Adoption of Management Accounting Practices and Operating Efficiency in SMEs in Sri Lanka

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Abstract

The small and medium enterprises (SMEs) are generally considered as the back born of any economy and immensely contribute to the GDP and employability. The purpose of this research is to explore the relationship between the adoption of Management Accounting (MA) practices by the SMEs in Sri Lanka and their operating efficiency. The research question of the Study is whether adoption of MA practices affects the operating efficiency in SMEs. Study based on thirty SMEs selected from a client data base of a leading development bank in Sri Lanka and used both qualitative and quantitative data gathered from semi structured questionnaire followed by an in-depth interview. Study reveals that the level of adoption of MA practices in the SME sector is relatively very low while certain MA practices are being practiced up to considerable extent in varying degrees. Findings of the study further highlight that the management accounting practices are not that deeply rooted in the SMEs in Sri Lanka. Managers of the SME sector are not that concern about the management accounting information and its importance to their business success. Empirical evidence indicates that the adoption of some management accounting practices leads to increase the assets turnover, sales growth, and gross profit in the SME sector.

Keywords: Management Accounting Practices, Operating Efficiency, SMEs, Sri Lanka.
1. Introduction

Small and Medium Scale Enterprises (SMEs) play a crucial role in contributing to the GDP, employment and income distribution of an economy. As such, economists assert that the SMEs are the backbone of any growing economy. However, recent studies on SMEs reveals that the net value addition from this sector is still relatively low. As per the annual reports of the Central Bank of Sri Lanka, the real value addition comes from SMEs is still remains at low level. The objective of this paper is to empirically verify as to whether the adoption of management accounting practices by the SMEs results in increasing their business performance. According the management accounting (MA) theory, MA aims at providing timely, relevant and tailor-made information that are financial and non-financial in nature to support the management in planning, organizing, implementing, monitoring and controlling of business operations. Use of timely and relevant information by the management in their decision-making process enables the business managers to make effective and efficient decisions. To this effect, it can be theoretically deducted that the adoption of MA practices by the SMEs would lead to increase their business performance. This study expects to examine as to whether the level of adoption of management accounting practices has a relationship with the operating efficiency in the SME sector in Sri Lanka.

Today’s business environment is highly competitive and rapidly changing. In this dynamic and competitive business environment, irrespective of the size of the business, the managers must make decisions very wisely. Managers are generally involved in planning, organizing, implementing, monitoring and controlling of its business operations. They should make decisions regarding the above functions and the success or the failure of their decision-making is highly dependent on the availability of relevant and reliable information. Management Accounting (MA) is mainly concerned to provide tailor-made information to the management in a manner that can be easily be used for decision-making. In the modern competitive business environment organizations need to be highly efficient and effective in performing their business operations. Since, the market does not tolerate mistakes in a highly competitive and dynamic business environment, managers have no room for making costly mistakes. As such, being efficient and effective is not an option; it has been a “must-do” for all organizations to survive and sustain in the market. The level of operating performance of any organization is highly affected by number of factors such as; Organizational culture and internal environment, business competencies and commitment of its employees, availability of unique resources and technical know-how, nature of the market competition and demand, internal business processes and quality of information used for decision making etc. In addition to above factors, the use of management accounting information by the business managers for decision making has also been a critical factor that enables the organizations to make rational decisions towards enhancing firm value.
2. Literature Review

Many economists have emphasized the importance of SMEs towards achieving the economic development of a country. Developing countries, as well as the developed countries, need to strengthen the SME sector since they play a crucial role in achieving and sustaining the development of any economy. In a recent study done by Federation of Chamber of Commerce and Industry of Sri Lanka (FCCISL) and Friedrich-Neumann- Stiftung (FNSt) of Germany, important facts about Sri Lankan SMEs were revealed and some of them are: SMEs account for 86% of industries, SMEs contribute to 18% of the GDP, SMEs employ 24% of the industrial workforce, 53% of SMEs import their raw materials, Value adding is 17%. The findings of this study clearly give evidence about the relative economic importance of the SME sector in the Sri Lankan economy. According to Staley and Morse (1995), the interest in the role of small and medium-sized enterprises (SME) in the development process continues to be in the forefront of policy debates in developing countries. They further identify and suggest a ‘developmental approach’ to SME promotion which has as its objective the creation of “economically viable enterprises which can stand on their own feet without perpetual subsidy and can make a positive contribution to the growth of real income and therefore to better living levels. The objective of macroeconomic policies of any government concerns to increase the economic growth rate, the level of employment, economic stabilization and faire distribution of income. In achieving these macroeconomics goals of a country, the contribution given by the SMEs is very significant. However, policy makers have not emphasized the economic importance of the SME sector in Sri Lanka. In a recent study done by Karunanayaka et.al., (2006) on Strategic Orientation of Entrepreneurs in Small and Medium Enterprises reveals that

"though many researchers had critically addressed the issues related to entrepreneurship, it is evident that the development of entrepreneurship over past decade is very insignificant, and the contribution from this sector is still in question. The reasons for such causes may be many."

