

FINANCIAL PERFORMANCE OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMES) IN THE PHILIPPINES

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ABSTRACT

The study analyzed the financial performance of selected micro, small, and medium enterprises using secondary data from financial statements for the past three years. Results showed the enterprises performed favorably in liquidity, activity and leverage but suffered from a low-level profitability. Using correlation analysis, the results show a significant linear relationship between liquidity and activity, liquidity and leverage, and activity and leverage. However, each of these measures has no significant relationship with profitability. Using t-tests, the results show no significant difference in the liquidity, profitability, and inventory turnover of the enterprises when grouped according to organizational form, business type, and asset size. However, a significant difference exists in receivable turnover, asset turnover, and debt ratios. The study recommends the MSMEs should revisit their strategies for improving profitability and use financial performance information in making critical decisions. Firms should connect financial performance to the larger external environment of the business so they will continue to play an important role in the growth of the economy.

JEL: M00, M400

KEYWORDS: Financial Performance, Organizational Form, Business Type, Asset Size

INTRODUCTION

This study assessed the financial performance of selected micro, small, and medium enterprises (MSMEs) in liquidity, activity, leverage, and profitability and explored the relationship among these measures. It also tested if there is a significant difference in the financial performance of MSMEs grouped according to three categories: organizational form, business type, and asset size. This study contributes to the existing literature in several ways. First, it provides empirical evidence on the financial performance of MSMEs whose capacity and needs are different from large enterprises, multinational corporations, and publicly listed companies. The study showed MSMEs had satisfactory performance in liquidity, activity, and leverage but experienced low profitability. As a result, MSMEs need strategic actions and directions that focus on improving profitability.

Second, the study provides an empirical basis to infer that a significant linear relationship exists between liquidity and activity, liquidity and leverage, and activity and leverage. However, these three measures of financial performance did not show any significant relationship with profitability. This finding contradicts several previous studies. For instance, Ayodele & Oke (2013, p.52) found a direct correlation between the liquidity and profitability of banks in Nigeria. Bolek & Wilinski (2012, p. 51) concluded that financial liquidity influences profitability of construction companies listed in the Warsaw Stock Exchange from 2000 to 2010. Kaya (2014, p. 66) found that firm leverage is an important factor in explaining profitability and liquidity of both retailers and wholesalers in the U.S. Meanwhile, in Pakistan, Akhtar et al. (2012, p. 15) shows that a positive relationship prevails between financial leverage and financial performance. Such finding includes profitability measures such as return on sales, return on assets, return on equity, earnings

per share, and dividend ratios. They investigated 20 publicly listed limited companies from the fuel and energy sector at Karachi Stock Exchange. Nonetheless, the results of this study agree with Niresh (2012, p. 39) who revealed no significant relationship between liquidity and profitability when he analyzed 31 listed manufacturing firms in Sri Lanka from 2007 to 2011.

Third, the study provided evidence on the differences of financial performance of MSMEs when grouped according to organizational form, business type, and asset size. Such grouping is an area that researchers seldom explore. This research found no significant difference in the liquidity, profitability, and inventory turnover of the enterprises when grouped according to these three categories. However, a significant difference exists in receivables turnover, asset turnover, and debt ratios. Specifically, single proprietorships have significantly higher receivable turnovers than corporations and small enterprises have significantly higher receivable turnovers than both the micro and medium enterprises. Comparatively, both manufacturing and trading businesses have significantly higher asset turnover than those rendering services while small enterprises have significantly higher asset turnover than both the micro and medium enterprises. Corporations have significantly higher debt ratios compared with sole proprietorships; manufacturing business, compared with trading; and medium enterprises, compared with both micro and small enterprises.

Finally, the study provided the MSMEs some bases to benchmark their performance. In doing so, they will be able to maximize value and better contribute to the social and economic well-being of a country. Studies focused on the characteristics of entrepreneurs (Morales et al., 2013) and dynamics of the entrepreneurial processes (Baltar & Coulon, 2014) are best combined with financial performance benchmarks to achieve greater entrepreneurial results. Since MSMEs are recognized as an important vehicle for the economic growth of most nations, mainstreaming their financial management concerns is paramount in any economy. The succeeding part of this paper contains the related literature, data and methodology, results of the empirical investigation, and conclusions.

LITERATURE REVIEW

Researchers have written much about the financial concerns of MSMEs. Typically, studies focus more on the critical reasons that prevented MSMEs from using available financial packages. The Philippine Senate (2012) identified access to finance as the most serious constraints to MSME growth and development. Aldaba (2012) underscored that SMEs had been unable to access funds because of their limited track record, limited acceptable collateral, and inadequate financial statements and business plans. Banks turn down financial requests of SMEs because of poor credit history; insufficient collateral; inadequate sales, income or cash flow; unstable business type; and poor business plans.

