

# Relationship between Modern Management Accounting Techniques and Organizational Performance of Industrial Sector Listed in Amman Stock Exchange

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## Abstract

This research examined relationship between modern management accounting techniques and industrial companies listed in Amman Stock Exchange (ASE). The questionnaire was used to collect data from 46 companies operating in industrial activities, a total of 152 questionnaires were distributed to employees in the financial business units (FBUs) in the companies, data of 116 questionnaires were used in the analysis process through Smart-PLS software. The results showed that reveals that MMATs had a strongly positive and significant effect on OP.

**Keywords:** Modern Management Accounting Techniques, Organizational Performance, Industrial companies, Amman Stock Exchange.

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## Introduction

### *Background to the study*

Over the past few decades, more developed Management Accounting Practices (MAPs) have been presented into corporations (Cao & Fowler, 2013). The adjustments from traditional to modern practices reveal partly emerge from criticisms of Management Accounting (MA). Burns and Scapens (2000) mentioned that perhaps the most commonly quoted adjustment driver of MA was the competitive economic condition, globalization of markets, intensified competition and revolutionary changes both in information and manufacturing technologies (Abdel Maksoud & Abdel-Kader, 2007; Abdel-Maksoud et al., 2012; Auzair et al., 2013).

The extensive criticism of conventional MA has concentrated on the limitations of traditional financial information and its dysfunctional results for instance, too short-term orientation, the manipulation of financial measures and the timeliness and aggregation of information (Ezzamel & Liley, 1997; Burns & Vaivio, 2001). This has led to the appearance of more new MAPs, which is demanded to offer more appropriate, relevant and accurate information (Johnson & Kaplan, 1987; Abdel-Kader & Luther, 2008).

Furthermore, efforts have been made to bridge the recognized gap between practice and theory to extend the financial information-based domain of conventional MA, not only regarding the variety of MAPs but also the nature and scope of information (Baines & Langfield-Smith, 2003; Hoque, 2011). The main effects of this process can be described below.

First of all, while traditional MA was mostly concerned with internal and historical information about a product's costs, strategic decisions primarily require external and future-oriented information such as information about customers and competitors to take on an active part in decision-making (Hoque, 2001; Cravens & Guilding, 2001; Chenhall, 2008).

Second, as cited in most literature, one of the MAPs, for example, budgeting, continued to be an important management accounting practices (Abdel-Kader and Luther, 2007; Uyar, 2009; King et al., 2010; Libby & Lindsay, 2010; Uyar & Bilgin, 2011; Bourmistrov & Kaarboe, 2013). It has been criticized by different practitioners (Jensen, 2001 and Bogsnes, 2009) who argue that the dissatisfaction with budgets is due to the rising environmental uncertainty that firms are facing with, the preparation of budget costs and the administrator's way of adopting budgets. That is why many practitioners feel that a total overhaul of the budgeting system is needed to enable it to respond to the requirements of the current business environment (Angelakis, Theriou & Floropoulos, 2010).

Finally, conventional costing systems adopted by manufacturing firms are also criticized. The cost structure is dissimilar with what conventional costing systems are adopted by manufacturing firms in today's competitive environment. Overhead cost is often the single greatest portion of the total cost. Techniques adopted in conventional costing systems use incentives for overproduction since managers feel a demand to

maximize standard labor hours to split up the overhead (Hutchinson, 2007). On the other hand, modern costing techniques bring further to the art of costing and redefine a rudimentary principle that should govern the action of any entity. Any decision should be interpreted in terms of costs, and the costing technique is significant in supporting operational and efficient decisions (Rof, 2012).

