

**THE EFFECT OF MANAGEMENT ACCOUNTING PRACTICES ON  
ORGANIZATIONAL PERFORMANCE OF LISTED MANUFACTURING  
SECTORS IN SRI LANKA, WITH THE MODERATING EFFECT OF  
COMPLEXITY OF PRODUCTION PROCESS**

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***Abstract***

*This research aims to identify, the impact of management accounting practices on organizational performance and the moderating effect of the complexity of the production process, on the association between management accounting practices and organizational performance. According to the findings of the study, management accounting practices did have favorable impact on organizational performance. Further, the complexity of the manufacturing process exercised significant effect on the association between management accounting practices and organizational performance. This research provides valuable information and recommendations for manufacturing organizations, particularly for managers responsible for ensuring that their companies' advancement is on the right track.*

***Keywords:*** *Management accounting practices, Organizational performance, Complexity of production process an Listed manufacturing companies*

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## 1. Introduction

Since the advent of neoliberalism, there has been increased global competition, advancement in technology, complexity in the production process, unpredicted fluctuations in the financial and capital market, and more ambiguity of companies' environment and these factors have intensified the challenge to managers, to consider the most effective ways to achieve competitive advantages and improve organizational performance. Adopting an innovative accounting system is one way to achieve corporate performance (Ismail, et al., 2018).

Management Accounting Practices (MAPs) have become a successful organizational accounting system, that allows managers to organize and manage the activities of complex organizations, to meet their organizational goals successfully (Horngren *et al.*, 2009; Adu-Gyamfi *et al.*, 2020). Sophisticated MAPs have become essential for more effective organizational performance (Abdel-Karder and Luther, 2006; Fonseka, 2012; Nakeeba and Haleem, 2020). Further, the idea of contingency theory indicates that the globally recognized accounting system does not apply in all circumstances, to all companies and the best accounting system depends on the organization's context (Otley, 1980). Among the wide variety of business operations, such as manufacturing, merchandising, and servicing, manufacturing businesses exploit the benefit of MAPs, due to the manufacturing environment, complexity, uncertainty and advanced technology (Inness and Mitchell, 1990; Gichaaga, 2014; Selvam *et al.*, 2016). However, there is scarcity of research on the usage of MAPs and their effect on organizational performance, particularly in Sri Lanka. Hence this study to analyze the influence of MAPs on the organizational performance of listed manufacturing companies in Sri Lanka, from the perspective of the contingency theory.

## 2. Review of Literature

Management Accounting Practices (MAPs) are techniques, that generate information for managers, towards the broader objectives of planning, decision-making, and controlling (e.g., Abdel-Kader and Luther, 2008; Selvam *et al.*, 2010; Chenhall and Morris, 1986; Gavrea *et al.*, 2011). An organization, that has adopted MAPs, would gain more competitive advantages than its competitors. In line with the contingency theory, Otley (1980) and Chenhall (2003) suggest that organizations, that adopt MAPs suitable to their organizational and environmental factors, would perform better. Further, they assert that the organization's performance depends on the adjustment to the contextual variables of the organization. Accordingly, the vital link between MAPs and organizational performance is supported by various studies. The impact of MAPs on performance is significant (Al-Mawali 2013; Petchjul *et al.*, 2014; Kaushalya and Kehelwalathanna, 2017; Huynh, 2017). In addition, Soobaroyen and Poorundersing (2008), Al-Mawali (2013), and Ghasemi *et al.* (2015; 2016) also found that greater use of MAPs contributes to the improved performance of organizations.

According to the contingency theory, management accounting practices is one of the critical components in the manufacturing process (Waweru and Uliyana, 2008; Haleem *et al.*, 2020; Vinayagamoorthi *et al.*, 2012). A significant positive relationship was found between the complexity of the processing system and MAPs (Mansor and Azudin, 2017). Ogunbade, *et al.*, (2017) found that the organization's effectiveness was inextricably linked to the industrial processes system. Gavrea *et al.* (2011) confirm the relationship between the complexity of production process and the organizational performance as

significant. Drawing from the above literature review and the contingency theory of management accounting, the conceptual framework, as shown in **Figure-1**, was established for this study. The contingency viewpoint assumes that the performance improvement of organizations depends on the MAPs, suitable for a specific business context and its contingencies. This study was focused on the moderating form of fit, from the contingency view, as suggested by **Drazin and Ven de Van (1985)**. The conceptual model, used in this work, covers the direct influence of MAPs on the organizational performance and the moderating impact of the CPP, on the connection between MAP-OP.

