
Factors Affecting the Adoption of a Formal Accounting System in Small and Medium Enterprises with Special Reference to Anuradhapura District

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Abstract

Small and Medium Enterprises (SMEs) are the most important category in an economy as they contribute to the economic development by generating employment opportunities and consumer's essential goods and services. But long term survival and success of SMEs is dependent on their ability to maintain a proper accounting system. But most of the SMEs have not adapted to maintaining an accounting system. The main purpose of the study is to identify factors which affect the adoption of a formal accounting system in Small and Medium Enterprises with special reference to Anuradhapura district. In the present study, one dependent variable and five independent variables are considered. The results suggest that financial accounting practices, owner/manager knowledge and size of the business have significant positive impacts on the adoption of a formal accounting system, while age of the firm and external pressure have insignificant positive impacts on the adoption of a formal accounting system by SMEs. A self-administered questionnaire was developed and disseminated to eighty respondents, and they were considered for further statistical analysis. The data were analyzed and hypotheses were tested through descriptive statistics, correlation analysis and regression analysis. However, the small sample size raises the issue of generalization, which future studies should seek to address. Further, the study recommends that SMEs can get the most benefits by adopting a formal accounting system, and accredited authorities should design specific guidelines for SMEs accounting and provide templates for accounting practices of SMEs.

Keywords: Financial accounting practices, Formal accounting system, Small & medium enterprises

1. Introduction

Small and Medium Enterprises (SMEs) perform valuable role in any economy as they are capable of generating employment, promoting the growth of Gross Domestic Product (GDP),

embarking on innovations and motivating other economic activities. The Small and Medium Enterprises sector can be identified as the backbone of all developed and developing nations. The development of SME sector is very important for any country as this sector has greater potential to generate maximum socio economic benefits to the country with the minimum level of investment (Rathnasiri, 2015).

Generally, all of the business firms' success depends on their decisions, such as investment decision, financial decision, etc. Among those decisions financial decisions directly deal with business success and are directly connected to the company's accounting system. Therefore, the accounting system of a company should be a formal one. In the context of SMEs, accounting information is valuable, as it can assist firms to manage their short term problems in fundamental areas such as costing, expenditure, and cash flows. To generate reliable and accurate accounting information, there should be a formal accounting system.

A formal accounting system will generate the necessary financial accounting information for various purposes. For example, a bank would require the knowledge whether the SME seeking finance would be able to pay the principle amount as well as the interest before granting the facility. This is particularly true of financial accounting information about a firm's operations. To provide the accounting information, there should be an adequate accounting system.

1.1. Problem Statement

The SME sector should have a formal accounting system to get the competitive advantages, and for proper execution. It is an essential sector for the society, as well as economy, job creation and contribution to economic growth. The main purpose of SME is to earn profit for the proprietors by depending on daily transactions. Even though most of SME earn profit, proper profit management is unsuccessful. The main reason for this issue is that there exists no proper accounting system to identify the income and the expenses correctly. Thus, a large number of SMEs fail to win the market and to remain competitive.

Rahamon & Adejare (2014) concluded that that there is a strong positive relationship between accounting record keeping and performance of small scale enterprises. Accounting record keeping is essential for decision making, which invariably affects the performance of small scale enterprises. Abdullah, and Tayib (2007) mention that there is a significant positive correlation with age of business, and the adoption of accounting system in SMEs. Rathnasiri (2015) concluded that educational background of the owner/ manager is significantly affects the adoption of financial management tools and techniques. Varanya & Tippawan (2007) have investigated the accounting information requirement and reporting practices of Thai SMEs. It was found that there is no uniqueness in the relationship between the size of the company, and utilities (uses?) of managerial account of financial information.

According to the previous research findings, observations and conclusion are different one to one with their area and most of the variable did not apply together to find out the results. Only two or three variables have been used as factors that affect formal accounting systems, and other variables have been neglected. Hence, those conclusions may not be relevant to all industries of SMEs. Therefore, the researcher decided to conduct the present research to arrive at the relevant conclusion based on several industries of SMEs, due to the lack of research observations available in connection with formal accounting systems of SMEs in Sri Lanka, to address the research gap. Therefore, considering the above issues, this research examines what factors affect the adoption of a formal accounting system in SMEs with special reference to Anuradhapura district.

