

The Impact of Contextual Factors on the Adoption of Management Accounting Practices: A Study Based on Manufacturing Firms Listed in the Colombo Stock Exchange

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ABSTRACT

The purpose of this study is to examine the impact of contextual factors on the adoption of Management Accounting Practices (MAPs) in the listed manufacturing companies in Sri Lanka using contingency theory perspectives.

The study adopted quantitative research and employed a cross-sectional research design. A questionnaire was administered personally to one member of the senior level management of each listed manufacturing firm in Colombo Stock Exchange (CSE). A seven-point Likert scale was used in designing the questionnaire, where respondents were asked to rate their opinions. The study examined the impact of a range of potential contingent variables on a broad set of MAPs. The variables relate to external characteristics, organizational characteristics, and manufacturing or processing characteristics.

The findings indicate that there is a positive significant relationship between adoption of MAPs and contextual factors such as, Perceived Environmental Uncertainty (PEU), organisation structure and firm size and adoption of MAPs. In other words, when PEU move from highly predictable to highly unpredictable, the adoption of selected MAPs increase by 44.1 percent. Similarly, when organisation structure moves from decentralized to centralized structure, the adoption of selected MAPs increase by 30.9

percent. Moreover, when firm size is large, the adoption of MAPs increases by 25.1 percent. However, contrary to our original expectation, both organisation strategy, and processing system do not have significant relationship between the adoption of MAPs. This indicates that firms adopt MAPs regardless of the strategy that they follow. Further, it shows that the complexity of processing systems does not affect the adoption of MAPs. This study extends the knowledge on the impact of contextual factors on the adoption of MAPs in the context of manufacturing firms in Sri Lanka.

Keywords: Management Accounting Practices, Contextual Factors, Contingency Theory

1. Introduction

In order to be competitive and effective in the market, the management of a firm needs to use MAPs objectively (Affes and Ayadi, 2014). There is no single MAP that can be applied effectively to all conditions or organizations (Otley, 1980). Certain MAPs are only effective for certain situations or organizations. Therefore, the MAPs adoption rate may vary according to the contextual factors within which a firm is operating, proposing that there is no single MAP suitable for all organizations. Consequently, there is a growing interest among scholars on studying the impact of contextual factors in the adoption of MAPs in organizations. For instance, scholars found that the suitability of a particular MAP adoption is argued to be contingent upon the environment, technology, size, structure, strategy and national culture of a particular organization (Chenhall, 2003).

The purpose of this research is to determine the influence of contextual factors on the adaptation of MAPs using the contingency theory to show how MAPs are associated with several contextual variables. Contingency theory looks at certain factors that assist management to decide on suitable practices. Otley (1980, p. 413) specifies that “a contingency theory must identify specific aspects of an accounting system which are associated with certain defined circumstances and demonstrate an appropriate matching.” The previous studies have identified irrelevance of MAPs for decision making associated with high implementation cost and invalid nature of the

assumptions underlying competitive markets, as factors leading for lack of adoption of MAPs (Scapens, 1993). In addition to the above-mentioned factors, Fonseka, Senarathna and Manawaduge (2005) found that lack of human resources, lack of knowledge and skill in the respective MAPs, resistance to change over from the present system and perception of business community regarding the use of MAPs are also contributing for the lack of adoption of MAPs in the Sri Lankan context. However, little attention has been paid to assess the influence of contextual factors on the adoption MAPs in Sri Lankan context. Hence, identifying and suggesting contingency factors that may influence on adoption of MAPs may shed a light to management on adoption of selective MAPs and the importance of them.

Therefore, an attempt has been made in this paper to identify the contextual factors that influence MAPs in the listed manufacturing companies in CSE. Manufacturing firms were selected as our sample since MAPs are widely used in manufacturing sector (Dugdale, 1994).

1.1. Objectives of the research

The main objective of the research is to identify the impact of contextual factors on the adoption of MAPs in Manufacturing Firms listed in CSE. The following objectives are considered as secondary objectives.

- To identify the impact of PEU on the adoption of MAPs in Manufacturing Firms listed in CSE.
- To identify whether the listed manufacturing firms following the differentiation strategy adopt more MAPs than manufacturing firms following the cost-leadership strategy.
- To identify whether the manufacturing firms characterized as decentralized adopt more MAPs than firms characterized as centralized.
- To identify whether the listed manufacturing firms with complex processing systems adopt more MAPs than firms with simple processing systems.
- To identify whether the large listed manufacturing firms adopt more MAPs than small listed manufacturing firms in CSE.

