perspective, this research will assist in determining appropriate measures to support the development of SMEs from a management accounting perspective. Additionally, it also enables

SME owners, managers, and accountants to assess the effectiveness of their MAP implementation and raise awareness of the critical role of MAPs in sustaining SME competitiveness. Academically, this study establishes a solid foundation for future research in the field of MAPs. The paper is expected to contribute to a greater understanding of the factors affecting MAPs by proposing a conceptual framework and exploring the extent to which MAPs exist in Malaysian SMEs. Additionally, expand existing discussions about related literature in developing countries, particularly those in Southeast Asia.

LITERATURE REVIEW

Contingency Theory

The contingency theory promotes an approach to organizational behavior research in which explanations are provided for how contingent variables such as technology, culture, and the external environment influence the design and function of organizations (Bastian & Andreas, 2012). Contingency theory is predicated on the premise that no single organizational structure is universally applicable to all organizations. Rather than that, organizational effectiveness is contingent upon a fit or match between the type of technology, the volatility of the environment, the size of the organization, the characteristics of its structure, and its information system. The adoption of the contingency theory in management accounting is motivated by conflicting research findings that cannot be resolved satisfactorily within a unified framework. This provides an impetus for developing contingency formulations. To explain why management accounting differs in different situations, concepts such as technology, organizational structure, and the environment have been invoked.

Management Accounting Practices (MAPs)

Management accounting is the process of making pertinent information available to decision makers through the identification of past, present, and future data, both financial and non-financial (CIMA, 2015). Management accounting methods, according to Abdel-Kader and Luther (2006), include costing systems, budgeting, performance evaluation, decision-support information, and strategic analysis. Meanwhile, management accounting techniques such as cost volume profit aid managers in making production volume-related decisions (Nandan, 2010; Okpala & Osanebi, 2020). Thus, management accounting responsibilities have developed over time in response to changes in the competitive environment and technological advancements (Amara & Benelifa, 2017).

The performance of an enterprise is highly dependent on managerial decisions that are based on accounting information, specifically management accounting (Burns & Scapens, 2000). CIMA (2015) asserts that to attain confidence in their success, businesses must make sound business decisions, which can be accomplished through good management accounting practices (MAPs). MAPs may differ between firms since they operate in distinct industries and environments (Burns & Stalker, 1961). Furthermore, Kalifa et al. (2020) claim that MAPs vary by country according to the country's environment and organizational structure. These observations are consistent with Otley (1980) application of contingency theory to MAPs. In essence, each company has its own unique MAP due to the influence of various elements. There is a substantial body of research on MAPs that takes a contingency approach, emphasizing both internal and external influences. This research focuses on contingency elements namely organization size, advanced production technology, accounting staff qualification level, market competitive strength, and government support.

Organization size and MAPs

The size of an organization reflects critical structural contingency factors, which explains the use of management control tools. Siska (2016) discovered that larger companies in the Czech Republic, which is a developing country, heavily rely on strategic management accounting techniques, which is consistent with Cadez and Guilding (2008). This is because larger firms

have the resources necessary to implement MAPs at a more complex level than smaller firms (Nguyen et al., 2019; Abdel-Kader & Luther, 2008). Additionally, as a business grows, communication and control issues arise, necessitating the specialization and sophistication of accounting and control processes (Hoque & James, 2000). Meanwhile, Abdel-Kader and Luther (2008) stated that, due to resources and expertise, large companies can afford to upgrade from simple to sophisticated MAPs.

From a study of South African manufacturing SMEs, Msomi et al. (2019) concluded that the size of the firm influenced the adoption of MAPs. This accords with the findings of Prihastiwati and Sholihin (2018), Nair and Tan (2018), Ahmad and Mohamed (2015), Albu and Albu (2012), and Holmes and Nicholls (1989). Within SMEs, larger SMEs employ more MAPs than smaller SMEs, owing to the increased complexity of their business (Lopez & Hiebl, 2015). There is no evidence that SMEs use management accounting more than larger businesses (Lopez & Hiebl, 2015). Rather than that, Hopper et al. (1999) discovered that there is no difference in MAPs between SMEs and large enterprises because various cultural characteristics, such as non-occidental corporate culture, are not different.