Research Questions

- Do financial accounting practices affect the adoption of formal accounting system in SMEs?
- Does the age of the firm affect the adoption of a formal accounting system in SMEs?
- Does knowledge of the owner/manager affect the adoption of a formal accounting system in SMEs?
- Does the size of the firm affect the adoption of a formal accounting system in SMEs?
- Does pressure external to the business affect the adoption of a formal accounting system in SMEs?

Research Objectives

- To examine the impact of financial accounting practices on the adoption of a formal accounting system in SMEs.
- To examine the impact of age of the firm on the adoption of a formal accounting system in SMEs.
- To examine the impact of financial accounting skills of the owner/manager on the adoption of a formal accounting system in SMEs.
- To examine the impact of the size of the firm on the adoption of a formal accounting system in SMEs.
- To examine the impact of external pressure on the adoption of a formal accounting system in SMEs.

Hypothesis

H1: The financial accounting practices of the firm significantly affect the adoption of a formal accounting system in SMEs.

H2: Age of the firm significantly affects the adoption of formal accounting system in SMEs.

H3: Financial accounting knowledge of the owner/manager significantly affects the adoption of a formal accounting system in SMEs.

H4: Size of the firm significantly affects the adoption of a formal accounting system in SMEs.

H5: External pressure on the firm significantly affects the adoption of a formal accounting system in SMEs.

2. Literature Review

Ismail & King (2007) investigated the factors influencing the alignment of the accounting information system in small and medium sized Malaysian manufacturing firms. Findings from the study suggest that, AIS alignment was related to the firm's level of IT maturity, the level of owner/manager's accounting and IT knowledge, the use of expertise from government agencies and accounting firms, and the existence of internal IT staff.

The results of Maseko & Manyani (2011) confirm that an entity may fail to prepare financial statements even with well-maintained books of accounts, because the preparation of financial statements requires accounting skills and this, as revealed by the results, is lacking in 62% of SMEs.

Padachi (2012) investigated factors affecting the adoption of a formal accounting system by SMEs. Researcher found that the education level of the owner/ manager influences the adoption of a formal accounting system. Holmes & Nicholls (1989) conclude that the development of a sound Accounting Information System (AIS) in SMEs depends on the owner's level of accounting knowledge. Rathnasiri (2015) concludes that educational background of owner/ manager affects the adoption of financial management tools and techniques significantly.

Amoako (2013) investigated the accounting practices of SMEs in Ghana. In his research he mentions that the government should also create the necessary legal instruments to make the preparation of proper books of accounts mandatory, in order to improve SMEs practice of accounting in Ghana. Sam et al., (2012) investigated factors that affect the adoption of computerized accounting systems in small medium enterprises in Malaysia. The researcher has found that there is a negative correlation between business competition, and the adoption of computerized accounting systems.

Rahamon (2014) investigated accounting practices and the control system of small and medium size entities in Ghana. According to his findings the age of the business has a direct influence on a firm's adoption of a formal accounting and control system. The findings of

Ntim, Evans and Anthony (2014), have revealed that the age of the business has a direct influence on a firm's adoption of formal accounting and control systems.

Rathnasiri (2015) investigated the financial management practices of Small and Medium Enterprises in Sri Lanka. According to his findings, the size of the firm significantly affects the adoption of financial management tools and techniques.

3. Research Methodology

3.1. Population

There are 8928 SMEs established in Anuradhapura district. Thus, small and medium Enterprises located in Anuradhapura District were taken as the population. (The study considered small businesses as those employing less than 50 people, and medium size businesses as those employing between 51-249 people based on the common practice of the Sri Lanka Standards Institution (SLSI) indicator.

3.2. Sample

A sample is a subset of the population. It comprises of members selected from the population (Sekaran and Roger, 2010). According to Sekaran and Bougie (2013), the sample should be approximately 4% from the population. But researcher was unable to select a sample of above size, because through the pilot test done by the researcher, it was found that enterprises' response rate is low. In addition, time and resources available for the research were very low. Therefore, considering all regional secretariat offices in Anuradhapura district, 80 SMEs' were selected as a sample for the study using the convenience sampling method.