The remainder of the paper is organized as follows. In the next section, the paper discusses the background literature, theoretical framework, and development of hypotheses. Subsequent sections describe the sampling procedure, the construction of the measures, results, and discussions. Finally, the conclusions, implications, limitations of this study and directions for further research are presented.

1.2. Background Literature

According to prior literature (Gul and Chia, 1994; Moores and Chenhall, 1991), major part of management accounting research has been the application of contingency theory. The contingency theory of management accounting is based on the premise that there are no universally applicable MAPs. However, the choice of suitable MAPs depends upon the context in which an organization finds itself (Otley, 1999). The features of a suitable practice depend on the circumstances faced by the company (Otley, 1980). The contextual variable that may have potential impact in the adoption of MAPs has been identified by many theorists. For instance, structure (Burns & Stalker, 1961), strategy (Govindarajan & Gupta, 1985), environment (Lawrence & Lorsch, 1967), firm size (Mitchell, 2002) and complexity of processing system (Krumwiede, 1998) are used as contextual factors affecting MAPs. Thus, findings of contingency based management accounting research revealed the fact that a system should be designed to fit the organizational and environmental context in which they are used (Gordon & Narayanan, 1984).

2. Theoretical framework

2.1. Management Accounting Practices

The MAPs include those techniques such as marginal costing, absorption costing, standard costing, actual costing ascertainment, variance analysis, budgetary control, differential costing, capital budget and many more. More than 30 popular cost and management accounting techniques have been introduced since 1950. According to Smith (1999), the major developments in management accounting since 1950s can be explained as follows.

- 1950s: Discounted cash flows, Total quality management and Optimum transfer pricing method.
- 1960s: Usage of computer technology, Opportunity cost budgeting, Zero-base budgeting, Decision tree, Critical path scheduling, and Management by objectives.
- 1970s: Information economics and agency theory, Just-in-time scheduling, Strategic business units, Experience curves, portfolio management, Materials resource planning, Diversification, Matrix organization and Product repositioning.
- 1980s: Activity based costing, Target costing, Value-added management, Theory of constraints, Vertical integration.

Scapens (1990) also stated that the last two decades have witnessed a re-evaluation of Management Accounting in terms of developing new techniques and systems including Activity Based Costing, Target Costing, Kaizen costing, Balanced Scorecard and Throughput Accounting. According to recent management accounting literature, the environment in which Management Accounting is practiced certainly appear to be changed with advanced information technology, highly competitive environments and economic recession (Waweru, Hoque and Uliana ,2005).

2.2 Development of Hypotheses

As discussed in the previous sections, MAPs mostly depend on contextual factors. This study therefore considers the effect of PEU, Structure, Size, Strategy and Processing Systems on the adoption of MAPs. For this purpose, following hypotheses were developed.

2.2.1 Perceived Environmental Uncertainty (PEU)

PEU is the perception of managers about the uncertainty of the environment. According to Gordon and Narayanan (1984), PEU is the managers' perceptions about the ability and stability in various aspects of their organization's industrial, economic, technological, and competitive and customer environment. Abdel-kader and Luther, (2008), argue that firms perceiving high environmental uncertainty adopt more sophisticated

management accounting practices than firms that perceive low environmental uncertainty. Further Affes & Ayadi (2014), sharing the same view, and found that increasing environmental uncertainty perceived by firms requires more new MAPs. Accordingly, the following hypothesis is proposed.

H₁: Firms perceiving a higher degree of environmental uncertainty adopt more MAPs than firms perceiving a lower degree of environmental uncertainty.

2.2.2 Organizational Strategy

Three typologies of strategies have been widely used to describe the various business strategies. Porter (1980) identifies three generic strategies (overall cost leadership, differentiation, and focus) by which firms in an industry may attempt to gain a competitive advantage over their rivals. Langfield-Smith (1997) found that the sophisticated management accounting system has a more positive effect on the performance of the companies that adopt a prospecting strategy than in companies that adopt a defender strategy. Cadez & Guilding (2012) predict that an appropriate management accounting system should support strategic priorities to improve performance. Competitive strategy was also examined by Anderson & Lanen (1999) as a mediating variable in the contingent relationship between external competition and management accounting practices. They found differences in competitive strategies and international outlooks, as explanatory factors for differences in MAPs. In this sense, the following hypothesis is derived:

H₂: Firms following a differentiation strategy adopt more MAPs than firms following a cost-leadership strategy.