In general, the discipline of MA has seen adjustments in concentration, techniques, functions, and roles, in response to criticisms that the profession had failed to adapt to changes in the economic and business environment (Mahfar & Omar, 2004). New kinds of assessments for meeting the challenges at the business, in both national and international levels, are required (Sleihat et al., 2012). Moreover, modern practices have been proposed as efficient MA instruments (e.g., Guilding & McManus, 2002; McLellan, & Moustafa, 2013). Generally, organizations perform more effectively if management control systems are designed to effectively and efficiently adapt to their environmental and organizational factors to equip them to form financial and non-financial information focusing on a more strategic orientation that would enhance organizational profitability (Jusoh, 2008; Cuzdriorean, 2017). Finally, MMATs and sophisticated systems are also useful for industrial businesses which are the main target of this study (Abdel-Kader & Luther, 2008; Nimtrakoon & Tayles, 2010; Al-Mawali, 2015).

### *Problem Statement*

The increasing level of global competition has intensified the challenges for managers and many experts have warned that if MA is to maintain its relevance, it needs to adapt to meet the changing needs of managers. In response to these concerns, a range of Modern Management Accounting Techniques (MMATs) has emerged to serve the strategic goals of the organization; this suggests that Traditional Management Accounting (TMA) can no longer meet the information needs of management (Ogungbade, Idode & Alade, 2016). The background of this study highlights the failures of TMA to respond to the drastic change in the market place and the need to adopt MMATs.

To arrive the efficiency of using the available resources, the quality of products and the classification of operations into multiple activities, reduce costs, improve the strategic it was important to use MMATs which consider significant for organizations to confrontation the competitive market in a global market (Alnawaiseh, 2013; Al-Qudah & Al-Hroot, 2017). There have been many interests in the use of MMATs but various empirical studies on the efficacy use of these techniques have been mingy (Sulaiman, Ahmad & Alwi, 2004 and Sunarni, 2014).

Furthermore, researchers emphasized that MMATs support the management in strategic decision making which leads to enhance the overall performance of organizations (Soltani, Nayebzadeh & Moeinaddin, 2014; Ghasemi, Mohamad, Karami, Bajuri, & Asgharizade, 2015; Atout, 2017). Many studies in Jordan emphasized that to enhance performance in the organization must be applied the MMATs instead of traditional techniques ( e.g. Al-Khadash & Feridun, 2006; Hardan & Shatnawi, 2013; Sharabati & Fuqaha, 2014; Alsoboa et. al., 2015; Al-Ettayyem & Al-Zu'bi, 2015).

While MMATs to be of considerable interest to increase performance, but there are a few studies on this field particularly in developing countries context and neither created coordinated results (Ahmad & Zabri, 2013; Ago, Nweze & Enekwe, 2016). this study attempts to bridge the gap by examining the effect of the adoption of MMATs on organizational performance of the industrial companies listed in ASE.

### *Research Question*

Furthering the background of the study and the problem discussed in the previous sections, this study was mainly designed to address the issue influence of MMATs on the organizational performance of industrial companies listed in ASE. This leads to the following main question:

- Are there significant influences of MMATs on the OP among industrial companies listed in ASE?

### *Research Objective*

Based on the mentioned research question, the objective of this study is set to reveal the influence of MMATs on the organizational performance of industrial companies listed in ASE. As a following:

- To assess whether MMATs can have impacts on the organizational performance of industrial companies listed in ASE.

### *Research Hypothesis*

In order to answer the main question of the study "Is there a significant influence of MMATs on the OP among industrial companies listed in ASE?". The main hypothesis as follows:

**H1:** MMATs usage is positively associated with organizational performance.

## **Literature Review**

### *Modern Management Accounting Techniques (MMATs)*

MAPs are defined by Ittner & Larcker (2002) as a variety of methods especially considered for manufacturing businesses so as to support the organization's infrastructure and management accounting processes. Ittner & Larcker (2001) have also argued that due to the development of these new methods, it has changed the basic principles of management accounting to a more superior one that adds value to various practices. The literature has also indicated that some practices such as absorption costing and marginal costing have not been highly favored by most industrial businesses. For example, Dugdale and Jones (2002) stressed that there is a limitation within these costing systems since they do not provide an accurate method of recording costs to be exact in order to make sound management decisions.