3.3. Data Collection

Data collection is the process of gathering and measuring information on variables of interest, in a systematic fashion that enables one to answer the stated research questions, test hypotheses, and evaluate outcomes. To collect data, there are two sources used in the research as primary and secondary. The researcher has used primary sources prominently for data collection.

3.4. Data Analysis

3.4.1. Multiple Regression

Multiple regression analysis was used to study the relationship between multiple constructs that affect the adoption of a formal accounting system, since all variables are measured using

interval data. MR allows simultaneous studies of the impact of two or more independent variables on single interval scale dependent variable.

Table 1: Descriptive statistics

	Min stat	SD stat	Skew. Stat
PP	1.50	0.849	0.035
IP	1.40	0.708	-0.092
DC	1.60	0.765	-0.190
FU	1.40	0.729	-0.038
IM	1.00	0.682	-0.741

Multiple regression is used to measure the relationship between financial accounting practices, and the age of the firm, the knowledge of the owner/manager, the size of the firm and the external pressure on the business, which affect the adoption of a formal accounting system in SMEs. These variables were derived using previous literature. Multiple regression was used to examine the strength of relationship for the overall regression model. The multiple regression equation for this study can be illustrated as follows.

$$FAS = \beta_0 + \beta_1 (FAP) + \beta_2 (AF) + \beta_3 (OMK) + \beta_4 (SF) + \beta_5 (EP) + e_i$$

Where; FAS -Formal Accounting system

FAP -Financial Accounting Practices

AF -Age of the Business; OMK -Owner/ Manager Knowledge

SF - Size of the Firm; EP -External Pressure

β_0 = Constant; β_1 , β_2 , β_3 , β_4 and β_5 = Coefficients of Independent Variables

e_i = Error Term

Source: Survey Data (2018)

4. Data Analysis and Findings

4.1. Descriptive Statistics for Research

Descriptive statistics of the variables were calculated to identify the nature of the research variables. Mean value provides the observation regarding the central tendency of the values of

a variable. This section analyses individual variables by using descriptive statistics to identify their basic nature. The researcher tries to identify the level of responses given by the sample regarding each independent variable and independent variable.

The table (Table 1) depicts the descriptive statistics of responses of respondents related to independent and dependent variables of the study. According to table, mean value of all independent variables is greater than 3.00, which signifies that all variables have a high impact on the adoption of a formal accounting system.

However, mean value of Owner/Manager's knowledge (M=4.27, SD=0.66) indicates a significantly high impact on a formal accounting system in SMEs, while mean value of both external pressure (M=4.02, SD=0.71) and financial accounting practices (M=4.07, SD=0.60) imply a significant impact on adopting a formal accounting system. The mean value of enterprise's age (M=3.77, SD=1.00), and the size of the enterprise (M=3.90, SD=0.68), also, indicate a significant impact on adoption of a formal accounting system, although, they are lower than the impact of the owner/manager's knowledge and external pressure toward formal accounting system.

4.2. Reliability Test

Table 2: Results of the reliability analysis

Variables	Cronbach's Alpha	No of Items
Financial Accounting Practices	0.722	3
Age of the Business	0.852	3
Owner/Manager Knowledge	0.784	4
Size of the Business	0.705	3
External Pressure	0.731	3
Formal Accounting System	0.748	4

Source: Survey Data (2018)

This section examines the internal consistency in terms of reliability and validity of the constructs that were used to measure the key variables of the study before further analysis. For this purpose, Cronbach's alpha test was performed. The results are reported in Table 2.

Cronbach's alpha is computed in terms of the average inter correlations among the items measuring the concept (Sekaran & Bougie, 2013). Cronbach's alpha should be greater than its' minimum value of 0.700; if so, the questions in the questionnaire can be accepted. According to the above table Cronbach's alpha value of all variables is greater than 0.700 and it assures

the acceptability of reliability of the constructed questionnaire. Therefore, the collected data could be used for further statistical analysis.