2.2.3 Organizational Structure

Organizational structure is about the formal specification of different roles for organizational members or tasks for groups, to ensure that the activities of the organization are carried out (Chenhall, 2003). Centralization structure refers to decision making restricted to owners and top managers while decentralization structure refers to delegation of decision making to lower-level managers (King et al., 2010). Abdel-Kader and Luther (2008) and Chia

(1995) found a positive relationship between decentralization and the MAPs. Accordingly, the following hypothesis is formulated.

H₃: Firms characterized as decentralized adopt more MAPs than firms characterized as centralized.

2.2.4 Processing Systems

According to Krumwiede (1998), when the firms' production process is complex it needs more sophisticated MAPs. Further, it has been identified that more sophisticated MAPs exist in companies which are more automated. To improve the manufacturing performance and gain, competitive advantage enormous changes have occurred. Because of these changes, companies processing systems have become complex (Abdel-kader and Luther, 2008). Accordingly, the following hypothesis is developed.

H₄: Firms with complex processing systems adopt more MAPs than firms with simple processing systems.

2.2.5 Firm Size

Firm size is one of the contingent factors which have an influence on adoption of MAPs. Generally, it is argued that when the firm size is large, it tends to adopt more sophisticated MAPs since they were more diversified in product lines and employed mass production techniques (Chenhall, 2003). Cadez and Guilding (2008) found that when the firm size is large, the level of strategic management accounting use is higher. Accordingly, the following hypothesis is formed.

H₅: Large firms adopt more MAPs than small firms.

2.3 Conceptual Framework

To test the above five hypotheses, a conceptual framework is developed as shown in figure 1.

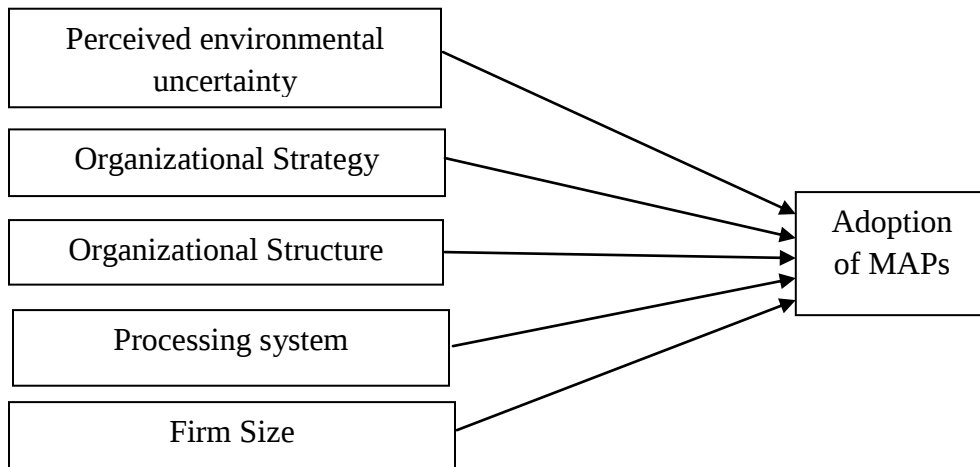


Figure 1. Conceptual framework

The hypothesized model shows the relationship between contextual factors chosen and adoption of MAPs. The PEU consists of both internal and external environmental uncertainty, Organizational strategy consists of differentiation and cost leadership, Organizational structure consists of centralized and decentralized structure, Firm Size consist of large and small firms and Processing System consist of complex and simple systems. Accordingly, to find out the relationship between dependent variable and independent variables, MAPs are considered as dependent variable, and strategy, structure, PEU, complexity of processing system and firm size are considered as independent variables.

3. Methodology

Since this study is designed to identify the relationship between independent and dependent variables, hypothesis testing has been employed to examine the study phenomenon. Further, the study seeks to observe many variables at a point in time (i.e., one-time-only), and thus a cross sectional survey research design was used.