The MMATs have been chosen in this study that has gained widespread attention in accounting, particularly since the latter decades of the 20th century and more suitable in the Jordanian context. The next part reviews research into modern techniques of MA.

### *Target costing*

This costing method is commonly known as a cost reduction tool used for managing product costs during the early stages of the product life cycle (Briciu & Capusneanu, 2013). Talebnia, Baghiyan, Baghiyan and Abadi (2017) defined the target costing as "a cost management tool for reducing the overall cost of a product over its entire life-cycle with the help of production, engineering, research, and design". Target costing involves setting a target cost by subtracting the desired profit margin from a competitive market price (Talebnia et al., 2017).

There are four stages to determining the target cost the first of which is determining a price point or the range of prices for an approximate combination of products. This will involve closely revising the market price for the product in view of changed market conditions. This is followed by subtracting a desired profit from the market price to determine the maximum bearable level of costs. Finally iterating the product design by eliminating or reducing unnecessary attributes with costs that can't be recovered at higher prices until the cost target is met (Aladwan, Alsinglawi, & Alhawtmeh, 2018). This technique is often used in conjunction with other tools such as Value Engineering, Lean manufacturing, Supply chain management, and Kaizen philosophy to reduce actual costs to the target cost level (Okpala, 2016).

The literature such as Briciu and Capusneanu (2013) and El- Dalahmeh (2018) shows a number of benefits from the use of target costing including, It is a tool for managing cost and profitability simultaneously; Reduce costs from product planning and design to after-sales; Achieves positive interaction between the internal environment of establishment and the extranet environment (customers and suppliers), and Contributes to the strategic management of future profit.

### *Kaizen (Continuous Improvement)*

Kaizen is a philosophy that involves all employees and defines management's role in continuously encouraging the implementation of small adjustments that make the process more efficient, effective, manageable, and adaptable (Abdulmouti, 2018). These are usually accomplished at little or no extra cost, without sophisticated techniques or expensive equipment (Abdulmouti, 2018).

The Kaizen technique has been successfully implemented in different industries in several countries regardless of business sectors (Nguyen, 2019). The applicability of Kaizen and its practical benefits in terms of inventory reduction, customer satisfaction, lead time, and waste reduction, etc. have been validated by different researchers worldwide, such as Chahal et al. (2017); Marodin et al. (2017).

### *Benchmarking*

Benchmarking is a term used by industry to compare business processes and performance metrics to the same processes and metrics of other businesses for the purpose of improvement (Alosani, Al-Dhaafri & Yusoff, 2016). Markovic, Dutina, and Kovacevic (2011) suggest that the benchmarking identifies production-related and other operations in the company that should be improved and goes much beyond the traditional analysis of the competitors, It implies a deeper analysis of the best competitors, a detailed examination of their achievements and how they did them as wells analysis of operation capabilities and characteristics of competitors' products aimed at taking actions to improve their own performance and business.

### *Activity-based Costing (ABC) and Activity-based Management (ABM)*

ABC is a method, which identifies activities in a firm and assigns the expenses of each activity with resources to all products based on the real consumption (Khodadadzadeh, 2015). ABC allows a wide scope for research and innovation, making changes in the control systems, evaluating performance, making decisions related to product prices, organizing productivity (Al-Refa'ee, 2012; Nassar, Al-Khadash & Sangster, 2014). Though this technique may reduce the dangers of under-or-over costing particular products, there is no evidence that ABC enhances firms' profitability (Lay, 2014). Gosselin (1997) suggested that ABC was the final of three stages of ABM. The first being Activity Analysis (AA) and the second Activity Cost Analysis (ACA). Baird et al (2004) argued that organizations may not use all three stages but may enact ABM after the cost analysis stage as the objective of the organization may be in cost reduction or process decisions rather than product costing.