By the same token, the ASEAN Strategic Action Plan for SME Development (2010–2015) identified access to finance as the primary goal, with four additional dimensions: market and internationalization, human resource development, information and advisory services, and technology and innovation. This means that lack of access to finance makes it more crucial for MSMEs to manage funds efficiently and effectively. Indeed, Jasra et al. (2011) stressed that financial resources are the most important factors that affect the success of SMEs and on which the whole business depends. They cited that SMEs have to endure the problem of modest capital compared with the large multinational corporations. Piet (2010) proved most entrepreneurs need financial skills and motivational and entrepreneurial skills to develop their businesses. At the same time, Piet (2010) noted there is a need for support in financial management among MSMEs to improve their financial health. These findings point to the importance of managing financial resources among these enterprises. Still, MSMEs face the challenge of putting in place an effectively functioning system on managing a broad range of financial activities that would enable achieving business goals.

Thus, it is important for MSMEs to capture financial information and measure performance in the use of financial resources. Mendoza (2014) cited that MSMEs need the services of practicing Certified Public

Accountants in most of these financial management areas, specifically taxation, accounting and financial reporting, and audit. In addition, micro and small enterprises differ from medium enterprises in complexity of accountancy services. Micro enterprises have simpler ways of doing their tasks and are not bent on exploring complex methods and processes.

There is a plethora of literature on financial performance of businesses. Previous researches tackled two major themes: performance measurement approach and measures of performance. On the first theme, the goal approach of Chong (2008) became clear for MSMEs. In this approach, owners and managers set their target internally based on their interest and capacity of their business. The approach enables owners and managers to identify if they have achieved their goals by looking at both financial and nonfinancial measures. Thus, its simplicity makes it popular. Shahbaz et al. (2014) described the system resource approach as a way to measure performance by appraising the capacity to get resources or inputs. They also explained the stakeholder approach as something related to meeting the needs and expectations of the entity's stakeholders. Chen & Huang (2013) used the organizational life cycle stages in analyzing the financial performance of audit firms in Taiwan. They found that financial performance continues to increase as the firms grows, resulting in best performance at an old stage. Dalrymple (2004) forwarded the benchmark index as another approach in measuring performance. In this approach, financial measures fall under the category of resource management. In essence, MSMEs have to take time to measure their financial performance and gauge it against standards or benchmarks.

On the measures of financial performance, Chong (2008) identified profit and asset turnover to assess short-term duration but steady revenue growth rate and growth in the employment size to measure long-term capacity. The Kennas Chartered Accountants (2014) considered profitability and return on assets as the key performance indicators that are critical in understanding the state of financial health of a business. The four commonly used measures are liquidity, activity, leverage, and profitability (Levy, 1998; Melicher & Norton, 2000; Statistics Canada, 2014). The Statistics Canada (2014) used solvency in lieu of liquidity and efficiency in lieu of activity. Melicher & Norton (2000) used asset management synonymously with activity and included market value for entities listed in the stock exchange.

DATA AND METHODOLOGY

This research used secondary data from 99 annual financial statements of 33 enterprises, all located in the CALABARZON Region in the Philippines. The enterprises used these financial statements in filing their annual income tax returns for the last three years (2011-2013). A great majority (60.61%) of the enterprises are single proprietorships, while the remaining 39.39 percent are corporations. More than half (51.52%) of the enterprises are into trading and the rest are service (27.27%) and manufacturing (21.21%). When grouped according to asset size, 45.45 percent are micro, 27.27 percent are small, and 27.27 percent are medium enterprises. In assessing the performance of the entities, the qualitative rating scale in Table 1 was used. The research also examined two types of hypothesis: (a) relationship between and among the four measures of financial performance using the respective indicators under each measure and (b) significant difference in the financial performance when the MSMEs are grouped according to their profile. Specifically, the study has the following null hypotheses (Ho):

Ho1(a): There is no significant relationship between the liquidity and activity of MSMEs in the Philippines.

Ho1(b): There is no significant relationship between the liquidity and leverage of MSMEs in the Philippines.

Ho1(c): There is no significant relationship between the liquidity and profitability of MSMEs in the Philippines.

Ho2(a): There is no significant relationship between the activity and leverage of MSMEs in the Philippines.

Ho2(b): There is no significant relationship between the activity and profitability of MSMEs in the Philippines.

Ho3: There is no significant relationship between the leverage and profitability of MSMEs in the Philippines.

Ho4: There is no significant difference in the financial performance of the MSMEs when they are grouped according to (a) organizational form, (b) business type, and (c) asset size.

Table 1: Qualitative Rating Scale

	Low	Medium	High
Liquidity			
Current ratio	Below 2	2 to 10	Over 10
Quick ratio	Below 1	1 to 5	Over 5
Activity			
Collection days	After the credit terms	Within the credit terms	Before the credit terms
Inventory days	Over 20	10 - 20	Below 10
Asset turnover	Below 5	5-10	Over 10
Leverage			
Debt ratio (%)	Above 60	40-60	Below 40
Profitability			
Return on sales (%)	Below 5	5-10	Over 10
Return on assets (%)	Below 5	5-10	Over 10
Return on equity (%)	Below 5	5-10	Over 10

This table shows the qualitative rating scale used in assessing the financial performance of the business enterprises, classified into low, medium, and high for each measure. The ideal current ratio of 2:1 and quick ratio of 1:1 was used as the equivalent of low performance; the credit term was used for collecting receivables. Other criteria were based on the experience of most enterprises.