### **3. Statement of the Problem**

Sri Lanka is a developing country, in the South Asian subcontinent. Many aspects of the industrial sector, particularly manufacturing, were affected by adopting an open economic policy in Sri Lanka, in the late 1977 and globalization. The manufacturing industry is the second-largest industry, after the service sector, accounting for approximately 30% of total gross domestic product and accounting for 29% of employment (**Central Bank of Sri Lanka, 2018**). Considering the necessity of the manufacturing sector to the national development of Sri Lanka, the Sri Lankan government initiated several steps, to move to the new era of economic progress, particularly in the last decades. However, there has not been any significant sign of progress in the move forward. There is limited research focused on the relationship between organizational performance and MAPs in the Sri Lankan context. As a result, studies on “to what extent manufacturing organizations’ performance responds to MAPs within the complex manufacturing environment?” is an empirical question, that remains unanswered.

### **4. Need of the Study**

Although in Sri Lanka, numerous studies examined the causes for the poor performance of the manufacturing sector, the influence of MAPs on the organizational performance, has not been emphasized. Therefore, continuous decline in the manufacturing sector’s performance and research dearth, have intensified the need for this study in Sri Lanka, specifically in a developing country. Further, this study was planned to offer a new theoretical framework, to explain the effect of MAPs on organizational performance, using the contingency theory. This study would provide useful inputs to managers, policymakers, and academics, to formulate a model, that would optimize organizational performance in the context of advanced technological world of manufacturing.

### **5. Objectives of the Study**

- i. To identify the impact of management accounting practices on the performance of Sri Lankan manufacturing organizations.
- ii. To find out the moderating effect of the complexity of the manufacturing process on the association between management accounting and organizational performance.

### **6. Hypotheses of the Study**

**H-1:** Management accounting practices have significant impact on organizational performance.

**H-2:** Complexity of the manufacturing process has a moderating effect on the association between management accounting practices and organizational performance.

### **7. Research Methodology**

#### **7.1 Sample Selection**

The sample included all manufacturing companies listed under the Colombo Stock Exchange in Sri Lanka. There are one hundred

and twenty-nine (129) companies, that engage in manufacturing a variety of products. The Management Accountants of selected organizations were treated as the unit of analysis (respondents) for this study. There were ninety-six responses, which were utilized for the study.

## 7.2 Sources of Data

The data from respondents were collected, by using a structured questionnaire utilizing a cross-sectional survey approach. The questionnaire was sent to all sample management accountants, by using Google docs' format.

## 7.3 Period of Study

The study was conducted between April 2019 and August 2020.

## 7.4 Tools used in the Study

Partial Least Square Structural Equation Modeling (PLS-SEM) was used to examine the data, with the help of Smart PLS version 3.32. Using this, the Researcher performed latent factor analysis, assessing comprehensive means and theoretical models' modification, as suggested by **Segars and Groveer (1993) and Hair et al. (2017)**. The use of fewer than 100 respondents, to carry out PLS-SEMs, has been recommended by **Hair et al. (2017)**.

## 8. Data Analysis

### 8.1 Measurement Model- Analysis and Reliability and Validity of Data

The confirmatory factor analysis and reliability and validity of data were done, by using the measurement model. All factor loading, shown in **Table-1**, indicated values of more than 0.7, confirming that the items, included in the constructs, reported high reliability. Further, to establish validity and reliability of the constructs, Cronbach alpha, internal composite (CR) reliability as well as average extracted variance (AVE) testing were employed. **Table-1** summarizes the outcomes of the analysis. Since

all values of CA, CR, and AVE were above the threshold level, further analysis was carried out, with statistical confirmation of validity and reliability.

### 8.2 Structural Model for MAPs and OP

Two structural models were created. For the first model, the PLS-SEM results, displayed in **Table-2**, explain the path coefficient estimates and their respective significant (p) values, for the structural model. This model recorded a path coefficient of 0.820, t-value of 24.003, and p-value of 0.000 ( $p < 0.005$ ), according to **Table-2**. These results indicated that MAPs did have significant impact on organizational performance. Further, this structural model's  $R^2$  value was 0.820, implying that MAPs accounted for 82 percent of variance in the organizational performance. As a result, the first hypothesis was confirmed.

### 8.3 Structural Model for Moderating Effect of CPP on MAPs and OP

The second structural model was built, to demonstrate the moderating impact of CPP, on the relationship between MAPs and OP and the results are shown in **Table-3**. CPP exercised significant influence (0.201), on the association between MAPs and OP. Further, this model explained that 80.8% of variation in the organizational performance was due to MAPs and CPP. In addition, the model fits indexes such as SRMR and NFI, which met the threshold level, and established the model to be better fit.