### *Balanced Scorecard (BSC)*

BSC is a strategic planning and management system to align business activities to the vision and strategy of the organization that is used in business and industry, government, and nonprofits organizations worldwide (Kshatriya et al., 2017). The main objective of the BSC is to address long term issues and not simply rely on producing good short term results (Abagissa, 2018). The BSC was initially introduced as a multidimensional performance measurement model. It consists of four perspectives, which are a combination of financial and non-financial performance measures. The four perspectives are financial, customer, internal business process, and learning and growth (Hamdy, 2018). BSC suggests that organizations performance can be viewed from four main separate but linked perspectives: two of these perspectives; internal business process and learning and growth seek to better business processes, which in turn lead to increased value to the customers, which finally contributes to improved financial performance for organization and stakeholders (Alsoboa et al., 2015).

### *Total Quality Management (TQM)*

Altahayneh (2014) defined TQM as a management approach that seeks to achieve and sustain long-term organizational success by encouraging employee feedback and participation, satisfying customer needs and expectations, respecting societal beliefs and values, and obeying governmental laws and regulations. TQM seeks to improve the quality of goods and services delivered through the participation of all levels and

functions of the organization; it also increases customer satisfaction by restricting traditional management practices (Syduzzaman et al., 2014).

To determine critical factors of total quality management, various studies have been carried out and different instruments were developed by individual researchers, Such as institutions, Malcolm Baldrige Award; EFQM (European Foundation for Quality Management); Deming Prize Criteria. Based on previous studies and models which has been a consensus that the following eight TQ: principles customer focus, leadership, continuous improvement, employee involvement, fact-based management, process management, strategic quality management, and supplier involvement; should follow in an integrated way for successful TQM implementation (Al-Damen, 2017).

Tanninen, Puumalainen, and Sandstrom (2010) claim that TQM practices can influence organizational performance through two key processes. The first is through improved internal performance resulting in increased efficiency, reduced waste and subsequently a higher return on assets. The second is through improved customer satisfaction which results in enhanced brand value and customer loyalty which in turn leads to higher levels of sales and market share. Syduzzaman et al., (2014) emphasized that TQM keeps a vital role in improving productivity, product quality and reduces manufacturing cost by reducing rework and scrape.

### **Just in Time (JIT)**

The JIT is considered as a system that makes what customer needs and when it needs in the quantity needed by using both of minimum resource of people and materials (Al haraisa, 2017). The researchers did not arrive to identify a clear and precise concept of just in time system. However, many researchers identified the concept of JIT system as managing the material flow in a plant in order to decrease or reduce the levels of inventory (Rahmani & Nayebi, 2014). Other researchers described the concept of the JIT system as a long- term strategy that involves promote and encourage excellence and remove waste during the organization's entire (Al haraisa, 2017).

JIT has been defined in a number of ways but the essential elements of JIT have remained the same. As a definition JIT is a manufacturing philosophy that aims to eliminate waste, as waste is or results from any activity that adds cost to the production process without necessarily adding value to the product, such as transporting inventories from one warehouse to the other or the simple act of storing them (Madanhire, Kagande & Chidziva, 2013). According to Patel, Patel, and Sanap (2016), implementation of JIT varies according to the companies, that is, small scale industries, and large scale industries which depend upon various factors. For example, if there is a large scale industry there will be more departments and production or manufacturing will be done at different places hence for implementation of JIT in such cases will require more interaction with all the departments of industries. While in small scale industries, JIT will be implemented faster than large scale industries because the structure of their organization will be not much complicated as that of large scale industries (Singh & Garg, 2011).

### *Value Chain Costing*

The value chain is a crucial strategic tool that is widely used in strategic cost management which is again an important part of management accounting (Jariwala, 2015). In the management accounting literature, the value chain costing is regarded as a core analytical technique of management accounting (Bhargava, Bafna & Shabarisha, 2018). The value chain, also known as value chain analysis, is a concept from business management that was first described and popularized by Michael Porter in his book 1985, *Competitive Advantage: Creating and Sustaining Superior Performance*. Shank and Govindarajan (1992) developed the value chain costing method that represents a management accounting operationalization of Porter's (1985) value chain analysis (Bhargava et al., 2018).