Pearson Product Correlation Coefficient was computed to describe the strength of the linear relationship that exists between the levels of two performance measures. Meanwhile, the Spearman Rank Order Correlation Coefficient was used for sample sizes lesser than 30 which were not normally distributed. Also, if a scatter diagram shows a nonlinear relationship, a transformation of one of the variables was performed, with such transformation depending upon the appearance of the scatter diagram. As an alternative approach, a regression analysis using the Pooled Ordinary Least Square Model was applied. The t-test was used for the significance of the correlation. One-way analysis of variance using an F-ratio was performed to determine whether the financial performance differs among three or more independent groups of enterprises classified according to the type (trading, manufacturing and service), and size of business (micro, small and medium). We concluded that at least one group has a significantly different performance whenever the probability value or significance associated with the computed F-ratio is less than 0.05. A post hoc comparison test (Tukey HSD) was performed whenever statistically significant differences resulted from each one-way analysis of variance. This enabled the determination of which independent group had significantly different performance.

RESULTS AND DISCUSSION

The results are presented in three parts: overall financial performance of the MSMEs, relationship of the financial performance measures, and test of differences when the MSMEs are grouped. The first finding of the study is the high score of MSMEs on liquidity and leverage, low score on profitability, and an erratic level in activity (Table 2).

Both current and quick ratios are far above the ideal measures, an indication that MSMEs have the ability to meet short-term obligations as they mature. Melicher & Norton (2000, p. 461) opined that “a low current ratio may indicate that a company may face difficulty in paying its bills.” However, they cautioned that “a high value for the current ratio does not necessarily imply greater liquidity.” Nonetheless, a business has to remain liquid so as not to incur the cost associated with a deteriorating credit rating, a potential forced liquidation of assets, and possible bankruptcy (Moyer, McGuigan, & Kretlow, 1990, p. 587). Additionally, Van Horne (1992) concurred that the liquidity of the individual components of the current assets must be taken into account. Furthermore, a ratio lower than ideal would be acceptable in the more difficult liquidity

conditions as cited by Samuels, Wilkes, & Brayshaw (1999, p.45). Bolek & Wilinski (2012, pp. 39-41) proposed a deep-seated observation when they thought the use of current and quick ratios is a static measurement of liquidity. This is so because they rely on data included in the balance sheet. So, they proposed the use of measurement data that is dynamic, specifically those coming from the cash flow account, such as the cash conversion cycle.

Table 2: Overall Financial Performance

	2011	2012	2013	3-Year Mean	Qualitative Rating
Liquidity					
Current ratio	9.77	13.74	14.14	12.55	High
Quick ratio	6.38	10.08	11.13	9.20	High
Activity					
Receivable turnover	65.72	68.90	53.93	62.85	
Collection days	5	4	6	5	High
Inventory turnover	12.57	10.86	10.22	11.22	
Inventory days	24	28	29	27	Medium
Asset turnover	3.01	2.59	1.96	2.52	Low
Leverage					
Debt ratio	39.96	35.69	38.60	37.09	High
Profitability					
Return on sales	1.16	-11.95	-5.44	-5.41	Low
Return on assets	3.47	0.34	1.12	1.64	Low
Return on equity	6.25	0.47	0.72	2.45	Low

This table shows all the measures and indicators used for assessing the financial performance for three years. Both indicators for liquidity had high ratings. The indicators for receivables had high scores also while those for inventories had medium rating. Debt ratio was high. Asset turnover and all the profitability indicators were low.

The activity level was high in the collection of receivables, moderate in the inventory turnover, and low in the overall asset turnover. The fast collection of receivables was illustrated in the ability to collect even earlier than the usual credit terms of 15 days. Similarly, the debt ratio, an indication of how the businesses use borrowing as a source of fund, has been below 40 percent each year. This could indicate safeguarding of the debt service payment at a satisfactory level and keeping borrowing at an acceptable level. Samuels, Wilkes, & Brayshaw (1999) opined that the acceptable level of inventory turnover should be linked to the type of industry or business. Likewise, they illustrated the rule of thumb in the United Kingdom for an acceptable debt ratio of 50 percent or 1:2. Similarly, Melicher & Norton (2000) stated that asset turnover is significantly influenced by characteristics of the industry within which the enterprise operates. They also underscored the financial leverage ratio indicates the extent to which borrowed funds are used to finance assets. Incidentally, the profitability level has been low, based on all aspects: sales, assets, and equity, even resulting in negative profit percentage on sales. Studies conducted by Bejaoui & Bouzgarrou (2013) showed that capital is important in explaining profitability.

The second finding of the study is that using correlation, several relationships exist between and among the different financial performance indicators (Table 3). First, liquidity and activity correlate as shown in the significant linear relationship between current ratio and inventory turnover ($r = 0.238$) as well as quick ratio and receivable ($r = -0.267$) and inventory ($r = 0.372$) turnovers. There is a significant relationship between liquidity and leverage as shown in the coefficient between both the current ratio ($r = -0.650$) and quick ratio ($r = -0.670$) with debt ratio. However, there is no relationship between liquidity and profitability.