4.3. Correlation Analysis

The correlation analysis demonstrates correlation of each variable with other variables including the dependent variable, so that correlation matrix aids the researcher to identify initially whether there is a relationship between each variable, and the relationship between each dependent variable and independent variable.

Table 3: Correlation analysis

	Practices	Age	Knowledge	Size	Pressure	System
Practices	1					
Age	.630**	1				
Knowledge	.795**	.672**	1			
Size	.625**	.774**	.749**	1		
Pressure	.804**	.824**	.810**	.783**	1	
System	.788**	.734**	.866**	.821**	.831**	1

Source: Survey Data (2018)

According to table (Table 3), there is a significant positive correlation between formal accounting system and financial accounting practices, and that is implied by Pearson correlation and Sig. value respectively (P.Corre=0.788**, Sig.=0.000). Similarly, the results show that there exists a significant positive correlation between the adoption of a formal accounting system, and the age of the enterprise (P.Corre=0.734**, Sig. =0.000). The Pearson correlation value (0.866**) and Sig. value (0.000) indicate that a positive correlation exists between owner/manager's knowledge and the adoption of a formal accounting system exists.

In addition, the results show a positive significant correlation between the size of the enterprise and the adoption of a formal accounting system through P.Corre = 0.821** and Sig. value 0.000. Furthermore, the correlation between external pressure and the adoption of a formal accounting system is positive and significant at 0.01 level (P.Corre=0.831**, Sig. =0.000).

4.4. Multiple Regressions Analysis

The R Square value is 0.842, which means 84.2% of the factors affecting the adoption of a formal accounting system can be explained by the predictions, financial accounting practices,

the size of the business, the owner/manager's knowledge, the size of the business and external pressure. Also it has an adjusted R square of 0.831 or 83.1%.

Table 4. Regression analysis (model summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.918	0.842	0.831	0.25550	2.033

Source: Survey Data (2018)

To ensure a significant relationship between dependent and independent variables, there should be a P value of less than 0.01 in ANOVA. Therefore, according to the above ANOVA table the P value is 0.000, and it ensures a significant relationship between dependent and independent variables. The total validity is the sum of both regression and residual variability ($30.597 = 25.766 + 4.831$).

When table 4.6 I considered, there is a positive significant impact of financial accounting practices on the adoption of a formal accounting system as indicated by (Beta=0.200) and ($p < 0.05$), and the effect of financial accounting practices is 20%. Furthermore, both the owner/manager's knowledge and the size of the enterprises, have a positive significant impact on the adoption of a formal accounting system as indicated by the Beta value and Sig. value (Beta=0.354, $p < 0.05$), (Beta = 0.287, $p < 0.05$) respectively, and both effects are 35.4% and 28.7%.

Table 5. Regression analysis (Anova table)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.766	5	5.153	78.940	0.00
	Residual	4.831	74	0.065		
	Total	30.597	79			

Source: Survey Data (2018)

Similarly, the enterprise's age and the external pressure have a positive impact on the adoption of a formal accounting system as depicted by (Beta=0.027) and (Beta=0.075) respectively, both of them are insignificant at 0.05 level ($p > 0.05$). According to the results of regression analysis, the regression model can be developed as follows:

$$FAS = \beta_0 + \beta_1S + \beta_2A + \beta_3K + \beta_4E + \beta_5P + e_i$$

$$FAS = 0.188 + 0.200FP + 0.027FA + 0.354K + 0.287S + 0.075P + e_i$$

Table 6: Regression analysis (Coefficient table)

Model		Unstandardized		Standardized		t	Sig.
		Coefficients		Coefficients			
1	(Constant)	0.188	0.217			0.866	0.389
	FA. Practices	0.200	0.089	0.194		2.241	0.028
	Firm Age	0.027	0.054	0.043		0.490	0.625
	Knowledge	0.354	0.087	0.376		4.060	0.000
	Size	0.287	0.077	0.317		3.717	0.000
	Pressure	0.075	0.101	0.086		0.746	0.458

Source: Survey Data (2018)

4.5. Hypothesis Testing

According to the result of multiple regression analysis, the following discussion can be made in relation to hypotheses which have been established in the study.