The value chain, It is an approach for breaking down the sequence (chain) of business functions into the strategically relevant activities through which value is added by the business; the objective is to identify the behavior of costs and the areas for differentiation (Dilip & Rajeev, 2016). Sutarmin and Jatmiko (2016) refer that Value chain analysis is the process by which a company determines the cost associated with the activities of the company from the purchase of raw materials to production and marketing. Value chain analysis aims to identify where the advantages or disadvantages of existing low cost throughout the value chain (Sutarmin & Jatmiko, 2016).

### *Throughput accounting (TA)*

TA is a management accounting system that has been developed to be as fair as possible for companies working with TOC (Lutlisky, Liovic & Markovic, 2018). Lutlisky et al. (2018) describe TA as a simplified management accounting approach that provides managers with support in decision-making aimed at increasing a company's profitability; It is a relatively new method of management accounting that identifies factors that limit the company in achieving its goals and then focuses on simple measures that drive behavior in key areas towards reaching organizational goals. This approach provides better cost data thus facilitating cost control and management, as opposed to assigning the tasks of improving business processes to workers (Lutlisky et al., 2018).

Hilmola and Gupta (2015) investigate that TA focuses on three main elements: throughput, operating expenses, and investments. Out of these three, throughput is the most important one since the goal is to create a high throughput. This is not the top priority in the same way in other accounting methods where the profit margin is used instead (Hilmola & Gupta, 2015). The result of using throughput accounting is a broad product mix when only products with costs of raw material higher than the income are excluded; in throughput accounting, the analysis is made much easier since fixed costs and semi-fixed costs are gathered in what is called operating expenses (Kirli, 2016). In practice, Despite a number of publications indicating that there is an increase in interest in this tool to implement in manufacturing companies but the tool doesn't seem to have been brought into mainstream acceptance (Wojakowski, 2016).

### *Backflush accounting*

Backflush accounting term published by CIMA terminology was introduced in February 1991 which is also called Delayed or Post Deduct Costing (Ramezani & Mahdloo, 2014). CIMA defined backflush accounting as an accounting system that is focused on the output of an organization and then works are returned to inventory and cost of sales based on the characteristics of the cost (Ramezani & Mahdloo, 2014). The salient point to note about backflush costing and accounting is that there is no continuous tracking system (Ndubuisi, Leonard & Chinyere, 2018). The delayed term is related to its creation because backflush accounting delays costing of inventories to sales time and finally cost returns through the accounting system; Backflush accounting removes the need to separate the work-in-progress account (Ndubuisi et al., 2018).

### *Life Cycle Costing (LCC)*

LCC is a vital methodology for accumulating and tracking different product costs along with its life (Bhimani et al., 2012). LCC is a means of estimating all costs involved in procuring, operating, maintaining and ultimately disposing products throughout its life (Jagtap, 2013). The concept of LCC was firstly introduced in the 1970s by the U.S. Department of Defense; then the LCC concept was extensively adopted in a wide range of industrial sectors including energy, construction, manufacturing, transportation, and healthcare (Abu-Rumman, Muslih & Barghash, 2017).

Several studies were suggested various benefits from LLC use such as the better assessment of planning by comparing budgeted and actual life-cycle costs, ability to make better pricing decisions, ability to aid product profitability by reducing the short-term perspective of management decisions, a link to the environment, as the life-cycle approach allows the environmental impact to be considered at the various stages of the life cycle and also a recognition of the importance of post-sale factors as a part of life cycle costs (Kaming, 2017; Grzyl & Siemaszko, 2018).

### *Organizational Performance (OP)*

Although the concept of organizational performance is very common in academic literature, there was no broad consensus among scholars on the specific definition of this construct (Gavrea et al., 2011). Consequently, the debate among scholars and practitioners about the most appropriate organizational performance measurement system has grown to become a key issue of discussion (Jusoh, Ibrahim, & Zainuddin, 2008). Ittner and Larcker (2003) noted that performance measurement can be used to help direct the allocation of resources; assess and communicate progress towards strategic objectives; and evaluate managerial performance. Similarly, a performance measurement system is about allocating responsibilities and decision rights, setting performance target and rewarding performance (Lee & Yang, 2011).

