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The Impact of Management Accounting Practices on Firm Performance: A Conceptual Framework

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Abstract

Management accounting plays an important role in providing useful information to help managers make decisions on using resources, planning, controlling, and evaluating performance to create competitive advantages and improve firm performance. However, many research results show inconsistencies in the relationship between management accounting practices (MAPs) and firm performance. The study is based on the contingency theory and the resource-based view to proposing a conceptual framework highlighting the impact of management accounting practices on firm performance based on the balanced scorecard perspectives (BSC).

Keywords: management accounting practices, firm performance, balanced scorecard, conceptual framework

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1. Introduction

Since the 1990s, research on management accounting, especially the change in management accounting practice, has become one of the main topics in management accounting research (Burns and Scapens, 2000). However, there are still limitations on empirical evidence demonstrating the relationship between management accounting and profitability. Evidence shows the fact that traditional management accounting has been practiced more popularly and beneficially than contemporary management accounting in studies from different countries (Chenhall and Langfield-Smith, 1998; Sulaiman et al., 2004; Hyvönen, 2005; Abdel-Kader and Robert Luther, 2006; Hussein, 2018). In addition, the studies showing a strong and positive correlation between management accounting and firm performance, more evidence suggests that management accounting does not affect performance (Young and Selto, 1993; Patiar and Mia, 2008; Phornlaphatrachakorn et al., 2019), even negatively affecting performance (Gul, 1991; Ittner and Larcker, 1997; Ittner et al., 2003; Agbejule, 2005).

In addition, an important problem is related to performance measurement when most of the previous studies do not really pay attention to non-financial indicators but only focus on financial performance or overall performance (Johnson and Kaplan, 1987). Therefore, the performance measures of later management accounting studies have included financial and non-financial indicators. The performance measurement system was developed by Govindarajan (1984), Govindarajan and Fisher (1990) when measuring firm performance in 12 financial and non-financial dimensions. Or the achievement scale of Hoque and James (2000) with 5 relevant criteria according to BSC, and many studies using a variety of different performance measurement indicators inherited from many previous research results. However, Ittner and Larcker (2003) also point out mistakes when trying to measure non-financial performance such as difficulty determining which non-financial measures need to be taken, measuring a lot of unrelated things, or measuring wrongly lead to the use of non-statistically valid measurements. This indicates a significant shortage of researchers (Richard et al, 2009). Therefore, this study aims to evaluate the effect of management accounting practice on firm performance based on the balanced scorecard (BSC) to develop an integrated performance measurement framework to provide integrated measures of performance and provides a holistic view of the performance of companies and, to avoid optimizing a particular performance aspect, provides a more comprehensive picture of the business performance.

2. Literature Review

2.1. Contingency Theory

Contingency theory is used throughout the field of management accounting research. It is based on the idea that there is no universally appropriate accounting system that applies equally to all organizations of all

circumstances (Otley, 1980). According to the contingency theory approach, relevance is understood as a positive effect on performance due to a given combination of context and structure. The performance of high or low firms is the result of a successful combination of context and structure (Gerdin and Greve, 2004). Which, organizational performance is considered a dependent variable in management accounting research because it provides a means to establish the concordance between the design of the organization's accounting information system and the variables under its context (Chenhall, 2003; Gerdin and Greve, 2004). That is, firm performance depends on the consistency between the management accounting system and other contingent factors (Chenhall and Langfield-Smith, 1998b; Seto et al., 1995). Contingency theory explains the thesis that the management accounting system in the enterprise is an inimitable resource because the design of the management accounting system in the enterprise must be consistent with many factors, specific factors related to that enterprise (Nguyen, 2018). Therefore, each management accounting system in each enterprise is unique and has its own nuances associated with certain organizational configurations, cultures, and ways of governance that can receive a beneficial impact on firm performance.

2.2. Resource-Based View

The resource-based view was a branch of resource theory proposed by Wernerfelt (1984) with the assumption that a firm's market position depends on its ownership of scarce resources to achieve a competitive advantage. Which, sustainable competitive advantages are advantages that are big enough, rare, inimitable, and irreplaceable to make a difference and be long-lasting against changes in the business environment, and outperform their competitors, among the business, attributes that affect customers (Barney 1991, 2001). The resource-based theory makes strong arguments for the importance of controlling and managing a firm's resources, which is an essential attribute of management accounting. The main purpose of management accounting practice in decision-making is to increase the efficiency and effectiveness of resources (Ahrens and Chapman, 2007). Therefore, management accounting for the decision-making process of management has a positive impact on profitability (Andersen and Samuelsson, 2016; Noordin et al., 2015).