Small firms employ a large share of the labor force in many developing countries, and they are more labor demanding than large firms. Many analysts argue that, within industries, SMEs are more labor intensive than large firms. According to Hallberg (2000), in Ecuador, for example, firms with fewer than 50 employees accounted for 99 percent of firms and 55 percent of employment in 1980; in Bangladesh, enterprises with fewer than 100 workers accounted for 99 percent of enterprises and 58 percent of employment in 1986.

Literature provides plenty of evidence that researchers have focused on the relationship between the adoption of Management Accounting (MA) practices and operating efficiency of business organizations. According to Fonseka, Manawaduge and Senaratne (2006), the proposition ‘management accounting practices and the level of operating efficiency’ has been researched by many academic researchers. However, most of the researches have mainly focused on the adoption of MA practices and the level of operating efficiency in the corporate sector organizations. Research findings clearly give evidence that adoption of MA practices even in the corporate sector is relatively low. In Sri Lankan context no efforts have still been made to study the relationship between the level adoption of MA accounting practices by SMEs and their level of operating
efficiencies. However, with the recent development in the management accounting practices many professionals and academics have concentrated how organizations could improve their level efficiencies by adopting MA practices as prescribe in the theory.

According to Fonseka et al. (2006), in their study to examine the gap between the theory and practice of MA in the corporate sector in Sri Lanka, the theory of MA encompasses conventional wisdom, academic literature, or in more practical terms, the contents of current textbooks on MA. They further state that the practice of MA covers the techniques, methods, and procedures prescribed in the theory that are adopted and used by organizations at strategic, functional and operational levels. In the modern business context, adoption of MA practices and use of MA information for day-to-day decision making has gain an increase attention of the practitioners. There is an emerging trend in the corporate sector to use MA accounting information together with other non-accounting sources of information that are generated by modern advanced integrated information systems such as SAP. Organizational performance is a combine result of efficiency and effectiveness. While effectiveness aims at enhancing and maximizing the output, efficiency focus on minimizing the input by way of eliminating or minimizing cost, waste, and time taken for the process etc. Organizational efficiency and effectiveness come from the inputs and outputs of key organizational functions and their process. Organizational performance is a broad term and it encompasses performance in general management, human resources management, production management, marketing management, financial management, operational management etc. As such, when measuring the level of overall organizational performance, it is important to consider all the key functions of the organization, and only the financial measures will not be adequate. According to Kaplan’s Balance Score Card approach to measure the organizational performance, he suggests that in addition to the financial measures, it is also important to consider the internal business process perspectives, people and learning perspectives and customer perspectives when measuring overall organizational performance. Nevertheless, this study uses financial indicators and measures to assess the organizational performance.

Literature on MA practices provides evidence that both the academia and practitioners have paid a keen interest on researching the extent to which MA practices are adopted by organizations in conducting their business, and they have found a significant gap between the theory and practice of Management Accounting. According to the traditional view, management accounting is a branch of accounting that mainly focused on providing information to the management that can be directly used in their day-to-day decision-making process. The effectiveness of the managers decisions is largely affected by the quality of the information they use. Management of any organization should therefore consider the quality of the information they use in the decision-making process. Managers should be empowered by providing; timely, accurate, relevant, and concise information that specifically address their information need, and management accounting system is one of such mechanisms that could be established by a firm to fulfill this information need of managers.
According to Ray H. Garrison (1997), “management accounting is concerned with providing information to managers—that is those who are inside an organization and who direct and control its operation.” Management accounting can be contrasted with financial accounting, which is concerned with providing information to stockholders, creditors and others who are outsiders to the organization. Management accounting provides the essential data with which organizations are run day-to-day-basis. Managers of any organization generally involve in making decisions at three main stages in the management process, they are: planning, implementing, and controlling. So, MA practices should facilitate the managers by providing the relevant information that are suitable for the decision context. Management control is also a vital role of managers. It concerns whether the organizations day-to-day operations are being conducted according to the way they were expected. Management control function is a process of setting performance standards and targets, measuring the performance of actual results, analysis of deviations and taking corrective actions. In this controlling process, management accounting information is largely utilized. MA practices can be used extensively, especially when setting performance standards and measuring the actual performance and recognizing the deviations. Adoption of standards costing, and budgetary control practices are, in particular, important for managers when implementing a sound financial control system. Innes and Mitchell (1990) discuss non-financial measures in relation to performance measurement and control. According to Innes and Mitchell, people are more towards measuring performance by way of sales figures, net profit and cost expenditures and forget the usefulness of non-financial measures. The proposition that adoption MA practices lead to increase firm operating efficiency and performance has been extensively emphasized in many text books on management accounting and by some management accounting researchers. According to Rajiv D. Banker, for example, for management accounting information systems are to be useful for strategic purposes their designs and use must follow the firm’s mission and competitive strategies. Further, Holly H. Johnston et.al, emphasizes that in a competitive and dynamic environment, it has become increasingly important for managers to develop coherent, internally and logically consistent business strategies and to have tools and models which provide useful information to support strategic decision making, planning and control. They further say, in response to these needs there have been many important developments in both management accounting research and practice.