Table 3: Summary of Relationships of Financial Performance Measures

	RT	IT	AT	Debt Ratio	ROS	ROA	ROE
Current ratio	-0.050	0.238**	-0.059	-0.650*	0.068	0.170	0.096
Quick ratio	-0.267*	0.372*	-0.125	-0.670*	0.102	0.163	0.104
Receivable turnover (RT)				0.027	-0.216**	0.071	0.058
Inventory turnover (IT)				-0.056	-0.436*	-0.188	-0.206**
Asset turnover (AT)				0.208*	-0.567*	0.045	0.053
Debt ratio					-0.236**	-0.088	0.144

This table summarizes the correlation between liquidity (current ratio and quick ratio) and activity (receivable turnover, inventory turnover, and asset turnover). It also shows the correlation of activity and leverage (debt ratio). Finally, it shows leverage correlation with profitability (return on sales, return on assets, and return on equity). **correlation is significant at p-value less than 0.05; *correlation is significant at p-value less than 0.10

Second, activity correlates with leverage as shown in the significant and positive relationship between asset turnover and debt ratio ($r = 0.208$). Also, activity correlates with profitability as the negative reciprocal of return on sales is also significantly but negatively related to all activity measures ($r = -0.216, -0.436, -0.567$). The negative reciprocal of the return on equity significantly correlates with inventory turnover ($r = -0.206$). Third, leverage correlates with profitability as shown in the linear relationship between debt ratio and return on sales ($r = 0.236$). In summary, the correlation has resulted in the varied decisions taken on the hypotheses (Table 4).

Table 4: Summary of Decisions on Hypotheses Tested

Hypothesis Number	Statement	Decision
Ho1(a)	There is no significant relationship between the liquidity and activity of MSMEs in the Philippines.	Reject
Ho1(b)	There is no significant relationship between the liquidity and leverage of MSMEs in the Philippines.	Reject
Ho1(c)	There is no relationship between the liquidity and profitability of MSMEs in the Philippines.	Accept
Ho2(a)	There is no relationship between the activity and leverage of MSMEs in the Philippines.	Reject
Ho2(b)	There is no relationship between the activity and profitability of MSMEs in the Philippines.	Accept
Ho3	There is no relationship between the leverage and profitability of MSMEs in the Philippines.	Accept

This table summarizes the decision about rejection or acceptance of the null hypotheses. The hypotheses that there is no significant relationship between liquidity and activity, liquidity and leverage, and activity and leverage were rejected. However, the hypotheses that there is no relationship between liquidity and profitability, activity and profitability, and leverage and profitability were accepted.

Next, a regression analysis using the Pooled Ordinary Least Square Model was applied with the following regression equation:

$$Y_{i,t} = \beta_0 + \beta_1 X_{i,t} + \varepsilon_{i,t} \tag{1}$$

To test the relationship between liquidity and activity, three simple regression results were generated (Table 5). The first model had quick ratio as the independent variable and accounts receivable turnover as the dependent variable. This model is statistically significant since the F value of 10.503 is significant at a probability value less than 0.01. This indicates a statistically significant relationship between quick ratio and accounts receivable turnover. Here, 9.8% of the variance of log accounts receivable turnover is explained by the variance in log quick ratio since $R^2 = 0.098$. A unit change in log quick ratio results in a decrease in log accounts receivable turnover as indicated by the negative sign of the unstandardized coefficient (-0.247). The second model used inventory turnover as the dependent variable. This model is statistically significant since the F-value of 15.411 is significant at a probability value less than 0.01. This indicates a statistically significant relationship between quick ratio and inventory turnover. Here, 13.96% of the variance of log inventory turnover is explained by the variance in log quick ratio since $R^2 = 0.1396$. A unit change in log quick ratio results in a decrease in log inventory turnover as indicated by unstandardized coefficient (0.311). For the third model, the dependent variable is assets turnover. This model is statistically insignificant since the probability value associated with $F = 0.791$ is greater than 0.05.

This implies that there is no significant relationship between log quick ratio, as a measure of liquidity, and log assets turnover, as a measure of activity.