Intensity of Market Competition and MAPs

Stigler (1988) defines competition as a rivalry between individuals or organizations that develops because of two or more parties pursuing a limited goal. Meanwhile, Mia and Clarket (1999) define competition as the degree to which external influence jeopardizes an organization's success. The strength or intensity of competition is a critical aspect of an organization's external environment because it influences strategy decisions, market entry decisions, and performance evaluations (Ceptureanu, 2016). Thus, a sector's competitive environment is determined by five forces: potential entry, suppliers, buyers, substitutes, and the firm's existing competitors (Porter, 1980).

The intensity of market competition has been found to have a significant positive relationship with the adoption of MAPs (Al-Omiri & Drury, 2007). This finding is consistent with Ahmad and Mohamed (2015), Ahmad (2014), and Tuan Mat and Smith (2011) research on Malaysian SMEs engaged in manufacturing. This is because intense competition compels managers to seek knowledge and experience regarding novel costing systems to remain competitive (Ahmad, 2014; Kaplan & Bruns, 1987). Similarly, Amat et al. (1994) established a direct link between market competition and MAPs in Spanish SMEs, arguing that competition indirectly forces organizations to acquire additional information, not just financial, but also non-financial, to remain competitive. Hammami et al. (2019) examined the level of adoption of MAPs, such as target costing systems, by Saudi manufacturing companies and found that there are relationships between target costing and competition intensity, which concludes that it has the potential to support the economic growth of the country.

These findings, however, contradict those of Prisihawati and Sholihin (2018) for Indonesian SMEs. Due to the high level of competition, SMEs must devote all available resources such as employees, time, and money to competing, rather than implementing innovative management techniques (Marc et al., 2010). However, this research has limitations because the sample is drawn from a small number of SMEs with relatively homogeneous sizes, resulting in similar experiences of market competition. Furthermore, Merchant (1984) concludes that market factors are not intrinsically linked to a firm's budgeting system. This is because the samples for these industries are drawn from the electronics and manufacturing industries. Similarly, Azudin and Mansor (2018) found no significant relationship between market competition and MAPs in their research of Malaysian SMEs. The authors explain that the variation could be explained by the fact that the sample was taken from Malaysia's East Coast, where competition is still relatively low in comparison to other regions. Thus, because

this research will include SMEs from a variety of industries and settings, varying levels of competition are expected to affect the MAPs of the SMEs.

Qualification level of accounting staff and MAPs

The qualification of accounting staff is reflected in human capital, which refers to a collection of knowledge and abilities, training and skills, innovation, and capabilities, as well as the ability and motivation of the people who comprise the organization (Ionel et al., 2010). Possessing a bachelor's degree or diploma is required by most organizations as a barometer of an employee's skill set and productivity (Ishola et al., 2018). Accounting skills are a significant predictor of financial professionals' performance and managers' cost-benefit judgement (He, 2015).

The capabilities and competencies of available accounting staff may preclude small organizations from adopting MAPs. According to CIMA (2015), an effective management accounting function is comprised of skilled and competent individuals. This agrees with Ogoun and Ayaundu (2020). According to Nguyen et al. (2019) and Lopez and Hiebl (2015), having a qualified accounting staff has a significant effect on MAP adoption. Most large firms have their own accounting and finance departments, and, as a result, they hire qualified personnel to fill related positions. Professional accountants are associated with a high level of knowledge regarding the application of MAPs in businesses (Ismail & Kings, 2007). Similarly, Haldma and Laats (2002) discovered that staff qualification has a significant effect on MAPs in Estonian manufacturing firms. The authors discovered that many accounting personnel lack legitimate knowledge regarding the efficient use of accounting data.

Meanwhile, in SMEs, employees perform a variety of roles and responsibilities rather than focusing exclusively on one area (Benjaoran, 2009). As a result of insufficient training to adopt sophisticated MAPs, accounting staff lack knowledge and skills, resulting in a decreased use of MAPs. However, Nair and Tan (2018) found no significant relationship between the level of accounting staff's qualification and the use of MAPs in Malaysia. This implies that the widespread use of MAPs in medium-sized businesses is not contingent on the presence of qualified accountants.