Murphy, Trailer, and Hill (1996) state that there are 71 different measures related to organizational performance, classified into eight (8) dimensions by taking into account both financial and non-financial measures. Therefore, there are many ways to look at the

firm performance and each one has its own implications to measure organization performance (Hubbard, 2009).

It is very important for an organization to develop an appropriate performance measurement system in which human-based activities and processes' effectiveness can be assessed so as to achieve business excellence. It is clear that all stakeholders should be considered when evaluating the performance of modern organizations. Financial measures should not be used solely when measuring organization performance (Ringim, Razalli, & Hasnan, 2012). Chenhall (2005) points out that in the performance measurement literature, there have been many attempts to develop strategic performance measurement systems that consider both financial and non-financial indicators. It is also crucial to take into account qualitative indicators, such as customer satisfaction, customer service, quality of products and learning and innovation as they have a long-term focus through value-creation activities (Kaplan & Norton, 1996). In general, an organization's performance measurement system should be designed and implemented in accordance with the company's business strategy in order to link the strategy, objectives and operational aspects (Kaplan & Norton 1996 and Neely et al., 2002).

### *MMATs Usage and Organizational Performance*

The effectiveness of MAPs in assisting firms in achieving their goals has become an important research topic. MAPs are presumed to provide relevant information for an organization. According to Horngren et al., (2002) management accounting has the following functions: formulating business strategy, planning and controlling activities, decision making, efficient resource usage, Performance improvement, and value enhancement, safeguarding tangible and intangible assets, and corporate governance and internal control. The investigation of the empirical evidence on MAPs effectiveness in enhancing business performance should be carried out.

There are substantive efforts have been done in measuring the effects or the relationship between MAPs and performance. An earlier study can be seen in Hoque (2011) who found the change to contemporary management accounting systems is positively associated with organizational performance. Baines and Langfield-Smith's (2003) findings proposed that the changes in advanced MAPs have led to improved organizational performance. The advanced MAP changes result in a greater reliance on non-financial accounting information (i.e. on-time delivery, customer satisfaction, market share, employee satisfaction, and employee training) which have a positive impact on organizational performance. This result confirms with Tuanmat and Smith (2011); Ajibolade (2013); Tuan Mat and Smith (2014); Ayedh and Eddine (2015); Al-Naser (2017); Alimoradi and Borzoupour (2017) and Lucianetti et al. (2018) which emphasized there is significant and positively relationship between advanced management accounting practices and organization performance.

### **Methodology**

This study examines industrial companies listed in ASE in 2018. According to the information gathered from the websites of listed companies obtained from ASE, there are about 46 companies engaged in industrial activities out of around 192 companies listed

on Bursa Amman Main Board. The unit of analysis for the study is the financial business units (FBUs) of industrial companies listed in ASE which engaged their core business in the industry. 152 questionnaires to all the respondents in the industrial companies listed on ASE, asking for their responses, yielded a total of 128 returned questionnaires. Out of these 128 questionnaires, 12 questionnaires were excluded from the analysis as more than 50% of their questions were not completed by the respondents according to the suggestion by (Hair, Black, Babin, & Andersen, 2010). 116 usable questionnaires for further analysis accounted for an overall 76.3% valid response rate. According to Saunders, Lewis and Thornhill (2012) state that the likely response rate for self-administered questionnaires in business studies is between 30-50 %.

### Data Analysis and Presentation

To achieve the research objective this study was used Partial Least Square Structural Equation Modeling (PLS-SEM) version 3.0 in analyzing both measurement and structural models. The measurement model was determined by running PLS algorithm while the structural model was determined through the bootstrapping method (Hair, Hult, Ringle & Sarstedt, 2014).

The goodness of the measurement was evaluated in order to confirm the validity and reliability of the output of the analysis processes using the PLS-SEM technique. Based on Henseler, Ringle & Sinkovics (2009) and Hair et al. (2014), this study was used convergent validity and discriminant validity before testing the hypotheses of the model.