Table 5: Regression Results for Various Financial Performance Measures

Independent Variable	Dependent Variable	R ²	Adj. R ²	F	Unstandardized Coefficients			
					Constant	Std. Error	Independent Variable	Std. Error
Quick Ratio	RT	0.098	0.088	10.503**	1.168**	0.068	-0.247**	0.076
	IT	0.1396	0.131	15.411**	0.606**	0.0687	0.311**	0.0791
	AT	0.0081	-0.021	0.791	0.0500	0.0652	0.0652	0.0733
	ROS	0.0794	0.0676	6.728*	0.2711**	0.0702	0.1910*	0.0736
	ROA	0.1529	0.1421	14.082**	0.4732**	0.0550	0.2166**	0.0577
AT	ROE	0.0030	-0.0103	0.222	0.7754	0.0550	0.0267	0.0567
	ROS	0.378	0.370	47.316**	0.430**	0.062	-0.743**	0.108
	ROA	0.068	0.056	5.689*	0.430**	0.062	0.257**	0.108
RT	ROE	0.051	0.038	4.020*	0.572**	0.115	0.163*	0.081
Debt Ratio	ROS	0.1015	0.090	8.809**	0.5484**	0.114	-0.0064**	0.0022
	ROA	0.2125	0.2025	21.053**	0.8008**	0.114	-0.0076**	0.0022
	ROE	0.0003	-0.0135	0.0209	0.7659**	0.0927	0.0003	0.0019

This table shows the results of the regression analysis to test the relationship between liquidity and activity, liquidity and profitability, activity and profitability, and leverage and profitability. The relationship is * significant at $p < 0.05$, **significant at $p < 0.01$

Regarding the relationship between liquidity and profitability, three simple results were obtained. For the first model, the dependent variable is return on sales. This model is statistically significant since the F-value of 6.728 is significant at a probability value less than 0.05. This indicates a statistically significant relationship between quick ratio and return on sales. Here, 7.94% of the variance of log return on sales is explained by the variance in log quick ratio since $R^2 = 0.0794$. Liquidity, as measured by log quick ratio has a positive effect on log return on sales, as indicated by the positive sign of the coefficient (0.1910). For the second model, the dependent variable is return on assets. This model is statistically significant since the F-value of 14.082 is significant at a probability value less than 0.01. This indicates a statistically significant relationship between quick ratio and return on assets. Here, 15.29% of the variance of log return on sales is explained by the variance in log quick ratio since $R^2 = 0.1529$. Liquidity, as measured by log quick ratio has a positive effect on log return on assets, as indicated by the positive sign of the coefficient (0.2166). For the third model, the dependent variable is return on equity. This model is statistically insignificant since the probability value associated with $F = 0.222$ is greater than 0.05. This also implies that there is no significant relationship between log quick ratio, as a measure of liquidity, and log return on equity, as a measure of profitability.

To test the relationship between activity and profitability, three simple regression results were similarly generated. For the first model, the independent variable is asset turnover (the lone significant predictor) and the dependent variable is return on sales. This model is statistically significant since the F-value of 47.316 is significant at a probability value less than 0.01. Here, 37.8% of the variance of log return on sales is explained by variance in log assets turnover since $R^2 = 0.378$. Activity, as measured by log assets turnover has a negative effect on log return on sales, as indicated by the negative sign of the coefficient (-0.743). For the second model, the dependent variable is return on assets. This model is statistically significant since the F-value of 5.689 is significant at a probability value less than 0.05. Here, 6.8% of the variance of log return on assets is explained by the variance in log assets turnover since $R^2 = 0.068$. Activity, as measured by log assets turnover has a positive effect on log return on sales, as indicated by the positive sign of the coefficient (0.257). For the third model, the dependent variable is return on equity. This model is statistically significant since that F-value of 4.020 is significant at a probability value less than 0.01. Here, 5.1% of the variance of log return on equity is explained by the variance in log accounts receivable turnover since $R^2 = 0.051$. Activity, as measured by log accounts receivable turnover (the lone significant predictor) has a positive effect on log return on sales, as indicated by the positive sign of the coefficient (0.163). The

relationship between leverage and profitability was illustrated in three simple regression results generated. For the first model, the dependent variable is return on sales.

This model is statistically significant since the F-value of 8.809 is significant at a probability value less than 0.01. This also indicates a statistically significant relationship between debt ratio and return on sales. Here, 10.15% of the variance of log return on sales is explained by the variance in debt ratio since $R^2 = 0.1015$. Leverage, as measured by debt ratio has a negative effect on log return on sales, as indicated by the negative sign of the coefficient (-.0064). For the second model, the dependent variable is return on assets. This model is statistically significant since the F-value of 21.053 is significant at a probability value less than 0.01. This also indicates a statistically significant relationship between these two measures. Here, 21.25% of the variance of log return on sales is explained by the variance in dent ratio since $R^2 = 0.2125$. Leverage, as measured by debt ratio has a positive effect on log return on assets, as indicated by the negative sign of the coefficient (-.0076). For the third model, the dependent variable is return on equity. This model is statistically insignificant since the probability value associated with $F = 0.0209$ is greater than 0.05. This also implies that there is no significant relationship between debt ratio, as a measure of leverage, and log return on equity, as a measure of profitability.

To test the relationship between liquidity and leverage, the model in Table 6 was generated. This model is statistically significant since the F-value of 78.9186 is significant at a probability value less than 0.01. This indicates a statistically significant relationship between liquidity, as measured by quick ratio, and leverage. Here, almost 50% or 44.86% of the variance of debt ratio is explained by the variance in log quick ratio since $R^2 = 0.4486$. A unit change in log quick ratio results to a decrease in log accounts receivable turnover as indicated by the negative sign of the unstandardized coefficient (-24.014).