Advanced Production Technology and MAPs

Technology is the nature of the manufacturing process, the degree of routine, the degree to which means-end relationships are understood, and the degree to which tasks are varied (Haldma & Laats, 2002). It is one of the earliest determinants of MAPs (Sleihat et al., 2012). Advanced production technology (AMT) refers to the adoption of advanced manufacturing (production) technologies and the integration of various computer applications into production planning and processes, such as integrated manufacturing (CIM), material requirements planning (MRP I), manufacturing resource planning (MRP II), computer-aided design (CAD), computer-aided engineering (CAE), and flexible manufacturing systems (Isa & Foong, 2005). Investment in AMT enables inventory reduction, reduction of lead times and throughput, and acceleration of the learning phase (Isa & Foong, 2005).

Tayles and Drury (1994) demonstrate that advanced manufacturing technologies and management accounting systems have a significant impact on manufacturing firms in the United Kingdom. According to the research, accountants with experience of developing AMTs such as Just-In-Time (JIT) and Flexible Manufacturing Systems (FMS) assert that these technologies significantly alter the management accounting system used by businesses for performance measurement and control. This is consistent with the findings of Fullerton and McWatters (2002), who examined the impact of Just-in-Time (JIT) and Total Quality Management (TQM) on performance measurement. Additionally, Abdel-Kader and Luther (2008) confirm that the sophistication of MAPs varies according to the extent to which AMT, TQM, and JIT are used.

Ahmad and Mohamed (2015) demonstrate that AMT has a significant effect on MAPs in SMEs. However, caution should be exercised when making broad generalizations about all SMEs across sectors. This is because the sample was drawn from medium-sized manufacturing

firms, which are more likely to use sophisticated MAPs to aid in production activities. Haldama and Laats (2002) established that technology has an impact on accounting systems, particularly in manufacturing firms. This is because complex manufacturing processes necessitate the use of advanced manufacturing processes.

Businesses that make use of modern technologies may have an impact on MAPs (Ogoun & Ayaundu, 2020). Because of evolving technology, the patterns of many production activities have shifted in the twenty-first century. Businesses with superior technology can outperform those without cutting-edge technology (Ogoun & Ayaundu, 2020). The Star (2020b) has accelerated Malaysian SMEs' adoption of digitalization to sustain their businesses. According to a study conducted by the University of Consortium Malaysia, the use of digital technology significantly increases the productivity of SMEs (Huawei Technologies, 2018). For instance, SMEs can increase their productivity by up to 60% when advanced digital technologies such as data management are used. Moller et al. (2020) assert that as digitalization progressed, sophisticated and evolving MAPs gained importance. As a result, this could result in an increase in the adoption of MAPs by Malaysian SMEs across multiple sectors.

Government support and MAPs

In the context of SMEs, government support acts as a catalyst by providing financial assistance in the form of capital injections for business operations and start-up, as well as training requirements for SMEs (Msomi et al., 2019). This assistance programmed are necessary considering the critical role of SMEs globally, particularly in developing countries, in terms of economic growth (World Bank, 2020). Additionally, government involvement is viewed as an external resource that contributes to the success of SMEs, including financial and non-financial assistance (Set, 2017). According to Nguyen et al. (2018), government support takes the form of tax exemptions, tax reductions, and loans with preferential interest rates, as well as trade activities, personnel training, and technology. Thus, government support is crucial not only for the business sector but also for other sectors such as education and health (Fatria et al., 2020).

There is a dearth of research on the effects of government support on MAPs, particularly in SMEs and developing countries. According to Bhimani (1996), one of the factors driving MAPs in European countries is the government's intervention and regulation of cost-based pricing and profits. This is to ensure that a certain level of competition exists, particularly in national economic situations where supply and demand are imbalanced because of rationing and mitigating profiteering actions during world wars. Meanwhile, Tuan Mat and Smith (2011) discovered that Malaysian government efforts to encourage manufacturing firms to be globally competitive have resulted in a greater adoption of management accounting systems by manufacturing firms to cope with current changes in the environment.

Additionally, Amat et al. (1994) discovered that when a dictatorship is replaced by a democracy, management accounting system usage increases in SMEs. This finding is consistent with the findings of Msomi et al. (2019) in their study of South African manufacturing SMEs, who concluded that government support for SME development has a significant impact on MAP adoption. Similarly, Waweru et al. (2004) discovered that changes in the environment as a result of government policy have influenced management accounting and control system changes. According to Nair and Tan (2018), advanced production technology and organization size have a significant effect on MAPs. The study argues that the government and accounting organizations should develop appropriate policies and procedures to promote MAP adoption. This can be accomplished by allocating financial resources and providing training on how to apply MAPs to organizations. As a result, this demonstrates that government support is a significant factor affecting MAPs.