The target population for this study consists of senior level managers in listed manufacturing companies in CSE. It consists of 39 companies. Whole population is selected as the sample. The unit of analysis is senior level manager in each company.

The questionnaire method has been followed to gather data. A seven-point Likert-scale was used in designing the questionnaire where respondents were asked to rate their opinion. To measure the PEU scale ranging from highly predictable (1) to highly unpredictable (7) were used. Similarly, to measure organizational strategy scale ranging from not important (1) to extremely important (7) were used. To measure organizational structure scale ranging from no delegation (1) to complete delegation (7) and 04 specific questions on specification of job task, publication of employee manual, decision making level and management style were used. Further to measure the complexity of processing system, scale ranging from not computer integrated (1) to completely computer integrated (7) were used. Finally, to measure MAPs respondents were asked to select MAPs adopted by their firms from a list of 20 MAPs. Since the nature of the data requires respondents to have the requisite knowledge and experience about the subject matter, the target respondents for this study were the senior level management (e.g., Chief Executive Officers [CEO], Financial Managers, General Manager and Chief Financial Officers [CFO]) of listed manufacturing firms. Such position holders were seen to have the relevant information and knowledge required to complete the survey questionnaire. One respondent was asked to complete the questionnaire from the top management team in each organization.

A pre-test of the questionnaire has been carried out to assess its validity. To make sure content validity, existing and validated scales were used and pre-tested on a sample of six respondents that include three academic researchers and three practicing members. Based on the testing, a few changes were made in terms of wording and presentation to enhance understandability of the questionnaire. The final questionnaire consists of 32 questions. To collect data, the questionnaire was personally handed over to the relevant senior level manager in the selected firms. Prior to visit the firm, the questionnaire was emailed to the relevant person for him/her to read the questionnaire and

familiarize with the questionnaire. In total, responses from 39 manufacturing companies were collected.

3.1 Measurement of Variables

3.1.1 Demographic Factors

To obtain background information of the respondents' five demographic questions were included in the questionnaire, namely sex, age, educational qualification, position, and tenure.

3.1.2 Perceived Environmental Uncertainty (PEU)

To measure PEU, the instrument employed by Miles & Snow (1978) was used. Precisely, the measurement of this variable consists of six questions (consisting 25 items), to indicate, on a 7-point Likert- scale, the predictability of the company's external environment related to predictability of suppliers, competitors, customers, financial markets, regulatory agencies and labour union actions.

3.1.3 Organizational Strategy

To measure the organizational strategy, the instrument used by Govindarajan and Fisher (1990) was adopted. The measurement of this variable consists of seven questions that indicate the importance given by the firms to cost leadership or differentiation strategy.

3.1.4 Organizational Structure

To measure the variable organizational structure, the work of Gordon and Narayanan (1984) was adopted. This variable consists of five questions (consisting 09 items) to indicate the degree of authority given to managers to make decisions related to development of new products, hiring and firing of managerial personnel, selection of large investments, budget allocations, pricing decisions, specification of job tasks, publication of employee manuals, decision making level and management style.

3.1.5 Processing System

To measure the variable processing system, 08 questions were adopted from Snell and Dean (1992), indicating the degree of computer integration in the

process of production, designing, planning, assembling, handling and quality control.

3.1.6 Firm Size

Firm size was measured in terms of the firm's total assets (Abdel-Kader and Luther, 2008). Information was obtained from the annual report of each company published in 2017/18.

3.2 Reliability and Validity of Measures

The internal consistency for each variable was estimated by computing Cronbach's alpha. As shown in Table 1, the Cronbach's alpha for PEU, Organizational Strategy, Organizational Structure, Processing System and MAPs ranged from 0.606 to 0.903. All the values were higher than the recommended cut-off (i.e., 0.6) for a construct to be reliable (Hair et al., 2010). Hence, the measurement instruments used in this study meet the reliability test.

Table 1. Reliability Statistics

Variables	Cronbach's alpha	No. of items
PEU	0.879	25
Organizational Strategy	0.700	07
Organizational Structure	0.606	09
Processing System	0.972	08
MAPs	0.903	20

To assess the content validity, the questionnaire was discussed (especially, the wording, meaningfulness of each item, and sequence of each instrument) with three academics who have experience in designing questionnaires. Additionally, feedback received from a pilot study using three practicing members, were also used in refining the questionnaire instrument. Factor analysis undertaken to test the construct validity for all variables shows that the items used to measure each of them have individual loadings greater than 0.6 indicating all measures have the ability to capture the meaning of the concept and to apply the theory (Dillman, 2000).