Based on the resource-based view, the management information system is considered a resource of the enterprise based on the role of providing information and supporting managers in the decision-making process, contributing to the improvement of business performance. Thus, the management accounting system is considered one of the information resources, which is also considered an enormous influence on the results, especially the enterprises that have to invest in the information system of the company, which their innovation needs, which has an important impact on their sustainable competitive advantage and operational efficiency. Thus, the management accounting system is a strategic resource that shows the conditions of being valuable, rare, inimitable, and irreplaceable, and can help enterprises perform effective decisions (Nguyen, 2018). In addition, the theory also explains the research results when it is discovered that traditional management accounting does not affect firm performance (Doan Ngoc Phi Anh, 2016; Nuhu et al., 2016). Because only certain types of information are considered valuable for strategic decision-making and provide managers with useful information that improves firm performance. Traditional management accounting information has failed to achieve this

2.3 Management accounting practices

Management accounting practices (MAPs) are defined in many ways, one simple definition is management accounting practices are information systems that provide an organization with appropriate information to add value to customers and organizations. They facilitate effective decisions and assist organizations in promoting intended programs. Nuhu et al. (2016) indicate that MAPs are categorized into traditional and contemporary management accounting practices based on the period of their development or their characteristics. Pre-1980, the existence of management accounting practices has been recognized. Since then, many MAPs have been created and these MAPs are more sophisticated than MAPs before. Therefore, recently developed techniques are called modern or contemporary MAPs, on the contrary, older techniques are called traditional MAPs. Traditional MAPs are short-term in focus, organizational issues and financial oriented, including Standard Costing, Return on Investment, Budgeting, and Cost-volume-profit. Whereas, contemporary MAPs focus on financial and non-financial information, and tend to be more strategically oriented, for instance, Benchmarking, Activity-Based Costing, and Balanced Scorecard (Hyvonen, 2005; Angelakis et al., 2010).

2.4 Firm performance measure

Regarding firm performance measure, Kaplan and Norton (1992) argue that there should be a combination of financial and non-financial measures, they should not be regarded as substitutes for each other, aiming for a balance in performance measurement (Taticchi et al., 2010), and better support for decision-making (Johnson

and Kaplan, 1987). Gupta and Govindarajan (1984) developed a measurement method based on 12 financial and non-financial criteria from which the general performance is calculated by taking the average score for all indicators. Specifically, the achievement criteria include revenue growth rate; market share; operating profit; profit margin; cash flow; ROI and non-financial include: new product development; market development; research and development; cost reduction program; personnel development; political or community issues. Each criterion is evaluated by managers against expected results on a likert scale with 5 levels, from 1 = "failure" and to 5 = "excellent". The comparison between actual and expected performance rather than absolute measurement aims to control indirectly for the influence of strategy and industry factors on performance. This measure is commonly in prior management accounting research (Abernethy and Guthries, 1994; Chong and Chong, 1997; Mia and Clarke, 1999; Baines & Langfield-Smith, 2003; Jusoh et al. events, 2008). However, it only identifies general performance, making it difficult to distinguish between financial and non-financial performance in the business. Another study by Hoque and James (2000) measures business performance based on the BSC perspective, including as follows: ROI, profit margin, production capacity, customer satisfaction, and product quality. Aspects are compared with competitors on a scale of 1 = "below average" to 5 = "above average" (Cadez and Guilding 2008; Ahmad, 2017; Maiga and Jacob, 2003; Lee, Folami and Chung, 2014). However, the author provides only one measure for one aspect of BSC, and may lead to limited accuracy in performance measurement. In addition, a number of studies evaluate the results from management accounting practice in terms of financial, quality, and human resources (Agbejule and Huusko, 2011), business performance, and operational performance (Ahmad, 2011). Mehra and Pletcher, 2004; Nawanir et al., 2013), or financial performance, operating performance, and market performance (Inman et al., 2011).

It can be identified that the previous studies carry certain differences in measuring firm performance. For example, general performance, financial and non-financial performance, internal and external performance, or focus on individual outcomes. In addition, the non-financial performance measures have a relatively significant variation across studies, which depends on the selection based on different perspectives from the researchers, and leads to the fact that the number of non-financial indicators used in the studies is different, and whether the number of selected indicators is enough to evaluate the non-financial performance of the enterprise. Moreover, the achievements of people, innovation, and learning in the organization have not really been paid attention to. While measuring the performance and effectiveness of organizational processes, the need to measure the efforts of the people in the organization should be emphasized (Kerssens-van Drongelen, Nixon and Pearson, 2000). Measuring human capital as an intellectual capital asset was a competitive advantage for firms (Walz, 2005), and learning and growth within the organization are seen as fundamental to the survival and organization's long-term development (Kaplan, 2009). In summary, the way to measure organizational performance in studies on the influence of management accounting has not provided an overall and comprehensive view, lacks systematize of measurement indicators, especially non-financial indicators. The inconsistency in measuring firm performance indicates a significant shortfall in researchers (Richard et al., 2009).