The Malaysian Digital Economy Corporation (MDEC) has launched SME Digital Quickwins to assist SMEs in connecting with technology solution providers in order to

overcome the COVID-19 barrier (MDEC, 2020). Additionally, the Malaysian government has allocated RM500 million to SMEs to help them adopt digitalization in their daily operations (MDEC, 2020a) and RM550 million to manufacturing and service SMEs to help them automate business processes (SME Corp, 2018). As these efforts increase the automation of SMEs, it is reasonable to expect an increase in the adoption of MAPs. This is because automation entails the implementation of management accounting systems such as Flexible Manufacturing Systems (Scarbrough et al., 1991). Additionally, Hendrick (1988) discovered that increased automation exacerbated issues such as investment justification, product costing, and performance measurement, all of which can be resolved using cost accounting practices. The study concludes that there is considerable interest in automated cost accounting practices, and it is consistent with Baier (2019), who discovered that digitalization influences MAPs. Hence, government support in this area is expected to influence MAP adoption in Malaysian SMEs.

Proposed Conceptual framework

Based on the discussion above, this study has proposed a conceptual framework as shown in Figure 1 which developed based on the literature review and current environment.

Figure 1: Proposed conceptual framework

METHODS

Research design

This paper employs a qualitative approach. This is accomplished by reviewing all pertinent literature on the subject from various databases and relating it to the current environment. After conducting a review of the literature, the study developed a research question to guide the author in this study, including the critical possible contingency factors that could result in the adoption of MAPs among SMEs in Malaysia. Additionally, the study proposed a conceptual model for the determinants of SME MAPs in Malaysia.

DISCUSSION

The proposed MAPs framework is intended to close the gap regarding the presence of government assistance and to strengthen the existing MAPs framework based on contingency theory. As a result of this research, the framework currently includes a contingent factor, namely government support. SME development is closely linked with government involvement to ensure small enterprises' development and viability. The framework also includes other contingency factors such as organization size, intensity of market competition, qualification level of accounting staff, and advanced production technology. The size of an organization

indicates why management control techniques are used. Most of the research has revealed that larger and medium-sized firms in emerging countries depend extensively on strategic management accounting strategies. Meanwhile, the intensity of competition will force managers to seek knowledge and experience concerning different costing systems to remain competitive in the market.

Another factor will be the qualification level of accounting staff. Previous studies discovered that accounting personnel have an influence on the adoption of accounting techniques, which requires them to acquire appropriate knowledge regarding the efficient use of accounting practices. Advanced production technologies related to digitalization have advanced, which is why sophisticated and evolving MAPs have gained importance. As a result, this could lead to an increase in the adoption of MAPs by Malaysian SMEs across multiple sectors. The framework will enable SME owners, managers, and accountants to evaluate the efficacy of their MAP implementation and promote awareness of its vital role in preserving SME competitiveness. By presenting a conceptual framework and examining the extent to which MAPs exist in Malaysian SMEs, the study is anticipated to contribute to a better understanding of the variables impacting MAPs.

CONCLUSIONS AND SUGGESTIONS

Conclusion

This paper proposes a conceptual framework of contingency factors as an antecedent to MAPs in Malaysian SMEs. The contingency factors would include all the common factors such as an organization's size, market competition intensity, accounting staff qualification, and advanced production technology, with the proposed inclusion of a new factor, which is government support. In addition to the common contingency factors, SMEs should consider government support as one of the factors that can lead to a greater adoption of MAPs, as government support can improve industry competitiveness, business prosperity, and long-term performance. By identifying the antecedents that led towards the greater adoption of MAPs among SMEs in Malaysia, this study contributed to providing extended knowledge in the field of literature and developing a proposed conceptual framework that helps SMEs with the improvement of managerial functions and decision making. Additionally, it enables small business owners, managers, and accountants to assess the effectiveness of their MAP implementation and raise awareness about the critical role of MAPs in sustaining small businesses' competitiveness.