All the construct of this paper has achieved the composite reliability above 0.7 and AVE above 0.5 (Hair et al., 2014). However, three items H10, H11, and H12 from the construct MMATs are deleted from further analysis due to the low loading (see figure 1 and Table 1).

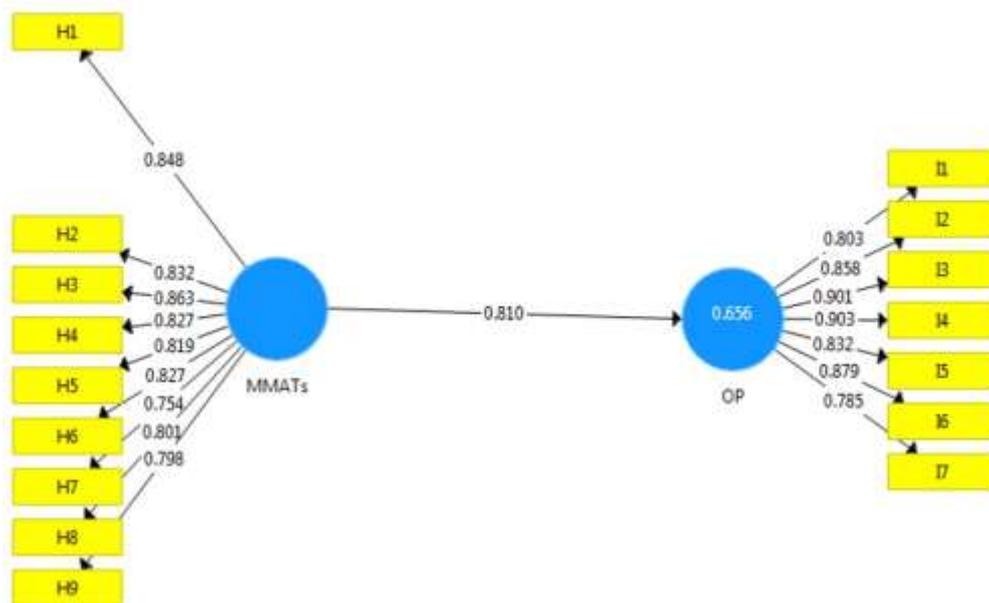


Figure 1: Measurement model

The discriminant validity analysis result is shown in Table 2. The square roots of AVE for the constructs are on the diagonal line signifying a higher square root of AVE. The square roots of AVE for the constructs are greater than the off-diagonal correlation coefficients in the corresponding rows and columns. In addition, this indicates that each and every variable shares more variance with its items than with another construct, and, thus supports discriminant validity (Hair et al., 2010).

Table 1. Reliability and Validity of Construct

Variable	Indicators	Loading	Cronbach's Alpha	Composite Reliability	AVE
MMATs	H1	0.848	0.939	0.948	0.671
	H2	0.832			
	H3	0.863			
	H4	0.827			
	H5	0.819			
	H6	0.827			
	H7	0.754			
	H8	0.801			
	H9	0.798			
OP	I1	0.803	0.937	0.949	0.727
	I2	0.858			
	I3	0.901			
	I4	0.903			
	I5	0.832			
	I6	0.879			
	I7	0.785			

Table 2. Discriminant Validity Variable

Variable	MMATs	OP
MMATs	0.819	
OP	0.503	0.853

The structural model was assessed by evaluating the beta value and the corresponding t-values through the bootstrapping procedure with 5000 resample. Therefore, the bootstrapping result from the Smart PLS reveals that MMATs ( $\beta = 0.810$ ,  $t = 19.457$ ,  $p < 0.01$ ) had a strongly positive and significant effect on OP supporting the hypothesis of this research (see Figure 2 and Table 3).