H1: Financial Accounting Practices of the business significantly affect the adoption of a formal accounting system in SMEs.

According to the result of multiple regression analysis, financial accounting practices of the business beta value is 0.200 and it is significantly less than 0.05 ($0.05 > 0.028$). Further, there is a significant positive impact from financial accounting practices toward the adoption of a formal accounting system. Therefore, financial accounting practices of the business significantly affect the adoption of a formal accounting system in SMEs, and thus, hypothesis 01 is accepted.

H2: Age of the business significantly affects the adoption of a formal accounting system in SMEs.

According to the results of the coefficient table, there is a positive impact of the age of the business on the adoption of a formal accounting system. (Beta =0.027) However, it is insignificant because significant value is 0.625 ($0.05 < 0.625$). Thus, the impact of the age of the firm on the adoption of a formal accounting system, is insignificant yet positive.

Therefore, the age of the business does not significantly affect the adoption of a formal accounting system in SMEs, and therefore, hypothesis 02 is rejected.

H3: Financial accounting knowledge of the owner/manager significantly affects the adoption of a formal accounting system in SMEs.

As shown in table 6, there is a positive impact of the owner/manager's knowledge on the adoption of a formal accounting system (Beta =0.354), and it is significant at 0.05 level as indicated by (0.05>0.000). It indicates a significant positive impact of owner/manager's knowledge on the adoption of a formal accounting system.

Therefore, owner/manager's knowledge significantly affects the adoption of a formal accounting system in SMEs and, thus, hypothesis 03 is accepted.

H4: The size of the firm significantly affects the adoption of a formal accounting system in SMEs.

The results of regression coefficient indicated in above table (Table 4.6) imply that there is a positive impact of the size of the firm on the adoption of a formal accounting system (Beta =0.287), and it is significant at 0.05 level as indicated by (0.05>0.000). The size of the firm has a significant positive impact on the adoption of a formal accounting system. Therefore, the size of the firm significantly affects the adoption of a formal accounting system in SMEs, and thus, hypothesis 04 is accepted.

H5: The external pressure on the firm significantly affects the adoption of a formal accounting system in SMEs.

According to the results of the regression analysis, there is a positive impact of external pressure on the firm on the adoption of a formal accounting system (Beta =0.075), and it is not significant at 0.05 level as indicated by (0.05<0.458)

External pressure on the firm has a insignificant positive impact on the adoption of a formal accounting system. Therefore, external pressure on the firm does not significantly affect the adoption of a formal accounting system in SMEs, and thus, hypothesis 05 is rejected. According to multiple regression analysis, the summary of the hypothesis testing can be shown as follows.

5. Conclusion

The main purpose of this study is explore the important factors which affect the adoption of a formal accounting system of small and medium enterprises in Anuradhapura District. Five hypotheses were used in the study to check the effect of independent variables on the

dependent variable. By using the appropriate statistical package, it was found that accounting practices, the accounting knowledge of the owners and managers, the size of the business are the factors that mostly affect the adoption of a formal accounting system, while factors like the age of the business, external environment pressure do not significantly affect the adoption of a formal accounting system. Hence, three hypotheses were accepted, while two hypotheses were rejected.

The SMEs have been contributing to the economic development of country and have been generating new employment. Hence, it is very important to examine the reason for the failure of the SMEs. Previous research has identified the lack of a sound accounting system to be one of the reasons for the failure, which served as the rationale to do this research.

In this particular study, researcher has identified five factors that are most likely to impact the adoption of a formal accounting system in SMEs, through reviewing the previous research work, in order to achieve the first objective of the research. The factors identified were financial accounting practices, the age of the business, the knowledge of the owner/manager, the size of the business, and the external pressure as factors that have an impact on the adoption of a formal accounting system. The determined factors were tested using a sample of 80 SMEs in Anuradhapura District. To achieve the objectives of the research, five hypotheses were constructed based on identified factors.

Considering the results of the study, it was identified that accounting practices, the accounting knowledge of the owners/managers, the size of the business have a significant positive impact on the adoption of a formal accounting system, while the age of the business and the external pressure have an insignificant positive impact on the adoption of a formal accounting system.

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