Above findings clearly show how SMEs are important for developing economies and how management accounting could empower managers of SMEs in making effective business decisions. However, it shows that the relative low value addition from SME sector hinders full potential contribution to the economy that could be expected from them by strengthening their management style. The writer believes that low value addition from SMEs could be owing to the adoption of MA practices in SMEs is relatively low. The objective of this paper is to examine whether there is a relationship between the extent to which the SMEs adopt MA practices and use MA information in their decision-making process and their business performance. It is expected that this study fulfills essential knowledge gap in the body of knowledge in management accounting.
There are number of popular MA practices are found in many management accounting textbooks they are: Standard costing and variance analysis, Target costing, Budgeting and budgetary control, Ratio analysis, Job costing, Process costing, Cash flow forecasting and planning, Absorption costing, Variable costing, CVP analysis, Reorder level (ROL), Economic order quantities (EOQ), ABC analysis (Pareto analysis), Performance measurement etc. As per the MA theory, use of these MA practices lead to improve the firm performance in terms of improving the profitability, sales growth, asset turnover, stock turnover, debtors’ turnover etc.

The conceptual framework derived from the literature review is depicted bellow

<table>
<thead>
<tr>
<th>Management Accounting Practices</th>
<th>Level of Operating Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of Ratio analysis</td>
<td></td>
</tr>
<tr>
<td>Adoption of Budgetary control</td>
<td></td>
</tr>
<tr>
<td>Adoption of Cash flow forecasting</td>
<td></td>
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<tr>
<td>Adoption of Product costing practices</td>
<td></td>
</tr>
<tr>
<td>Adoption of Stock control techniques</td>
<td></td>
</tr>
</tbody>
</table>

*Diagram 1. Conceptualization of the study*

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Indicator</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA Practices</td>
<td>Use of ratio analysis</td>
<td>Degree of adoption of MA Practices</td>
</tr>
<tr>
<td></td>
<td>Use of budgetary control</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Use of cash flow forecasting</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Use of product costing practices</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Use of stock control techniques</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Use of variance analysis</td>
<td></td>
</tr>
</tbody>
</table>

*Table 1. Operationalization of the study- MA Practices*
The writer uses a three-scale questionnaire, which allows the respondent to provide its level of adoption as High, Moderate or Low for which numerical values are assigned following manner;

<table>
<thead>
<tr>
<th>Level of adoption of MA practices</th>
<th>Quantification</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>3</td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3. Quantification of qualitative information

3. Methodology

In this study, writer expects to examine whether there is a relationship between the level of adoption of MA practices and the level of operating efficiency of SMEs in Sri Lanka. Study used both qualitative and quantitative information collected from primary and secondary sources of data. The availability of financial information is very crucial for the study and as such SMEs that prepares annual financial statements are considered for the study. It is very unlike those SMEs prepare financial statements since it is not mandatory. Accordingly, when selecting the sample for the study SMEs that deal with a development bank were considered. This study used a sample of 30 SMEs from the manufacturing sector selected from the SMEs (clients) attached to a leading development bank in Sri Lanka. When selecting the sample, stratified convenience sampling method was used as the basis. Study used questionnaire-based survey followed by an open-ended in-depth interview with the some of the selected respondents who were willing to take a part of the survey. An open-ended interview was conducted with desired respondents at their own place of business in order to ensure the reliability of the information gathered.