3.3 Operationalization of Data

There were some concerns in the literature regarding dichotomization of variables (e.g., Macculam et al., 2002). Further, it has been argued that when data are not highly skewed (i.e., normally distributed), mean value could be calculated for scale responses as for a normally distributed data, dichotomization at the mean and the median are equivalent in the population (Macculam et al., 2002). Accordingly, data were operationalized. Before dichotomization, the nature of association between original variables were examined and it was identified a linear relationship between variables, then it has been dichotomized. Responses obtained from each senior level manager on all the items on a variable are pooled and mean score on each of the variable is computed and dichotomized at the mean.

3.3.1 Independent Variables

The PEU, organizational strategy, firm size, organizational structure, and processing system were taken as independent variables as explained above. Each independent variable was calculated as follows: Each respondent's scores for PEU were pooled and then the mean of the twenty-five items was calculated. This value was dichotomized at the mean. Scores below the mean were coded as 0 (low PEU), whereas those above the mean were coded as 1 (high PEU). Each respondent's scores for organizational strategy were pooled and then the mean of the seven items was calculated. Responses for question numbers 15 to 18 were reverse coded and used to capture cost leadership. This value was dichotomized at the mean. Scores below the mean were coded as 0 (differentiation strategy), whereas those above the mean were coded as 1 (cost leadership strategy). Each respondent's scores for organizational structure were pooled and then the mean of the nine items was calculated. This value was dichotomized at the mean. Scores below the mean were coded as 0 (centralized organizational structure), whereas those above the mean were coded as 1 (decentralized organizational structure). Each respondent's scores for processing system were pooled and then the mean of the eight items was calculated. This value was dichotomized at the mean. Scores below the mean were coded as 0 (simple processing system), whereas those above the mean were coded as 1 (complex processing system). Firm Size was calculated using the total assets of each firm in year 2017/18. The

mean values of the total assets were calculated and values below the mean were coded as 0 (Small firms), whereas those above the mean were coded as 1 (Large firms).

3.3.2 Dependent Variable

Adoption of MAPs (Absorption Costing, Activity Based Costing, Balance Scorecard, Budgetary Control, CVP- Analysis, Investment appraisal, Just In Time, Ratio Analysis, Responsibility Accounting, Standard Costing and Variance analysis, Target Costing, Theory of Constraints, Total Quality Management, Transfer pricing, Variable Costing, Internal Audits, Cash Flow Planning, Performance Evaluation, Re-order Levels, Management Audits) were taken as the dependent variable of the study. From responses for MAPs that were in practice in each firm were collected and calculated as ratio out of total MAPs that were listed.

3.4 Data Analysis

Data were analyzed using 39 responses. Demographic factors were analyzed using descriptive analysis. To analyze the existing relationship among independent and dependent variables, multiple regression Analysis was employed. Before analyzing the existing relationship among variables, the basic assumptions underlying in the regression analysis were carried out.

3.4.1 Descriptive Analysis

Respondents' demographical background has been analyzed using descriptive statistics.

3.4.2 Regression Analysis

To investigate the relationship between contextual factors and adoption of MAPs (AMAPs) in Sri Lankan manufacturing companies the following regression model is used.

$$\text{AMAPs} = \beta_0 + \beta_1 (\text{PEU}) + \beta_2 (\text{Structure}) + \beta_3 (\text{Size}) + \beta_4 (\text{Strategy}) + \beta_5 (\text{Processing System}) + \varepsilon$$

β_0 = Constant (intercept) of the model
 $\beta_1 - \beta_5$ = Coefficient of independent variables
 ε = Error term

4. Data Analysis and Interpretation

4.1. Descriptive Analysis of Respondents

The respondents of this study represent a wide range of senior managerial positions. Among the responses, the highest rate of the respondents belongs to Finance Managers (Table 2). Other respondents are CEO, CFO and GM. Therefore, most of the respondents tend to be in a position to be very knowledgeable about the MAPs used in their organization. This is important for reliability of the responses. The respondents' average age is 39 years and average number of years worked is 6 years for their present company. Most of the respondents (77.5 percent) are males.