Table 6: Regression Results for Liquidity and Leverage

	Unstandardized Coefficients		T	P-Value Or Significance
	B	Std. Error		
Model 1				
Constant	40.4566	2.4019	16.843	0.000**
Quick Ratio	-24.0140	2.7032	-8.884	0.000**
Model 2				
Constant	33.0950	6.156	5.376	0.000**
RT	11.0347	4.684	2.356	0.021*
IT	-9.7964	4.578	-2.140	0.035*

Notes: The dependent variable for Model 1 is debt ratio, pairwise missing values were excluded, $R^2 = 0.4486$, adjusted $R^2 = 0.4429$, the over-all fit of this model, $F = 78.9186$ is significant at p-value of 0.000. The dependent variable for Model 2 is debt ratio, pairwise missing values were excluded, $R^2 = 0.0761$, adjusted $R^2 = 0.056$, the over-all fit of this model, $F = 3.8701$ is significant at p-value of 0.024. This table shows the results of the regression analysis to test the relationship between liquidity and leverage and leverage and profitability. *coefficient is significant at $p < 0.05$, **coefficient is significant at $p < 0.01$

In testing the relationship between leverage and profitability, the prediction model generated was found to be statistically significant since the F-value of 3.8701 is significant at a probability value less than 0.01. This model accounted for 7.61% of the variance of debt ratio since $R^2 = 0.0761$ and adjusted $R^2 = 0.056$. Using this model, leverage is primarily predicted by two measures of activity, log accounts receivable turnover and log inventory turnover since these coefficients are significant at the 0.01 level (as indicated by p-values less than 0.05 for the test statistic t). Log accounts receivable turnover has a positive effect on debt ratio while log inventory turnover has otherwise as indicated by the signs of the coefficients. The third finding of the study is that using the t-test for differences in means, there is a significant difference in some financial performance measures when the enterprises are grouped according to business profile. Results of the t-test showed no significant difference in the liquidity of the MSMEs when grouped according to form of organization. This is so, because the probability values associated with the computed value of t for both ratios are greater than 0.05 (Table 7).

Table 7: Differences in Financial Performance of the MSMEs Grouped According to Organizational Form

		N	Mean	Std. Deviation	Computed Value of T, Df	Significance	
Liquidity							
	Current Ratio	Corporation	39	14.465	39.526	0.518	p > 0.05
		Proprietorship	60	11.305	20.951	97	
Quick Ratio	Corporation	39	10.446	31.284	0.401	p > 0.05	
	Proprietorship	60	8.387	19.806	97		
Activity							
	Receivable turnover	Corporation	39	29.673	57.108	-2.271**	p < 0.05
		Proprietorship	60	86.360	190.872	74.185	
Inventory turnover	Corporation	39	13.618	17.794	1.171	p > 0.05	
	Proprietorship	60	9.655	15.532	97		
Asset Turn-over	Corporation	39	2.444	2.544	-.179	p > 0.05	
	Proprietorship	60	2.567	3.751	97		
Leverage							
	Debt Ratio	Corporation	39	60.624	32.364	5.949***	p < 0.01
		Proprietorship	60	25.177	22.771	62.239	
Profitability							
	Return on sales	Corporation	39	-0.367	16.290	1.149	p > 0.05
		Proprietorship	60	-8.686	52.356	75.301	
Return on assets	Corporation	39	1.800	2.608	0.077	p > 0.05	
	Proprietorship	60	1.541	26.028	60.814		
Return on equity	Corporation	39	1.821	12.912	-0.255	p > 0.05	
	Proprietorship	60	2.908	28.824	88.026		

The table shows the results of the t-test on the differences of financial performance of the enterprises when they were grouped according to form of organization. Based on the test, there is no significant difference in the liquidity of the enterprises, but there exists a significant difference in the accounts receivable turnover. There are also no significant differences for inventory turnover and asset turnover but there exists a highly significant difference in the debt ratio. There is also no significant difference in profitability in terms of return on sales, return on assets, and return on equity. Notation *** means the difference is significant at $p < 0.01$ while ** means the difference is significant at $p < 0.05$.

On activity, we note that when enterprises are grouped according to form of organization, there exists a significant difference in the accounts receivable turnover of MSMEs ($t=-2.271$, $p<0.05$). Further, it can be inferred that accounts receivable turnover of the single proprietorships are significantly higher than corporations. Inventory and asset turnovers showed no significant differences. On leverage, results revealed that when enterprises are grouped according to form of organization, there exists a highly significant difference in the debt ratio of the MSMEs ($t=5.949$, $p<0.01$). Further, it can be concluded that leverage of the corporations are significantly higher than the single proprietorships.

Finally, there is no significant difference in the profitability of the MSMEs in terms of return on sales, return on assets, and return on equity. Results of the one-way analysis of variance on Table 8 show no significant difference in the liquidity of the MSMEs when grouped according to type of business. The current and quick ratios reflect this finding. In terms of activity, results showed at least one business type has a high significantly different asset turnover ($F=6.483$, with p-value less than 0.01). Consequently, the post hoc comparison test revealed the asset turnover of both manufacturing and trading businesses are significantly higher than those engaged in services (mean difference of 2.810, p-value less than .008 and mean difference of 2.416, p-value less than .005, respectively).