4. Result and Discussion

4.1 Level of Adoption of MA Practices in the SME sector.

Statistical analysis of this study clearly show that SMEs adopt MA practices in varying degrees. For example, the level of adoption of inventory control practices and product costing practices in the SMEs compared to other MA practices is relatively high. On the contrary, the level of adoption of budgetary control, variance analysis and ratio analysis is relatively very low.
In general product costing practices and the inventory control practices are the commonly used MA practices in the SME sector. Approximately 65% of the selected SMEs used product-costing practices while inventory control practices were used approximately by 60% of the firms. However, use of budgetary control, ratio analysis and variance analysis in the SME sector seems to be low.

**Diagram 1. Average levels of adoption of MA Practices**

Table 2. Adoption of MA Practices in SMEs
The average levels of adoption of each management accounting practices concerned for the study are given in the table-3, together with their relevant standard deviations, maximum and minimum levels of adoptions.

<table>
<thead>
<tr>
<th></th>
<th>Inventory control</th>
<th>Variance Analysis</th>
<th>Ratio Analysis</th>
<th>Budgetary Control</th>
<th>Cash flow forecasting</th>
<th>Product Costing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Level of Adoption</td>
<td>1.423</td>
<td>1.077</td>
<td>1.038</td>
<td>1.077</td>
<td>1.192</td>
<td>1.538</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.578</td>
<td>0.272</td>
<td>0.196</td>
<td>0.272</td>
<td>0.402</td>
<td>0.582</td>
</tr>
<tr>
<td>MAX</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MIN</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 3. Level of Adoption of MA Practices

Approximately 60% of the SMEs used inventory control practices. However, the average level of adoption of inventory control practice was 1.423 subject to 0.578 level of standard deviation, which indicates that the practice is moderately used. The maximum level of adoption was 3.0 and the minimum level of adoption was zero. This indicates that in certain SMEs this practice is used at a high degree of adoption while some other firms do not have inventory control practices at all. Variance analysis is mainly used in management accounting as a main control technique that enable a firm to ascertain whether the actual performance is carried out as expected and to recognize the deviations from the standards. However, the, the average level of adoption of variance analysis practice was relatively very low. In general, around 75% firms do not use this practice. Even in the practicing firms, the level of adoption of 1.077 indicates that the level of adoption of variance analysis practice is relatively very low.

The level of adoption of ratio analysis in the SME sector also indicated a low rate. Average level of adoption of this practice was about 1.038, which emphasizes that the ratio analysis is not that used in the SME sector. The gap between the maximum adoption level of 2.0 and the minimum adoption level of 0 (zero) indicates level of adoption of ratio analysis varies greatly between firms. The level of adoption of budgetary control practice also found to be very low. Approximately, only 28% of the SMEs used this practice while rest of the firms did not it. Further, the level of adoption of this MA technique, even in the practicing firms, indicated a low level of adoption, which is approximately around 1.077. The standard deviation of 0.272 denotes the level of adoption among firms varies very significantly.

Approximately about 40% of the SMEs use cash flow forecasting practices. This indicates that CF forecasting in the SMEs is relatively popular. The reason for this trend may be due to the fact that SMEs needs to prepare the future cash flow statement when negotiate with the financial institution for funding arrangements. However, similar to other MA practices the average level of adoption of this practice indicates a low level of adoption. As per the measurement, the average level of adoption of cash flow forecasting was around 1.192 subject to standard deviation of 0.402 that emphasizes that the level of adoption of cash flow forecasting practice varies very significantly between the SMEs. Compared to other MA practices product-costing practice was highly popular in the SME sector. Approximately 65% of the SMEs used product-costing practices and the level of
adoption of 1.385 also indicated that the level of adoption is moderate. Specially, since the selected sample includes SMEs attached to the manufacturing sector such an observation can be expected. Generally, manufacturing firms uses the product costing practices in order to competively and accurately price their products against the competitors.

4.2 Level of Operating Efficiency in the SME Sector.

For the purpose of this study operating efficiency was measured in terms of sales growth, assets turnover, stock residence period, debtors’ collection period, gross profit ratio and the net operating profits (before interest and depreciation) ratio. The average levels of selected efficiency measures are depicted in the Table-4.

<table>
<thead>
<tr>
<th>Statistic Indicator</th>
<th>Sales growth</th>
<th>Gross Profit Ratio</th>
<th>Net Profit Ratio</th>
<th>Assets turnover</th>
<th>Stock Residence Period</th>
<th>Debtors Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Level of Usage</td>
<td>16%</td>
<td>25%</td>
<td>17%</td>
<td>1.63</td>
<td>46</td>
<td>35</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.09</td>
<td>0.072</td>
<td>0.09</td>
<td>0.81</td>
<td>22.506</td>
<td>22.658</td>
</tr>
<tr>
<td>MAX</td>
<td>39%</td>
<td>45%</td>
<td>34%</td>
<td>3.7</td>
<td>99</td>
<td>94</td>
</tr>
<tr>
<td>MIN</td>
<td>0.04</td>
<td>0.12</td>
<td>0.09</td>
<td>0.25</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 4. Level of Operating Efficiency