Table 2. Number of Respondents by Position

	Frequency	Percent
CEO	2	5.1
CFO	13	33.3
FM	16	41.0
GM	2	5.1
other	6	15.4
Total	39	100.0

4.2 Results of Multiple Regression Analysis

4.2.1 Model Summary

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.784 ^a	.614	.545	4.34819

a. Predictors: (Constant), PEU, Strategy, Processing system, Structure, Size

Regression analysis is used to test the impact of contextual factors on the adoption of MAPs in listed manufacturing companies in CSE. Table 3 shows that about 54.5 percent adoptions of MAPs can be explained using the independent variables (R Square is 54.5).

Table 4. ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	623.922	5	124.784	10.509	.000 ^a
Residual	391.822	33	11.873		
Total	1015.744	38			

a. Predictors: (Constant), PEU, Strategy, Processing system, Structure, Size

b. Dependent Variable: MAP

Table 4 shows results of ANOVA test. It indicates that the model explains most possible combination of predictor variables that could contribute to the relationship with the dependent variable. The F value is 10.509 and the respective p value is 0.000 which is statistically significant at 5 percent.

Table 5. Coefficients

Model		Unstandardized Coefficients		T	Sig.
		B	Std. Error		
1	(Constant)	.208	.804	.258	.000
	PEU	.441	.153	2.882	.000
	Structure	.309	.097	3.193	.003
	Size	.251	.141	1.780	.010
	Strategy	.161	.514	.313	.088
	Processing system	.673	.899	.748	.153

Table 5 shows the constant, the slope of PEU, Structure and Size are 0.208, 0.441, 0.309 and 0.251 respectively and these are statistically significant ($p < 0.05$). Therefore, the regression model is derived as follows;

$$\text{AMAPs} = 0.208 + 0.441 (\text{PEU}) + 0.309 (\text{Structure}) + 0.251 (\text{Size})$$

The results indicate that there is a positive significant relationship between PEU and adoption of MAPs ($\beta = 0.441$, $t = 2.882$ and $p = .000$). When PEU is

highly unpredictable that is PEU move from highly predictable to highly unpredictable the adoption of selected MAPs may increase by 44.1 percent. Accordingly, our first hypothesis which denotes firms perceiving a higher degree of environmental uncertainty adopt more MAPs than firms perceiving a lower degree of environmental uncertainty can be accepted.

The second hypothesis states that firms following a differentiation strategy adopt more MAPs than firms following a cost-leadership strategy. This hypothesis was rejected as the results of a positive insignificant relationship between strategy and adoption of MAPs ($\beta=0.161$, $t=0.313$ and $p=0.088$). It infers that, when firm strategy moves from cost leadership to differentiation or vice versa, it does not affect adoption of MAPs. This finding is contradictory to previous findings which state that firms following differentiation strategy adopt more MAPs than firms following cost leadership strategy (e.g., Chenhall (2003), Chenhall and Langfield-Smith (1998), Cadez and Guilding (2008)).

Our third hypothesis that states decentralized firms adopt more MAPs than centralized firms can be accepted, as the results of a positive significant relationship between structure and the adoption of MAPs ($\beta=0.309$, $t=3.193$ and $p=0.003$). From this, we can say that companies with more delegation adopt more MAPs. When firm structure moves from decentralized to centralized firms, the adoption of selected MAPs may increase by 30.9 percent.

Further the fourth hypothesis states that firms with complex processing systems adopt more MAPs than firms with simple processing systems is supported. The results indicate positive insignificant relationship between processing system and adoption of MAPs ($\beta=0.673$, $t=0.748$ and $p=0.153$). The findings show that whether firms use complex processing systems or simple processing systems, it does not affect the adoption of MAPs.

Our final hypothesis states that large firms adopt more MAPs than small firms are accepted. The results show a positive significant relationship between firm size and adoption of MAPs ($\beta=0.251$, $t=1.780$ and $p=0.010$).

Accordingly, when firm size is large, selected MAPs increase by 25.1 percent. This means large firms tend to adopt more MAPs.