Table 8: Difference in Financial Performance of the MSMEs Grouped According to Type of Business

		N	Mean	Std. Deviation	Computed Value of F
Liquidity					
Current ratio	Manufacturing	21	22.487	52.521	2.154
	Trading	51	7.217	12.799	
	Service	27	14.894	26.653	
Quick ratio	Manufacturing	21	17.220	41.629	2.018
	Trading	51	4.823	10.353	
	Service	27	11.224	26.295	
Activity					
Account receivable turnover	Manufacturing	21	13.379	8.785	2.078
	Trading	51	91.038	202.80	
	Service	27	62.847	155.105	
Inventory turnover	Manufacturing	21	16.615	19.387	1.592
	Trading	51	10.492	16.903	
	Service	27	8.387	12.371	
Asset turnover	Manufacturing	21	3.488	2.714	6.483***
	Trading	51	3.094	3.973	
	Service	27	0.678	0.676	
Leverage					
Debt ratio	Manufacturing	21	53.764	34.312	4.148**
	Trading	51	31.286	23.335	
	Service	27	42.605	39.885	
Profitability					
Return on sales	Manufacturing	21	1.049	0.784	1.869
	Trading	51	-13.192	52.629	
	Service	27	4.271	33.004	
Return on assets	Manufacturing	21	2.823	3.084	1.155
	Trading	51	-1.157	23.508	
	Service	27	6.015	20.996	
Return on equity	Manufacturing	21	2.447	6.285	0.531
	Trading	51	0.461	26.824	
	Service	27	6.319	26.317	

The table shows the results of the one-way variance analysis when the enterprises are grouped according to type of business. There is no significant difference in liquidity as reflected in the current and quick ratios. However, at least one business type has a high significantly different asset turnover and debt ratio. There is also no significant difference in the return on sales, assets and equity. Notation *** means the difference is significant at $p < 0.01$ while ** means that the difference is significant at $p < 0.05$.

On leverage, results of the one-way analysis of variance show that at least one business type has a significantly different debt ratio ($F=4.148$, with p-value less than 0.05). Moreover, the post hoc comparison test disclosed that the debt ratio of manufacturing business is significantly higher than those engaged in trading (mean difference of 22.478, p-value less than 0.05, sig. 0.019). With respect to profitability, the one-way analysis of variance shows that when grouped according to type of business, there is no significant difference in financial performance of MSMEs in terms of return on sales, assets and equity.

Using one-way analysis of variance, the study found that when the enterprises are grouped according to total assets, there is no significant difference in liquidity as manifested in the current and quick ratios (Table 9). In the aspect of activity, results showed that at least one MSME group has significantly different accounts receivable turnover ($F=8.102$, with p-value less than 0.01) and asset turnover ($F=6.327$, with p-value less than 0.01). Also, the post hoc comparison test for accounts receivable turnover shows that the mean ratio of small enterprises is significantly higher than the micro enterprises as well as medium enterprises (mean difference of 119.785, p-value less than 0.01 and mean difference of 145.638, p-value less than 0.01, respectively).

Table 9: Differences in Financial Performance of the MSMEs Grouped According to Asset Size

		N	Mean	Std. Deviation	Computed Value of F
Liquidity					
Current ratio	Micro	45	18.997	40.647	2.387
	Small	27	10.092	17.108	
	Medium	27	4.263	7.091	
Quick ratio	Micro	45	15.115	34.332	2.598
	Small	27	6.261	13.906	
	Medium	27	2.275	4.125	
Activity					
Account receivable turnover	Micro	45	37.229	72.854	8.102***
	Small	27	157.014	261.788	
	Medium	27	11.376	8.208	
Inventory turnover	Micro	45	11.333	17.041	0.467
	Small	27	13.294	18.963	
	Medium	27	8.944	12.791	
Asset turnover	Micro	45	2.011	2.360	6.327***
	Small	27	4.330	5.077	
	Medium	27	1.553	1.172	
Leverage					
Debt ratio	Micro	45	26.312	31.478	10.478***
	Small	27	40.850	28.728	
	Medium	27	58.813	25.649	
Profitability					
Return on sales	Micro	45	-1.436	27.329	1.120
	Small	27	-15.723	69.834	
	Medium	27	-1.716	19.327	
Return on assets	Micro	45	0.878	29.942	0.128
	Small	27	3.324	4.882	
	Medium	27	1.237	1.441	
Return on equity	Micro	45	1.058	33.084	0.268
	Small	27	5.276	7.157	
	Medium	27	2.054	14.653	

*This table shows the results of the one-way variance analysis when the enterprises are grouped according to total assets. There is no significant difference in liquidity as manifested in the current and quick ratios. At least one group has a significantly different accounts receivable turnover, asset turnover, and debt ratio. There is no significant difference in the return on sales, assets, and equity. Notation *** means that the difference is significant at $p < 0.01$.*