Sales growth rate indicates the average increase in sales value compared to previous years. As per the survey result the average sales growth rate of SMEs is approximately 16%. However, this average growth rate is subject to a standard deviation of 9% that indicates that the variation in the sales growth rate between the firms. The maximum sales growth rate was 39% and the minimum sales growth rate was 4%. This gap also highlights the variation in sales growth rate between the firms. Gross profit ratio represents the relationship between the gross profit and the sales. As per the survey result, the average gross profit ratio in the SME sector was approximately 23%. However, since the standard deviation is 7%, this average gross profit ratio varies among the SMEs very significantly. The maximum gross profit ratio in the sample was 45% and the minimum was 12% this gap also indicates the gross profit ratio varies very significantly among SMEs. When using the net profit ratio as a performance indicator writer has considered the net profit before interest and depreciation. Survey results indicate that the average net profit ratio in the SME sector is 17% and standard deviation of 6% indicates that the variance in net profit ratio among SMEs, when compared to other indicators, is relatively low. Assets turnover says how efficient that the firm has utilized its resources in generating sales. Generally higher the assets turnover ratio indicates the higher level of operating efficiency. The assets turnover of the selected sample was 1.63 times that indicates that SME’s assets generate 1.63 times sales from those assets. Maximum assets turnover was 3.7 and minimum was 0.25 accordingly assets turnover varies significantly among the firms. Stock residence period tells how long stock is held in the warehouse till it is sold. It indicates whether the firm has tied up most of its assets in inventory in vain or the firm maximizes it return minimizing the investment in stocks. Stock residence period indicates the level of efficiency of the firm’s inventory management. This ratio measures how well the company has utilized its resources in its day-to-day business operations. Low stock residence period indicates that the firm has utilized its resources efficiently for making better operational result. As per the survey result the average stock residence period in the SME was 46 days. This means firms keep
stock in the warehouse for 46 days in vain before they sell them. However, Standard deviation of 22 days indicates that this average stock residence period would vary greatly among the firms. Debtors’ collection period is an indicator of the level of the firm’s efficiency in managing debtors. Generally, higher debtors’ collection period indicates that firm ties up its working capital in as debtors this will result in increasing the cash operating cycle. The level of debtors’ collection period is greatly depending on the firm’s credit policy. As per the survey result the average debtors’ collection period of 35 days indicate that the firms have to wait to collect its debtors for 35 days. However, this average collection period varies significantly between the firms.

The main objective of this study is to examine whether there is a relationship between the level of adoption of MA practices and the operating efficiency of SMEs in the manufacturing sector. This relationship is tested in six hypothetical explanations. Accordingly, six regression analyses were carried out to ascertain the relationship between the levels of average management accounting practices with the respective efficiency measures. One of the hypotheses that the writer expects to test is, whether “High degree adoption of MA practices leads to increase the sales growth”. As per the result of the regression analysis, the relationship between the use of MA practices and the sales growth indicated a beta of 1.163, P value of 0.027 and R^2 of 0.217. As such, writer accepts the hypothesis (H1) that is “High degree of adoption of MA practices leads to increase the sales growth” at 5% significance level.

Regression analysis on the relationship between the use of MA practices and the assets turnover indicated beta value of 0.970, P value of 0.030 and R^2 of 0.181. Accordingly, the second hypothesis (H2) “High degree of adoption of MA practices leads to increase the assets turnover” can be accepted at 10% significance level. However, R^2 of 0.181 indicates that MA practices contribute to explain only 18% of the variation in the assets turnover and as such 82% of the variation in assets turnover cannot be explained by the level of adoption of MA practices. As per the result of the regression analysis, the relationship between the level of adoption of MA practices and gross profit ratio indicated a beta value of 0.942, P value of 0.024 and R^2 of 0.203. Hence, the hypothesis (H3) i.e. “High adoption of MA practices leads to increase the gross profit margin” can be accepted at 10% significance level. However, R^2 of 0.203 indicates that only 20% of the variations in the depending factor is explained by the management accounting practices. Accordingly, the gross profit margin in the SMEs greatly affected by the factors other than management accounting practices, those factors need to be further examined, which is beyond the scope of this study.