2.5 The impact of MAPs on firm performance

In the uncertain and competitive environment, companies will tend to use more information from the management accounting system for decision-making, providing better and more diverse information will help them make decisions to improve resource allocation and thereby improve business performance (Mia and Clarke, 1999; Baines and Langfield-Smith, 2003; Hoque, 2004). Ahmad (2017) found that specific management accounting techniques have a positive relationship with business performance such as cost systems, budgeting systems, performance evaluation systems have a positive impact on financial performance. Strategic management accounting has a positive effect on non-financial performance and business performance. In addition, many studies show that advanced management accounting systems have a positive impact on business performance, while traditional management accounting systems do not offer this (Dul et al., 2009; Clearly, 2015; Doan Ngoc Phi Anh, 2016; Nuhu et al., 2016). Cadez and Guilding (2008) highly appreciate the importance of the fit between management accounting and the strategy and business environment of the enterprise to help improve organizational performance. The above results are supported by a wide range of research evidence showing that strategy must be supported by appropriate control systems, organizational structures, and management information systems to achieve competitive advantage and ensure organizational performance (Jermias and Gani, 2004; Chong, 1996; Mia and Clark, 1999; Gul, 1991; Chenhall and Langfield-Smith, 1998b; Joshi et al. 2003; Abdel Al and McLellan, 2013). In contrast, some evidence suggests that management accounting techniques do not indeed affect firm performance (Young and Selto, 1993; Perrera et al., 1997; Ittner et al., 2003a, Banker et al. et al., 2008; Phornlaphatrachakorn et al., 2019). These studies found that technical tools such as budgeting, ABC, and non-financial measures do not bring positive signals for firm performance. In

particular, Ittner and Larcker (1997), Ittner et al. (2003b) provided evidence of a negative association between management accounting practices and firm performance.

3. A Conceptual Framework for Assessing the impact of MAPs on firm performance based on BSC

Macinati and Anessi-Pessina (2014) stated that most of the benefits of management accounting practice to businesses are qualitative and intangible, so there is a positive relationship between the characteristics of management accounting. Financial performance does not fully show the results from management accounting practices. Many studies have shown that traditional financial performance measures that look only to the past are no longer relevant to the management requirements of enterprises (Ittner and Larcker, 1998; Neely, 2005; Chow and Van der Stede, 2006; Atkinson and Brown, 2001; Ghalayini and Noble, 1996; Chong, 2008). Besides, the reality shows that in addition to financial performance, organizational performance can also be measured based on operational performance, customer satisfaction, and product quality (Brah et al., 2000; Ong and Teh, 2009), or a measure of productivity, quality, inventory costs, product leadership, production flexibility, and distribution efficiency (Kaplan, 1983). Several studies provide evidence that the application of comprehensive quality management (TQM) has a positive effect on customer satisfaction and loyalty (Brah et al., 2000; Sila and Ebrahimpour, 2005; Chen et al., 2017; Betinal, Omogbiya and Addah, 2018). Activity-based costing (ABC) is a commonly used and beneficial tool in customer profitability analysis (Smith and Dicolli, 1995; Dalci et al., 2010). In addition, current management accounting techniques such as balanced scorecard, activity-based costing, and target costing have been shown to be directly related to the internal capacity of the enterprise (Davila et al. associates 2009; Goebal et al. 1998; Dekker and Smidt 2003; Abrahman et al., 2016). In summary, firm performance is measured overall or measured by financial results and non-financial results, but not yet paid attention to the influence of management accounting practice on each specific achievement such as customers, internal processes, employees, learning and growth. These criteria have often been used by previous studies to evaluate non-financial performance as a whole, and also do not measure performance on learning and innovation within firms. Therefore, the proposed conceptual model aims to clarify the influence of management accounting practice on specific performance aspects, in order to provide evidence of performance as a basis for managers to recognize performance.

Some studies have found that the balanced scorecard (BSC), developed by Kaplan and Norton (1992), is able to cover all aspects of firm performance well despite the lack of integration between the top and bottom operational level (Hudson et al., 2001; Tangen, 2004). Wu et al. (2015) show that most businesses apply the balanced scorecard to measure performance to aggregate financial performance, customer perspectives, internal business processes, learning and growth, to get the best measurement system. The results from this measure demonstrate the suitability of the environment for the business's operations and the ability to exploit existing resources and knowledge to help measure business performance with a system of relevant financial and non-financial indicators. Since its introduction, BSC has become popular in the world, studied and widely used in many countries (Rigby and Bilodeau, 2015; Madsen, 2015). Studies applying BSC for performance evaluation develop various sets of scales and connections between business goals and strategies as well as focus on discovering potential factors to identify and measure firm performance (Remenyi and Sherwood Smith, 1999; Behery et al., 2014). Allee (1999) evaluates the BSC method as a specific measurement tool, therefore providing meaningful results in comparisons between companies and industries.