Likewise, the post hoc comparison test for asset turnover shows the mean ratio of small enterprises is significantly higher than micro enterprises as well as medium enterprises (mean difference of 2.319, p-value less than 0.05 and mean difference of 2.777, p-value less than 0.01, respectively). When grouped according to size of business, at least one MSME group has a highly significantly different leverage based on the debt ratio ($F=10.478$, with p-value less than 0.01). Moreover, the post hoc comparison test shows the debt ratio of medium-sized enterprises is significantly higher than micro enterprises (mean difference of 32.502, p-value less than 0.01, sig. 0.000). Finally, the results show that when grouped according to size of business, there is no significant difference in the profitability of MSMEs as reflected in the return on sales, assets, and equity. Table 10 summarizes the results of the test of difference in financial performance denoted as either significant (S) or not significant (NS).

CONCLUDING COMMENTS

This paper sought to assess the financial performance of selected MSMEs using data from the annual financial statements for the three years (2011-2013). It also sought to determine if there is a significant difference in the financial performance of the MSMEs grouped according to organizational form, business type, and asset size. The study used correlation, regression, and t-test as tools for analyzing the data. Because of the relatively small sample size and the limited geographical area covered, the study used the results of correlation analysis in testing the hypotheses. The study concluded that subject MSMEs are of sound financial health in terms of liquidity, activity, and leverage. Overall, they are in a better position to

meet currently maturing obligations, convert efficiently receivable and inventories into cash, and use credit to finance their business operations. On the contrary, the said enterprises are wanting in producing the returns necessary to maximize profit.

Table 10: Summary of the Test of Difference in Financial Performance

	Form of Organization	Type of Business	Asset Size
Current ratio	NS	NS	NS
Quick ratio	NS	NS	NS
Receivable turnover	S	NS	S
	Single proprietorships have significantly higher receivable turn-over than corporations		At least one group has a significantly different financial performance; small enterprises have significantly higher receivable turn-over than micro and medium
Inventory turnover	NS	NS	NS
Asset turnover	NS	S	S
		At least one business type has a significantly different financial performance; asset turn-over of manufacturing and trading are significantly higher than those engaged in services	At least one group has a significantly different financial performance; small enterprises have significantly higher asset turn-over than micro and medium
Debt ratio	S	S	S
	Corporations have significantly higher debt ratio than single proprietorships	Debt ratio of manufacturing is significantly higher than those engaged in trading	At least one group has a high significant different financial performance; Medium enterprises have significantly higher debt ratio than micro and small
Return on sales	NS	NS	NS
Return on assets	NS	NS	NS
Return on equity	NS	NS	NS

This table summarizes the results of the test of difference in financial performance denoted as either significant (S) or not significant (NS). There are no significant differences in the liquidity, profitability, inventory turnover, return on sales, return on assets, and return on equity when the enterprises are grouped according to the form of organization, type of business, and asset size. There are significant differences in the receivable turnover, asset turnover, and debt ratios in some groupings.

The correlation revealed that a significant linear relationship exists between liquidity and activity, liquidity and leverage, and activity and leverage. However, the three performance measures showed no significant relationship with profitability. Conversely, it is clear from the study that while the MSMEs have high scores on liquidity, leverage, and most aspects of activity, they suffer from low profitability. The t-test showed no significant difference in the liquidity, profitability, and inventory turnover of the enterprises when grouped according to the organizational form, business type, and asset size. Nonetheless, a significant difference exists in receivable turnover, asset turnover, and debt ratios. The t-test revealed that single proprietorships have significantly higher receivable turnovers than corporations, while small enterprises have significantly higher receivable turnovers than both the micro and medium enterprises. Both manufacturing and trading businesses have significantly higher asset turnover than those engaged in services while small enterprises have significantly higher asset turnover than both the micro and medium enterprises. Corporations showed significantly higher debt ratio compared with sole proprietorships; manufacturing business, compared with trading business; and medium enterprises, compared with both micro and small enterprises. The subject MSMEs should revisit their strategies on the use of financial resources to maximize profit and the overall value of their business. Since liquidity, activity, and leverage have been the core advantages of these MSMEs, efforts should be geared towards improving profitability aspects. Mainly, the enterprises should reexamine their cost structure, pricing policies, and expense management practices. They should also identify and assess the risks associated with their revenue generating activities. Since both liquidity and

activity are related to leverage, these enterprises have to reassess how the former can further result in an optimum level of borrowing.

These enterprises should take advantage of borrowed funds and assess how optimal capital structures will maximize the value of the enterprises. In that way, the MSMEs will continue to play an important role in the growth of the economy. The study also brings about the need for business owners and shareholders to make use of financial performance information in coming up with vital and critical business decisions. The risks associated with profitability confirm the need of entrepreneurs to capacitate themselves on tools and techniques to better manage their finances. Moreover, entrepreneurs have to connect financial performance to the larger external environment of the business. Future researchers can focus on a larger sample size and a broader geographical coverage. In addition, country comparison of the MSME performance can also be undertaken.

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