The relationship between the MA practices and the net profit ratio shows a beta of 0.849 and P value of 0.02 and R^2 of 0.241. Hence, fourth hypothesis (H4) that “High degree of adoption of MA practices leads to increase the net profit margin” can be accepted at 5% significance level. As per the result of the regression analysis, the beta of positive 0.849 says that there is a positive relationship between the level of adoption of MA practices and the net profit ratio in the SME sector. However, R^2 of 0.241 tells that MA practices explain only 24% of the variations in the net profit ratio while more than 76% of variations in the net profit ratio cannot be explained by the level of adoption of management accounting practices adapted by the firm. The regression analysis on the relationship between the management accounting practices and the stock residence period indicated that the beta value of –24.06, P value of 0.052 and R^2 of 0.344. As such, the fifth
hypothesis (H3) that “High degree of adoption of MA practices leads to decrease stock residence period” can be accepted at 10% significance level. The beta value of negative 14.06 shows that there is a negative relationship between the use of MA practices and the stock residence period. That means high adoption of MA practices leads to decrease in stock residence period. However, R² of 0.344 indicates approximately only 35% of the variation in the stock residence period could be explained by the level of adoption of MA practices while the balance variation will be resulting from factors other than MA practices. Analysis of the statistics implies that there is a positive relationship between the level of adoption of MA practices and the sales growth, gross profit ratio, net profit ratio and assets turnover at varying degrees of significance levels. In addition to the above relationships, analysis of correlation asserts that there is a negative relationship between the levels of adoption of MA practices and the stock residence period. However, the explaining power of the independent variable (i.e. use of MA practices) is relatively low on each of dependent variables (operating efficiency measures), that emphasizes, there are some factors, other than the adoption of management accounting practices, that could effect on the level of the operating efficiency in the SMEs in Sri Lanka.

5. Analysis and discussion of results
Findings of this study clearly indicate that the level of adoption of certain MA practices in the SME sector is relatively very low. However, there are certain MA practices are being practiced up to a considerable extent. Why there is such an observation in the SMEs? What are the reasons for such a result? In the following paragraphs, writer expects to discuss the nature of the MA practices adopted by the SMEs and to provide the theoretical explanations to justify the possible reasons.

Inventory control practices are very important and common to the manufacturing sector SMEs. As per the study results, the level of adoption of inventory control practices is relatively high. Almost all the SMEs used certain level of inventory control practices. However, the level of adoption of inventory control practices that are discussed in the MA theory reflected a greater variation among the firms. Nature and the form of the inventory also were different in the selected firms. Some SMEs had raw material, working progress, and finished goods and they had different levels of inventory control practices for each types of inventories. Specially, some SMEs in the selected sample had certain control standards that are inherent to them. Inventory control is a functional level managerial activity that concerns about maintenance of ideal levels of stocks in order to ensure that the firm does not tie up its funds unnecessarily in the form of unsold stock in vain. Specially in the manufacturing sector SMEs must consider about their inventory levels since that affect smooth operations, customer satisfaction, market competitiveness. Discussions made with the management of SMEs revealed that they are mainly concerned regarding the above none financial objectives of maintenance of inventory rather than financial objectives such as minimization of order cost and holding cost including cost of capital. Further, most of the inventory control practices adopted by the SMEs were highly judgmental.
As a management control practice variance analysis is another important tool that helps organizations to recognize whether actual performance level meets its expected levels of standard. To this effect, the adoption of variance analysis enables organizations to improve both effectiveness and efficiency. However, the average level of adoption of variance analysis practices is relatively very low. As per the survey result about 70% of the selected firms do not use variance analysis. In order to implement a successful variance analysis practice SME should have well-established standards. However, discussion revealed that many SMEs had no clearly defined standards. Similarly, they do not have adequate performance measurement and reporting practices.

Ratio analysis refers to analysis of mathematical relationships between one or more variables. This analysis enables the firm to compare its current performance levels, for example current year gross profit ratio, with its prior year financial information or industry average figures. However, many of the firms in the selected sample indicated that the level of adoption of ratio analysis is very low. There are no industry average figures or benchmark levels available for the SMEs this may limit the SMEs ability to use ratio analysis practices extensively. However, SMEs have been compelled by financial institutions to calculate certain performance indicators when preparing loan and other project proposals. In order to implement an effective budgetary control practices firms should make a reliable forecast of its future business operation. Relative adoption of budgetary control practices in the SME sector indicated a very low level of adoption. Approximately 75% of the SMEs in the selected sample did not prepare budgets. Even in the used firms the level of adoption was very low. This situation indicates that many of the SMEs do not concern about planning and controlling of its future operations. This implies that SMEs do not that concern about forecasting of its future business operations. Approximately 40% of the selected SMEs used cash flow forecasting practice. Compared to some other MA practices this indicates that cash flow forecasting practices are being adopted by SMEs. However, the average level of adoption of cash flow forecasting practices was relatively low. Many of the SMEs had used cash flow forecasting to meet the requirements of the financial institutions when borrowing loans. However, only very few firms used cash flow forecasting for planning its future business operations. Many SMEs do their business operations on day-to-day basis paying a less concern regarding the future forecasting. Approximately 65% of the SMEs used product-costing practices that indicate product-costing practice is a popular MA practice adopted by the SMEs. Further the level of adoption also indicate that product costing practices are used at a moderate level. Compared to other MA practices SMEs use product-costing practices greatly. Product costing practices is very vital for any organization to fix its products prices competitively. The reason for such a high-level adoption of product costing practice can be accepted since the selected SMEs represent manufacturing sector firms where they need to cost its products in order to fix its selling price.