Suggestion

Further empirical study is needed to examine whether all these factors do contribute significantly to the adoption of MAPs in Malaysian SMEs. Future researchers will also include other contingency factors affecting MAPs, such as the owner's or manager's commitment, the complexity of the processing system, the extent of the SME's business network, and perceived environmental uncertainty, to enrich the field's literature. With regard to Industry Revolution 4.0, the level of adoption of smart technologies may be a contingent factor affecting MAPs in SMEs and may be included to enhance the framework. Moreover, future research may also explore literature that examines whether the types of industries that SMEs engage in influence the adoption of MAPs. SME geographical differences may also have an influence on the intensity of competition and business performance. Therefore, geographical factors may be included as one of the contingency factors in future research. Future empirical studies may examine whether the types of government support that this study has included as part of its framework of contingency factors are significant factors that contribute to the adoption of MAPs in Malaysian SMEs.

REFERENCE

- Abdel-Kader, M., & Luther, R. (2006). Management accounting practices in the British Food and Drinks Industry. *British Food Journal*, 108(5), 336-357.
<https://doi.org/10.1108/00070700610661321>
- Abdel-Kader, M., & Luther, R. (2008). The impact of firm characteristics on management accounting practices: A UK-based empirical analysis. *The British Accounting Review*, 40, 2-27. <https://doi.org/10.1016/j.bar.2007.11.003>
- Ahmad, K. (2014). The adoption of Management accounting practices in Malaysian Small and Medium-sized Enterprises. *Asian Social Science*, 10(2), 236.
<http://dx.doi.org/10.5539/ass.v10n2p236>
- Ahmad, K. & Mohamed Zabri, S. (2015). Factors explaining the use of management accounting practices in Malaysian medium-sized firms. *Journal of Small Business and Enterprise Development*, 22(4), 762-781. <https://doi.org/10.1108/JSBED-04-2012-0057>
- Albu, N., & Albu, C. (2012). Factors associated with the adoption and use of management accounting techniques in developing countries: The case of Romania. *Journal of International Financial Management & Accounting*, 23 (3), 245-276.
<https://doi.org/10.1111/jifm.12002>
- Al-Omiri, M. and Drury, C. (2007). A survey of factors influencing the choice of product costing systems in UK organization. *Management Accounting Research*, 18(4), 399-424.
<https://doi.org/10.1016/j.mar.2007.02.002>
- Amara, T. and Benelifa, S. (2017). The impact of external and internal factors on the management accounting practices. *International Journal of Finance and Accounting*, 6(2), 46-58. <https://doi.org/10.5923/j.ijfa.20170602.02>
- Amat, J., S. Carmona, and H. Roberts. (1994). Context and change in management accounting systems: A Spanish case study. *Management Accounting Research*, 5(2), 107-122.
<https://doi.org/10.1006/mare.1994.1008>
- Azudin, A., & Mansor, N. (2018). Management accounting practices of SMEs: The impact of organizational DNA, business potential and operational technology. *Asia Pacific Management Review*, 23(3), 222-226. <https://doi.org/10.1016/j.apmr.2017.07.014>
- Bastian, H., & Andreas, W. (2012). A Bibliometric View on the Use of Contingency Theory in Project Management Research. *Project Management Journal*, 43(3), 4-23.
<https://doi.org/10.1002/pmj.21267>
- Benjaoran, V. (2009). A cost control system development: A collaborative approach for small and medium-sized contractors. *International Journal of Project Management*, 27(3), 270-277. <https://doi.org/10.1016/j.ijproman.2008.02.004>
- Bhimani, A. (1996), *Management Accounting: European Perspectives*, Oxford, Oxford University Press.
- Bier, T. (2019). Digitalisation in Management Accounting, [Unpublished bachelor's thesis]. *Berlin School of Economics and Law*.
https://www.theseus.fi/bitstream/handle/10024/262141/Baier_Theresia.pdf?seq
- Burns, J., & Scapens, R. W. (2000). Conceptualizing management accounting change: An institutional framework. *Management Accounting Research*, 11(1), 3-25.
<https://doi.org/10.1006/mare.1999.0119>
- Burns, T. & Stalker G.M. (1961). *The management of innovation*, Tavistock Publications, London.