5. Summary and Conclusion

This study investigates the impact of contextual factors on the adoption of MAPs using contingency theory which argues that appropriate design of MAPs will be influenced by contextual factors within which an organization operates (Otley, 1999). Further, (Chenhall, 2003) found that the suitability of a adoption of MAPs is contingent upon the environment, technology, firm size, structure, strategy and national culture of a particular organization.

However, in Sri Lankan context, except the study conducted by Fonseka et al., (2005) on the factors contributing for the lack of adoption of MAPs, scant attention was given to identify the impact of contextual factors on the adoption of MAPs. Therefore, this study aims to identify the contextual factors that influence the adoption of MAPs and shed a light to management on the contextual factors that may have an influence on the adoption of selective MAPs.

For this purpose, one top level employee from each listed manufacturing company in CSE was selected as the sample. A total of 39 questionnaires were administered across the companies. The responses were analyzed using multiple regression analysis. In addition, descriptive statistics were used to analyze demographic background of the respondents. It was found that PEU, Organizational structure and Firm size have significant positive impact on the adoption of MAPs while Organizational Strategy and Processing System do not have a significant impact on the adoption of MAPs.

From the above findings, we can infer that when environmental uncertainty perceived by firms increase, the need for accounting information become more. This, in turn, may demand for more MAPs to be adopted. Adopting more MAPs may help to control the environmental uncertainties and make better decisions concerning the cost minimization and the improvement of firm performance. This finding supports the earlier findings (e.g., Gordon and

Narayanan (1984), Chenhall and Morris (1986), Gul and Chia (1994), Chong and Chong (1997) and Abdel-Kader and Luther (2008).

It has been argued that more MAPs are required for a firm that adopt differentiation strategy than the firms that adopt cost domination strategy (e.g., Baines and Langfield-Smith (2003), Chenhall and Langfield-Smith (1998) and Cadez and Guilding (2008)). However, our findings do not show any significant relationship between organizational strategy and adoption of MAPs. This may be due to the reason that in Sri Lankan context while adopting MAPs, management may not give priority to the firm's strategy.

Our expectation on influence of organizational structure on adoption of MAPs was supported by the findings. This finding is in line with (e.g., Chia (1995), Chenhall (2003), Abdel-Kader and Luther (2008), Baines and Langfield-Smith (2003) and Wegmann (2008)). This may be due to the reason that when firm is decentralized, it needs more monitoring, controlling and performance evaluation mechanisms. Hence, firms with decentralized structure need to adopt more MAPs than firms which are centralized.

Although scholars identified that firms which do have more complex processing system tend to adopt more MAPs (e.g., Abdel-Kader and Luther (2008) and Krumwiede (1998)) the result on the relationship between processing system and adoption of MAPs is not supporting our expectation. The reason for this may be because the adoption of MAPs in Sri Lanka is at low level (Fonseka, et al., 2005) and firms are adopting selected MAPs regardless of the complexity of the processing system.

The findings of the study supported our expectation on firm size (large firms tend to use more MAPs). This may be because small businesses do not seek to use more MAPs since their activities are quite simple. However, large companies are more accessible to the use of these practices due to their most complex activities and largest financial and human capacities that enable them an easier use of the MAPs. This finding is in line with the findings of Chenhall (2003), Abdel-Kader & Luther (2008) and Otley (1995).

5.1. Limitations and Future Research

Although this study contributes to the understanding of the applicability of contingency theory across the adoption of MAPs, these results are subject to certain limitations. The first limitation is that the results might be sensitive to the managerial level selected for the analysis. For example can consider, responses from middle level management. In future, studies may consider the impact of these variables

The second limitation relates to the methodological improvement. Since there were some concerns raised in the literature as to the objectivity of self-ratings, instrument developed in this study to measure MAPs and PEU, Organizational Structure, Firm Size and Processing System, they may be further refined in future studies. Further, as this study uses cross-sectional research design, the cause and effect relationships among the variables of interest may not be assessed. Rather, it can be argued that the results are consistent or non-consistent with the theoretical position taken in the study. Hence, future research may extend this study using longitudinal field research methods.

The third limitation is that the current study is restricted to few contextual factors. The impact of variables, such as culture of the organization, may have an influence on the selection of MAPs. Future research may consider other contextual factors which were not considered in this study to advance the understanding of the impact of contextual factors on the adoption of MAPs.

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