In the modern dynamic business context SMEs face huge market competition. In this competitive business environment SMEs have to highly concern about their operating efficiency. Business firms that are not in a position to do its business in an efficient and effective manner will not be able to survive in the market. One of the objectives of this study is to measure the level of operating efficiency in the SME sector. For the purpose of this study efficiency was measured in terms of
sales growth, assets turnover, stock residence period, debtors’ collection period, gross profit ratio and the net operating profits (before interest and depreciation) ratio. As per the survey result, SMEs in the selected sample indicated a satisfactory average sales growth rate of 16%. However, standard deviation of 9% indicates this average sales growth rate varies greatly between the firms. The maximum sales growth rate of 39% and the minimum sales growth rate of 4% also highlights sales growth rate is highly volatile between the firms. Generally, sales growth is highly depending on the quality of the goods produces and the effectiveness of the firm’s sales and distribution activities. Certain firms indicated a very low sales growth rate; this is may be due to the fact that those firms do not have proper sales and marketing planning practices.

Gross profit ratio represents the relationship between the gross profit and the sales value. Higher gross profit ratio indicates higher level of operating efficiency. Generally, business firm should have a adequate amount of gross profit to cover its other operating expenses such as general administrative expense, sale and distributions expense and expected return. As per the survey result, the average gross profit ratio in the SME sector was approximately 23%. However, it is seen this average gross profit ratio is highly volatile between firms. Further, The maximum gross profit ratio in the selected sample was 45% and the minimum was 12% this gap also indicates the gross profit ratio varies very significantly among SMEs. The level of gross profit is highly depending on the firm’s cost of sale, so the firms that managed to decrease the cost of sale has indicated a high gross profit ratio. A firm that has a higher gross profit ratio has the opportunity spend more on sales and distribution activities, which enable the firm to further expand its market share and gross profit.

Net profit ratio shows the relationship between the sales value and the net profit of the firm. Higher net profit ratio indicates higher return to the business. Similarly, higher net profit ratio indicates the net value addition by the business is higher. As per the survey results the average net profit ratio in the SME sector is 17%. Further, the standard deviation of 6% indicates that the variation in net the profit ratio in SME sector is at a moderate level. As far as gross profit ratio is concerned, firms have been able to maintain a gross profit ratio of 23%. However, net profit ratio of 17% indicates that approximately 7% of sales income has been spent on day-to-day operational activities such as general administration expenditure and sales and distribution expenditure. As such as far as operational expenditure of the SMEs is concerned it is seen that firms have been able to reduce its general administration and sales and distribution expenditure. Assets turnover measures how well the firm has utilized its assets in generating sales to the firm. Generally higher assets turnover indicates that the firm has utilized its resources efficient manner in its day-to-day business of operations. As such higher the assets turnover ratio indicates the higher level of operating efficiency. As per the survey result the average assets turnover of the selected sample was 1.63 times. Accordingly, assets turnover of 1.63 times indicates that SMEs assets generate 1.63 times sales on its assets. An assets turnover ratio of 1.63 is relatively low, which indicates that SMEs have idle assets that have no or less contribution in generating sales. Further, maximum assets turnover of 3.7 and minimum of 0.25 indicate that assets turnover ratio varies significantly among the firms.
Stock residence period is also another important indicator that provides information about the level operating efficiency of a business firm. This indicator tells how long inventory is held in the warehouse till it is sold. Higher stock residence period indicates that firm ties up its working capital in the inventory that has lower return to the organization. Generally, this ratio varies greatly from industry to industry and requires a careful study. As such there is no ideal level of residence period for stock turnover. However, higher ratio indicates that inventory does not languish in warehouse but rather “turns over” rapidly as it moves quickly from time of acquisition to sale. As such high stock turnover or low stock residence period indicates that the firm utilizes its resources efficiently in making optimum operational result. As per the survey result the average stock residence period in the selected SMEs was 46 days. So, firms have to tie up its working capital in the inventory for 46 days in vain. However, Standard deviation of 22 days indicates that the average stock residence period varies greatly among the firms.