- Cadez S., and Guilding, C. (2008). An exploratory investigation of an integrated contingency model of strategic management accounting. *Accounting, Organizations and Society*, 33(7-8), 836–863. <https://doi.org/10.1016/j.aos.2008.01.003>
- Ceptureanu, E. G. (2016). Competitive intensity and its implication on strategic position of companies. *Journal of Quantitative Methods*, 11(1), 57-62. http://jaqm.ro/issues/volume-11.issue-1/pdfs/jaqm_vol11_issue1.pdf#page=61
- Chartered Institute of Management Accountants (CIMA). (2015). Global management accounting principles: Improving decisions and building successful organizations [online]. Retrieved from: <https://www.cimaglobal.com/Documents/Employer%20docs/web%20pages%202016/global-management-accounting-principles.pdf>
- Department of Statistics Malaysia (DOSM). (2020). Small and Medium Enterprises (SMEs) Performance 2019 [online]. Retrieved from: https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=159&bul_id=VjM1enZ2RmlVRDVTNFAwRWZiZUs3QT09&menu_id=TE5CRUZCblh4ZTZMODZlbnk2aWRRQT09
- Fatria, M., Harlen, H., & Setiawan, D. (2020). The Effects of Physical and Non-physical Investments of Government Expenditure in Education and Health Sectors on Human Development Index in Pekanbaru City. *Indonesian Journal of Economics, Social, and Humanities*, 2(1), 65-77. <https://doi.org/10.31258/ijesh.2.1.65-77>
- Fullerton, R. R., & McWatters, C. S. (2002). The role of performance measures and incentive systems in relation to the degree of JIT implementation. *Accounting, Organizations and Society*, 27(8), 711-735. [https://doi.org/10.1016/S0361-3682\(02\)00012-0](https://doi.org/10.1016/S0361-3682(02)00012-0)
- Haldma, T., & Laats, K. (2002). Contingencies influencing the management accounting practices of Estonian manufacturing companies. *Management accounting research*, 13(4), 379-400. <https://doi.org/10.1006/mare.2002.0197>
- Hammami, H., Al-Omiri, M., Bouraoui, T., & Anam, O. A. (2019). Target costing: Adoption and its relationships with competition intensity, intended strategy and firm size. *Asia-Pacific Management Accounting Journal*, 14(3), 223-250. <http://dx.doi.org/10.24191/apmaj.v14i3.1074>
- He, L. J. (2015). Auditor industry specialization, audit experience and accounting restatement. *International Business Management*, 9, 1686-1697. ISSN: 1686-1697.
- Hendricks, J. A. (1988). Applying cost accounting to factory automation. *Strategic Finance*, 70(6), 24. <https://www.proquest.com/openview/a5b658b8a5c1cbebb6a5b73298c94214/1?pq-origsite=gscholar&cbl=48426>
- Holmes, S. & Nicholls, D. (1989). Modelling the accounting information requirements of small businesses. *Accounting and Business Research*, 19(74), 143-150. <https://doi.org/10.1080/00014788.1989.9728844>
- Hopper, T., Koga, T., & Goto, J. (1999). Cost accounting in small and medium sized Japanese companies: An exploratory study. *Accounting and Business Research*, 30, 73-86. <https://doi.org/10.1080/00014788.1999.9728925>
- Hoque, Z., & James, W. (2000). Linking balanced scorecard measures to size and market factors: impact on organizational performance. *Journal of management accounting research*, 12(1), 1-17. <https://doi.org/10.2308/jmar.2000.12.1.1>