Figure 1. A model of the impact of MAPs on firm performance aspects.

3.1 MAPs and financial performance

There are substantive efforts have been done in measuring the relationship between MAPs and firm performance based on financial or subjective criteria. Financial measures have the advantage of being easy to calculate based on numbers from financial statements, in order to assess the exact extent to which the organization's goals have been achieved (Simon 2000; Otley, 2001). Currently, in the field of management accounting, researchers and business owners still use financial performance as a measure of firm performance, although there have been significant advances in recent years in measuring performance (Tangen, 2003). Because financial performance measures still govern organizational strategy, especially in the short term, and financial measures that have been used over the decades provide a familiarity with which managers use them in the short term (Simon, 2000; Walker, 1996). Much research evidence demonstrates a positive impact of management accounting practices on financial performance (Joshi, 2001; Ghalayini and Noble, 1996; Jusoh and Parnell, 2008; Cadez and Guilding, 2008, Afonina, 2015; Noordin et al., 2015). Therefore the first hypothesis is as follows:

H1: There is a positive relationship between MAPs and financial performance.

3.2 MAPs and customer performance

The rapid change in technology, as well as the preferences and tastes of customers, make it very important to understand the customer. Therefore, to gain a competitive advantage, businesses should link their control tools with advanced management systems such as activity-based costing, total quality management, information financial, and non-financial to satisfy customer requirements (Chen et al., 2017). Several studies provide evidence that total quality management (TQM) has a positive effect on customer satisfaction and loyalty (Brah et al., 2000; Chen et al., 2017). Similarly, activity-based costing (ABC) is a commonly used and beneficial tool in analyzing customer profitability (Smith and Dicolli, 1995). So the hypothesis is:

H2: There is a positive relationship between MAPs and customer performance.

3.3 MAPs and internal business process performance

Bromwich (1990) found that customers are becoming more change and demanding in today's world. Therefore, businesses are forced to focus on issues related to market product development and innovation to maintain market share and persuade new customers. Management accounting information systems provide an opportunity for companies to improve coordination and control, or to gain a competitive advantage in the marketplace because of their impact on the performance of internal processes (Guilding et al., 2000). Current management accounting techniques such as balanced scorecard, activity-based costing, and target costing have been shown to be directly related to a firm's internal capabilities (Davila et al. 2009; Abrahman et al., 2016). So, the third hypothesis is:

H3: There is a positive relationship between MAPs and internal business process performance.

3.4 MAPs and learning & innovation performance

Accounting information plays an important role in creating new and shared knowledge within the organization

(Choe, 2004). For the learning process to be effective, the generated information must be distributed to the areas of the organization (Argris, 1977). Management accounting tools are believed to affect the level of knowledge capital acquisition (Tayles et al., 2002; Novas et al., 2012). Non-financial information such as quality, customer complaints, customer satisfaction, and supplier reputation provide strong incentives for learning in organizations (Sim and Killough, 1998). Kaplan (1984) found that the information provided by strategic management accounting for aggregate performance measures could be used to encourage employees to behave in accordance with strategies.

Jansen et al. (2006) define exploratory innovation as searching for new knowledge beyond existing knowledge and seeking to improve existing products and improve efficiency. The aim is to develop new products and services for new customers and markets. It is through exploratory innovation that a company can secure a different product line that offers unique attributes that satisfy customer needs and tastes. Previous research demonstrated that management accounting information functions can significantly impact innovation by focusing on implementing innovation strategies (Chenhall and Moers 2015; Grabner 2014). Pasch (2019) used data from 244 companies from German-speaking countries in different industries. The results of the structural equation model indicate the mediating role of the management accounting system in the relationship between differentiation strategy and innovation. The use of management accounting systems in decision-making by management is believed to have a positive impact on discovery innovation. Therefore, the fourth hypothesis is:

H4: There is a positive relationship between MAPs and learning, innovation performance.

4. Conclusion

The proposed conceptual framework aims to change the way of evaluating firm performance in management accounting practice. Besides, the model is intended to construct the empirical research framework needed to determine whether the relationships constructed in the hypothesis are exact of practical significance and to what extent any associations might be most meaningful. Along with the hypotheses presented above, the framework highlights four aspects of performance based on BSC theory that is affected by MAPs, including financial performance, customer performance, internal process performance, and learning & innovation performance. The framework uses both contingency theory and resource-based view to explain the relationship between MAPs and firm performance, whereas, previous studies only used the contingency theory (Hoque and James, 2000; Cadez and Guilding, 2008). This result will provide the foundation to help businesses base on their performance goals and choose a management accounting technique or group of techniques suitable for the business to apply and improve results. In addition, this study contributes to the treasure trove of documents on improving firm performance based on MAPs.

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