The level of adoption of MA practices and its relationship with the operating efficiency or performance level has been studied by researchers, academics and professional institutes in Sri Lanka and in overseas. As per the survey findings, the average level of adoption of MA practices in the SMEs in Sri Lanka is seems to be very low. However, certain management accounting practices are used in the SME sector at a satisfactory level, still many of other management accounting practices were not used in the SME sector. This, result complies with the findings of previous studies. In a very recent study on “Management Accounting Practices in Quoted Public Companies in Sri Lanka” done by Fonseka et.al (2006) have found that a significant gap exists between the theory and practice of management accounting in the corporate sector companies. Findings of the above study further emphasizes that adoption of certain management accounting practices even in the corporate sector is still relatively at a low level. In the above study Fonseka et.al (2006) have studied 36 management accounting practices and they have found that adoption rate of 24 management accounting practices out of 36 is below 30%. In a recent study done by Omar et.al. (2002) in 250 locally owned Malaysian companies found that application of management accounting practices was very low. Further, according to Luther (2003), he finds a similar result that asserts adoption of management accounting practices in the plantation sector is very low. As per the findings of this study the overall level of operating efficiency is largely depending on the factors other than management accounting practices that complies with the Balance Score Card approach for performance measurement by Kaplan (2010). According to Kaplan overall performance of a firm should be measured in a holistic approach that encompasses, in additional to financial aspects, internal business processes, people and learning aspects, and customer perspectives.
6. Conclusions and Recommendations

This study examined the types of management accounting practices used in thirty SMEs in Sri Lanka and the objective of this study was to examine whether adoption of MA practices leads to improve the level of operating efficiency in the SMEs in Sri Lanka. Complying with the findings of previous researches writer examined six types of MA practices that are presumed to be used in the SME sector. The findings of the study show that level of adoption of management accounting practices in the SMEs is relatively low. As per the survey results it is clearly indicated that SMEs use certain MA practices in varying degrees. For example, compared to other MA practices the level of adoption of inventory control practices and product-costing practices in the SMEs is relatively high. This may be due to the fact that product-costing and inventory control practices are relatively more important to the manufacturing sector enterprises than other MA practices. However, budgetary control, variance analysis and ratio analysis indicated relatively a very low level of adoption. As such, it is highlighted that management accounting practices are not that deep rooted in the SMEs in Sri Lanka. Most of the circumstances it was highlighted that management of the SMEs was not that concern about the management accounting information and its importance to the business.

The level of operating efficiency in SME as measured in terms of assets turnover, stock residence period, debtors’ collection period, net operating profit ratio etc indicated that the average level of operating efficiency in the manufacturing sector SMEs is relatively low. For example, many SMEs indicated relatively a high stock residence period that implied SMEs are less efficient in managing its inventory. The possible impact of this situation may include high wastage rate, obsolescence of stocks, poor quality and stock losses etc. Further, average asset turnover in the SMEs was also indicated relatively low rate that indicates that the SMEs have idle assets that have poor contribution in generating sales.

One of the main objectives of this study was to examine whether a relationship exists between the adoption of management accounting practices and the level of operating efficiency in the SME sector. As per the findings of the study it was highlighted that there is a relationship between the level of adoption of management accounting practices and the level of operating efficiency in the SME sector. Findings indicated that adoption of management accounting practices leads to increase the assets turnover, sales growth, and gross profit in the SME sector. Further it indicated that a negative relationship exists between the adoption of management accounting practices and the stock residence period and the debtors’ collection period. However, findings clearly indicated that the efficiency in the SME sector is highly affected by the factors other than management accounting practices. For example, management accounting practices contributed to explain approximately 20% of the variation in assets turnover, sales growth, operating profit etc. Above result clearly indicates that the level operating efficiency is largely depends on the factors other than management accounting practices.
Above findings emphasize that the adoption of management accounting practices in Sri Lankan small and medium scale enterprises is considerably low. Further it shows that level of operating efficiency in Sri Lankan SMEs is also relatively low. Further, findings indicated that operational efficiency in the SMEs is largely depending on the factors other than management accounting practices. So, why the level of adoption of management accounting practices in SME sector is very low? What are the current perceptions of the management of the SMEs regarding management accounting practices and is importance to the business? What are the other factors that affect the level of operating efficiency in the SME sector? These are the direction for the future researchers, which should draw the urgent attention of academics as well as the practitioners of Management Accounting.

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