-
- Huawei Technologies. (2018). Accelerating Malaysian Digital SMEs: Escaping the Computerization Trap, Retrieved from <https://www.huawei.com/minisite/accelerating-malaysia-digital-smes/img/sme-corp-malaysia-huawei.pdf>
- Ionel, V. C., Alina, C., & Dumitru, M. I. (2010). Human resources accounting for the most valuable asset of an enterprise. *Annals of the University of Oradea: Economic Science*, 1(2), 925-931. <https://core.ac.uk/download/pdf/6263291.pdf>
- Isa, C. R., & Foong, S. Y. (2005). Adoption of advanced manufacturing technology (AMT) and management accounting practices: the case of manufacturing firms in Malaysia. *World Review of Science, Technology and Sustainable Development*, 2(1), 35-48. <https://doi.org/10.1504/WRSTSD.2005.006726>
- Ishola, A., Adeleye, S., & Tanimola, F. (2018). Impact of Educational, Professional Qualification and Years of Experience on Accountants' Job Performance. *Journal of Accounting and Financial Management*, 4(1), 32-44. ISSN 2504-8856
- Ismail, N. A. & King, M. (2007). Factors influencing the alignment of accounting information systems in small and medium sized Malaysian manufacturing firms. *Journal of Information Systems and Small Business*, 1(1/2), 1-20. <https://ojs.deakin.edu.au/index.php/jissb/article/view/1>
- Kalifa, A., Triyuwono, I., Irianto, G., and Prihatiningtias, Y. (2020). The use and benefit of management accounting practices in Libyan oil companies. *Asian Journal of Accounting Research*, 5(1), 91-102. <https://doi.org/10.1108/AJAR-08-2019-0066>
- Kaplan, R. S. & Bruns, W. J. (1987). Accounting and Management: Field Study Perspectives. *Harvard Business School Press, Boston*, 97-118.
- Lopez, O. L., & Hiebl, M. R. W. (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>
- Malaysia Digital Economy Corporation (MDEC). (2020). MDEC Introduces SME Digital Quickwins to Continue Assisting Covid-19 Impacted Businesses. Retrieved from: <https://mdec.my/wp-content/uploads/SME-Digital-Quickwins-.pdf>
- Malaysia Digital Economy Corporation (MDEC). (2020a). Propelling SMEs Into the Digital World. Retrieved from: <https://mdec.my/digital-economy-initiatives/for-the-industry/sme-digitalisation-grant/>
- Marc, M., Peljhan, D., Ponikvar, N., Sobota, A., and Tekavcic, M. (2010). Determinants Of Integrated Performance Measurement Systems Usage: An Empirical Study. *Journal of Applied Business Research*, 26(5), 63-76. <https://doi.org/10.19030/jabr.v26i5.319>
- Merchant, K. A. (1984). Influences on departmental budgeting: An empirical examination of a contingency model. *Accounting, Organizations and Society*, 9(3/4), 291-307. [https://doi.org/10.1016/0361-3682\(84\)90013-8](https://doi.org/10.1016/0361-3682(84)90013-8)
- Mia, L., & Clarket (1999). Market competition, management accounting systems and business unit performance. *Management Accounting Research*, 10(2), 137-158. <https://doi.org/10.1006/mare.1998.0097>
- Moller, K., Schaffer, U. & Verbeeten, F. (2020). Digitalization in management accounting and control: an editorial. *Journal of Management Control*, 31, 1-8. <https://doi.org/10.1007/s00187-020-00300-5>
- Msomi, M. P., Ngibe, M., & Nyide, C. J. (2019). Factors influencing the adoption of Management Accounting Practices (MAPs) by manufacturing Small and Medium

- Enterprises (SMEs) in Durban, Kwazulu-Natal. *International Journal of Entrepreneurship*, 23(4), 1-18. <http://hdl.handle.net/10321/3512>
- Nandan, R. K. (2010). Management accounting needs of SMEs and the role of professional accountants: A renewed research agenda. *Journal of Applied Management Accounting Research*, 8(1), 67-79. <https://www.scribd.com/document/79982187/52048968>
- Nair, S., & Tan, X. (2018). Factors influencing the implementation of activity-based costing: A study on Malaysian SMEs. *International Business Research*, 11(8), 133-141. <https://doi.org/10.5539/ibr.v11n8p133>
- Nguyen, H. T. T., Huong, V. V., Bartolacci, F., & Tran, T. Q. (2018) The Impact of Government Support on Firm Performance in Vietnam: New Evidence from a Dynamic Approach. *Asian Academy of Management Journal*, 23(2), 101-123. <https://doi.org/10.21315/aamj2018.23.2.5>
- Nguyen, T. N., Nguyen, T. T. H., Chuc, T. T. T, and Nguyen, D. D., & Phuong Nguyen, T. T (2019). Factors affecting the application of management accounting in small and medium enterprises in Hanoi, Vietnam. *Management Science Letter*, 9, 2039-2050. <https://doi.org/10.5267/j.msl.2019.7.002>
- Ogoun, S., and Ayaundu, S. (2020) Firm Attributes Count and Management Accounting Practices in an Emerging Market. *International Journal of Business and Economics Research*, 9(3), 94-102. <https://doi.org/10.11648/j.ijber.20200903.11>
- Okpala, K. E., & Osanebi, C. O. (2020). Cost volume profit analysis and profit planning in manufacturing SMEs in Nigeria. *Asia-Pacific Management Accounting Journal*, 15(2), 207-240. <http://dx.doi.org/10.24191/apmaj.v15i2.1216>
- Otley, D. T (2016). The contingency theory of management accounting and control: 1980-2014. *Management accounting research*, 31, 45-62. <https://doi.org/10.1016/j.mar.2016.02.001>
- Otley, D. T. (1980). The contingency theory of management accounting: achievement and prognosis. *Accounting, Organizations and Society*, 5(4), 413-428. https://doi.org/10.1007/978-1-4899-7138-8_5
- Porter, M. E. (1980), *Competitive Strategy*, Free Press, New York.
- Prihastiwi, D. A., and Sholihin, M (2018). Factors Affecting the Use of Management Accounting Practices in Small and Medium Enterprises: Evidence from Indonesia. *Journal Dinamika Akuntansi*, 10(2), 158-176. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3424632
- Reid, G. C., and Smith, J. A. (2002). The bigger picture: feature on information management systems. *Financial Management*, 1, 24-26. <http://www.cima.org/>
- Scarbrough, P., Nanni Jr., A.J, & Sakurai, M. (1991). Japanese management accounting practices and the effects of assembly and process automation. *Management Accounting Research*, 2(1), 27-46. [https://doi.org/10.1016/S1044-5005\(91\)70025-5](https://doi.org/10.1016/S1044-5005(91)70025-5)
- Set, K. (2017). The awareness and use on government assistance programs among tourism entrepreneurs in Malaysia. *International Journal of Advanced and Applied Sciences*, 4(12), 226-230. <https://doi.org/10.21833/ijaas.2017.012.039>
- Shahzadi, S., Khan, R., Toor, M., & ul Haq, A. (2018). Impact of external and internal factors on management accounting practices: a study of Pakistan. *Asian Journal of Accounting Research*, 3(2), 211-223. <https://doi.org/10.1108/AJAR-08-2018-0023>