## 9. Findings of the Study

Findings revealed that management accounting practices significantly influenced organizational performance of listed manufacturing companies in Sri Lanka. This finding was consistent with previous literature (e.g., **Al-Mawali, 2013; Petchjul et al., 2014; Ghasemi et al. (2015; 2016) Kaushalya and Kehelwalathanna; 2017; Huynh, 2017)**. This

finding would help manufacturing organizations, who wish to improve performance through higher usage of MAPs in general, specifically for Sri Lanka. In addition, the finding also revealed that CPP moderated the connection between MAPs and organizational performance significantly and it was consistent with other studies (e.g., **Gavrea et al., 2011; Mansor & and Azudin, 2017; Ogungbade et al., 2017**). This conclusion demonstrated that more complicated a production procedure, more MAPs are needed to increase its performance.

### 10. Suggestions

According to the findings, the research model, used in this study, would be applicable to Sri Lankan-listed manufacturing enterprises. The open economic policy of Sri Lanka, along with globalization, has increased the competitiveness and the need for application of CPP in the manufacturing industry. It has tremendous implications not only for listed manufacturing companies but also for other manufacturing sectors. Hence the listed manufacturing companies should adopt appropriate MAPs, within their organizational context. By aligning these MAPs appropriately, the organization could achieve improved performance.

### 11. Conclusion

The study's results established that MAPs did have substantial effect on organizational performance. There was also significant moderating impact of CPP on the link between MAPs and organizational performance. The results of the study led to the conclusion that management accounting practices did have a significant effect on organizational performance and the complexity of the production process had exercised significant moderating effect on the association between MAPs and OP. Therefore, this study could offer valuable insights and guidance for manufacturing

companies, mainly the managers responsible for ensuring, that their businesses progress at the right place. This study would be beneficial for policymakers as it revealed the MAPs to be the critical reason, affecting the organizational performance of Sri Lankan listed companies. Hence policymakers and government can advise the listed manufacturing companies in their planning, decision-making, and performance evaluation, about the sustainability of the organizations through the use of MAPs.

### 12. Limitations of the Study

The following limitations are acknowledged in this study. First, the sample did not consider all the sectors, listed under the Colombo Stock Exchange (CSE) in Sri Lanka. Second, the data were collected only from a single person, from each organization.

### 13. Scope for Future Research

Due to the limitation outlined above, the following opportunities are open for future research. First, this study can be extended to other industries listed at the Colombo Stock Exchange. Second, comparative studies among different sectors of businesses in Sri Lanka, like manufacturing and non-manufacturing, could be carried out in future research, that would provide a holistic picture of the MAPs usage by Sri Lankan organizations. Third, data could be collected from more than one person familiar with MAPs.

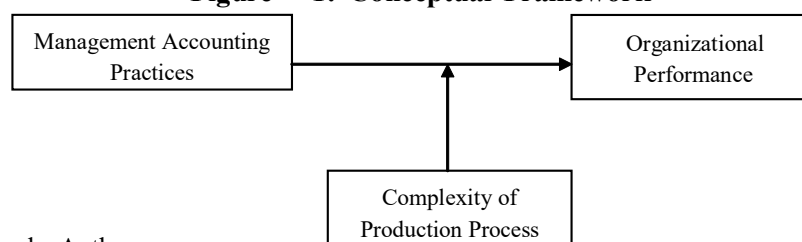
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**Figure – 1: Conceptual Framework**



**Source:** Drawn by Authors

**Table-1: Results of Confirmatory Factor Analysis and Reliability and Validity of Data**

Construct	Indicators	Factor Loading	CA	CR	AVE
Management Accounting Practices	BUD	0.757	0.879	0.912	0.64
	CAB	0.804			
	COS	0.797			
	LDR	0.700			
	RIM	0.815			
	RUT	0.768			
	SDS	0.770			
	STC	0.811			
	STP	0.786			
	VCT	0.770			
Complexity of Production Process	CPP1	0.725	0.872	0.907	0.662
	CPP2	0.816			
	CPP3	0.865			
	CPP4	0.786			
	CPP	0.832			
Organizational Performance	FP	0.880	0.726	0.880	0.785
	NFP	0.892			

Source: Primary data computed using Smart PLS version 3.32

**Table-2: Results of the Impact of Management Accounting Practices on the Performance of Sri Lankan Manufacturing Organizations**

Hypotheses	Path coefficient	t-value	p-value
H <sub>1</sub> : MAPs → OP	0.820	24.003	0.000
	R <sup>2</sup>	0.820	

Source: Primary data computed using Smart PLS version 3.32

**Table-3: Results of the Moderating Impact of CPP on the Relationship between MAPs and OP**

Hypotheses	Path coefficient	t-value	p-value
H <sub>2</sub> : CPP*MAPs → OP	0.201	2.897	0.004
	R <sup>2</sup>	0.808	

Source: Primary data computed using Smart PLS version 3.32