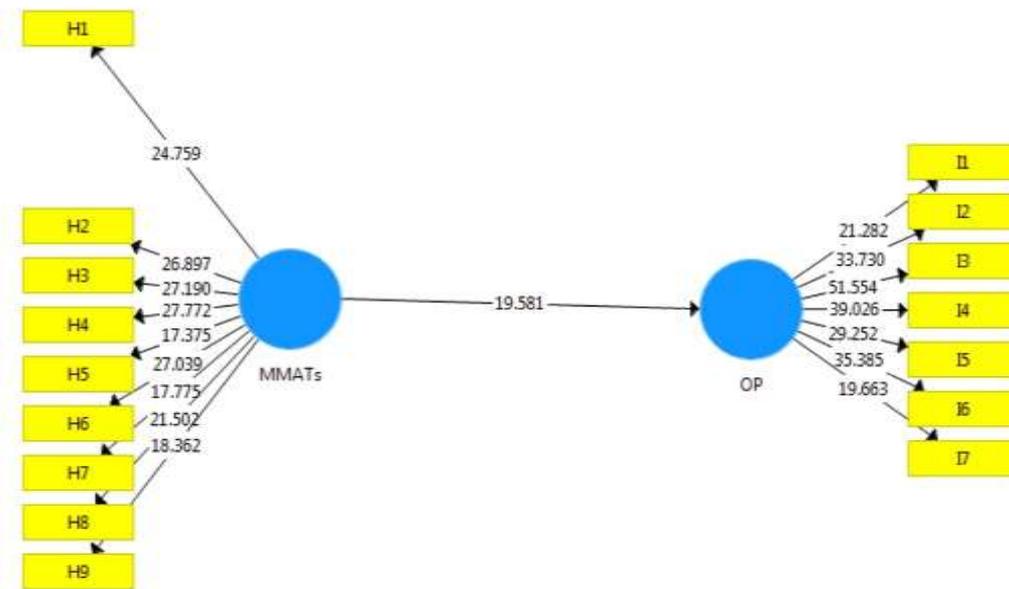


Figure 2: Structural model

Table 3: Result of the structural model analysis

Relationship	Beta	Standard Deviation (STDEV)	T Statistics	P Values
MMATs -> OP	0.810	0.042	19.457	0.000

### Discussion of Finding

The study was undertaken to assess whether MMATs can have an impact on the organizational performance of industrial companies listed in ASE. The finding of the study shows that MMATs was proved to have a significant effect on organizational performance. The finding is consistent with the previous studies that found a significant link between the two constructs in industrial companies (see Baines & Langfield-Smith, 2003; Hoque, 2011; Tuanmat & Smith, 2011; Ajibolade, 2013; Tuan Mat & Smith, 2014; Ayedh & Eddine, 2015; Al-Naser, 2017; Alimoradi & Borzoupour, 2017; Lucianetti et al., 2018).

This result suggests that MMATs in the form of cost techniques, quality techniques, management techniques, and measurement techniques are able to contribute to organizational performance. In explaining this, Nuhu, Baird, and Appuhami (2016) believe that MMATs helps to improve quality, efficiency, costs, cost driver analysis, processes, and improved performance.

### Conclusion and Recommendation

This result suggests that MMATs in the form of cost techniques, quality techniques, management techniques, and measurement techniques are able to contribute to organizational performance. In explaining this, Nuhu, Baird, and Appuhami (2016)

believe that MMATs helps to improve quality, efficiency, costs, cost driver analysis, processes, and improved performance.

Huynh (2017) suggested that management accounting practices is essential for organizations because it provides suitable business information to facilitate the management of expenses and the enhancement in organizational efficiency. According to Kaplan et al. (1998), management accounting is a controlling tool used to facilitate decision-making by gathering, handing out and conveying information helping executives plan, systematize, run and evaluate business activities and firm performance.

In brief, financial departments in industrial companies listed in ASE should have the necessary knowledge to enhance organizational performance. They should have readiness for sophisticated management accounting objects and supporting any initiatives to use MMATs effectively within their companies to operate in order to achieve superior performance.

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