-
- Siska, L. (2016). The Contingency Factors Affecting Management Accounting in Czech Companies. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 64(4), 1383-1392. <https://doi.org/10.11118/actaun201664041383>
- Sleihat, N., Al-Nimer, M., & Alabbadi, S. (2012). The Effect of Advanced Technology on the Implementation of Costing System Practices: Case of Jordan. *Administrative Sciences Journal*, 39(1), 107-118. <https://platform.almanhal.com/Files/Articles/33423>
- SME Corp. (2018). SME Annual Report 2018/2019. National Entrepreneur and SME Development Council (NESDC). Retrieved from: https://www.smecorp.gov.my/images/SMEAR/SMEAR2018_2019/final/english/SME%20AR%20-%20English%20-%20All%20Chapter%20Final%2024Jan2020.pdf
- SME Corp. (2020) Additional Measures to Support SMEs Affected by the COVID-19 Outbreak. Malaysia. Retrieved from: <https://www.smecorp.gov.my/index.php/en/initiatives/2020-03-31-00-53-27/additional-measures-to-support-smes-affected-by-the-covid-19-outbreak>
- Stigler, G. (1988). Competition. In Eatwell, J., Milgate, M., & Newman, P. (eds), *The New Palgrave: A Dictionary of Economics*, 531-536. <https://doi.org/10.1111/j.1467-6419.1988.tb00042.x>
- Tayles, M. and Drury, C. (1994). New manufacturing technologies and management accounting system: Some evidence of the perceptions of UK management accounting practitioners. *International Journal of Production Economics*, 36,1-17. [https://doi.org/10.1016/0925-5273\(94\)90144-9](https://doi.org/10.1016/0925-5273(94)90144-9)
- The Star (2020a). There is a future in fintech for SMEs [online]. 25 September. Retrieved from: <https://www.thestar.com.my/opinion/letters/2020/09/25/there-is-a-future-in-fintech-for-smes>
- The Star (2020b) Tech to lead recovery for SMEs [online] 29 August. Retrieved from: <https://www.thestar.com.my/business/business-news/2020/08/29/tech-to-lead-recovery-for-smes>
- Tuan Mat, T. Z., and Smith, M. (2011). Changes in management accounting practices in Malaysia. *Asian Review of Accounting*, 19(3), 221-242. <https://doi.org/10.1108/13217341111185146>
- Waweru, N.M., Hoque, Z. and Uliana, E. (2004). Management accounting change in South Africa Case studies from retail services. *Accounting, Auditing & Accountability Journal*, 17(5), 675-704. <https://doi.org/10.1108/09513570410567773>
- World Bank (2020) Small and Medium Enterprises (SMEs) Finance. Retrieved from: <https://www.worldbank.org/en/topic/sme/finance>