Moderating Role of Firm size on the relationship between Micro Factors and Financial Performance of Manufacturing Firms in Kenya

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1*Dorothy Mutunga & 2Dr. Edward Owino

1Postgraduate student
KCA University

2Lecturer
KCA University

*Corresponding email: dmutunga83@gmail.com


Abstract

The assessment and projections of economic growth of Kenya is pegged on the increase in the contribution of the manufacturing sector to the economy. However, this has not been achieved despite prominence in the government development blueprints such as Vision 2030. In reality, the performance and contribution of the Kenyan manufacturing firms to the economy has been worrying especially in the wake of realizations that other sectors of the economy such as real estate and telecommunications have surpassed it on the contribution to the GDP. In Kenya, Manufacturing share of total Kenyan economic output has stagnated at 10 with a declining contribution to total wage employment. It is this fact that necessitated an enquiry on the role of micro factors on the financial performance of manufacturing firms in Kenya. The specific objective was to determine effect of operations practices and firm financial performance, and to establish the moderating effect of firm size on micro factors on firm’s financial performance.

The macro economic factors included operational practices, production capacity, management practices. Agency theory is used as the foundational theory, with enforcements from wealth maximization theory and the resources based theory. The research design was descriptive research design. Data was collected using a self-administered questionnaire, from a population of 180 manufacturing firms in Kenya. The response rate was 95%. Descriptive statistics, correlation and regression techniques were used to analyze the data. The results of the study show a statistically positive and significant direct relationship between micro factors on firm financial performance. The results show that relationship between micro factors and firm financial performance would
performance is moderated by firm size. It was further established that firm size and firm financial performance were positively and significantly related. The study further concluded that there is a positive relationship between the moderating effect on micro factors and manufacturing firms’ financial performance. The study recommends and firm size moderates the relationship between micro factors and financial performance of manufacturing firms in Kenya.

**Keywords:** Firm size, Micro Factors, Financial Performance, Manufacturing Firms, Kenya

### 1.1 Introduction

Determinants of firm’s performance are under consideration of investigation since the evolution of modern firm. From financial point of view the ultimate goal of a firm is to maximize the stockholders’ wealth and firm performance is one of the most important factors which helps to maximize the shareholder wealth. Firm performance comprises the actual output or results of a firm as measured against its intended outputs, goals and objectives (Banker, Chang, Pizzini, 2004).

It encompasses three specific areas of firm outcomes: financial performance, which includes profits, return on assets and return on investments; secondly product market performance such as sales, market share, service propositions and thirdly shareholder return and economic value added (Lipe & Salterio, 2000). For this reason, firm performance is among the most important research considerations of financial management. Factors that have important effects on determination of firm performance could be divided into micro and macro factors (Wellage, 2012).

Factors that affect the performance of manufacturing firms can either be micro factors or macro factors. Micro factors are the internal factors, whereas macro factors are the factors from external environment. Any change in the macro factors in the economy affects the firms which could be seen in the performance of the firm as well. These effects could be positive or negative depending on the change in the macro environment and structure of the firm. Even the same change in the macro environment may or may not have the same impact on the two firms which belong to the same industry (Wei & Zhang, 2008).

Micro factors are factors close to a business that have a direct impact on its business operations and success. Micro factors refer to the factors which are in direct contact with the business organization and can affect the routine activities of business straight away (Rauch, & Frese, 2000). They are associated with a small area in which the firm functions. They are also known by the name internal factors. Micro factors are a collection of all the forces that are close to the firm. These forces are very particular for the said business only. They can influence the performance and day to day operations of the company, but for a short term only. Understanding the core micro factors affecting the business helps in planning and preparation, as well as long-term business strategy development (Bøllingtoft, & Ulhøi, 2005).

The micro factors consist of those elements which are controllable by the management. Normally the micro factors do not affect all the companies in an industry in the same way, because the size, capacity, capability and strategies are different. For example, the raw material suppliers are
giving more concessions to large sized companies. However, they may not give the same concessions to small companies (Rauch, & Frese, 2000). Micro factors show a very interesting image of firms and suggest the most important areas to develop are those such as cost management, trade and marketing, production, technical development and finances (Volberda, Foss, & Lyles, 2010).

Production Capacity is a micro factor determined within the firm. It is the volume of products or services that can be produced by an enterprise using current resources. Capacity in manufacturing firms is often defined as the capability of an object, whether that is a machine, work center, or operator, to produce output for a specific time period. Companies measure capacity in different ways using the input, output, or a combination of the two as the measure (Tybout, 2000).

Performance is the result of the fulfillment of the tasks assigned. Company performance describes how individuals in the company try to achieve a goal. Company performance illustrates the magnitude of the results in a process that has been achieved compared with the company’s goal. Company’s performance is evaluated in three dimensions. The first dimension is company’s productivity, or processing inputs into outputs efficiently. The second is profitability dimension, or the level of which company’s earnings are bigger than its costs. The third dimension is market premium, or the level of which company’s market value is exceeding its book value (Wellage, 2012).

Financial performance plays an important role in the company performance that is expressed in monetary term. Financial performance emphasizes on variables related directly to the financial report. Before investing their funds, investors should first know about the performance of the company. The simplest way to determine the performance of the company is to look at the company’s financial statement. In this intense competition among the companies, the company is expected to be able to maintain and improve its performance in order to compete with others.

Firm performance comprises of the actual output or results of a firm as measured against its intended outputs, goals and objectives (Banker, Chang, Pizzini, 2004). It encompasses three specific areas of firm outcomes: Financial performance, namely profits, return on assets and return on investments; Product market performance such as, sales, market share, service propositions and shareholder return, specifically total shareholder return and economic value added (Lipe & Salterio, 2000). This has called for the need of balancing the accuracy and integrity of financial measures with the drivers of future financial performance of the organization (Banker et al, 2000).

Different approaches to the measurement of firm performance for financial services organizations have been used to analyze the efficiency and performance of financial sectors across the world (Berger & Humphrey, 1997). The traditional approach involves analyzing major financial indicators of the organization over time (Rahut, Castellanos & Sahoo, 2010). Profitability, earning, operational strategy, productivity, efficiency, leverage and liquidity, capital adequacy, growth and aggressiveness and market share were used by Rahut et al. (2010) to represent traditional measures of performance of financial institutions. Mwangi et al. (2013)
analyzed the effect of financial innovations on the performance of commercial banks in Kenya. The study used profitability, total income, total assets and customer deposits as proxies of performance of commercial banks. According to Dew (2007), the lifeblood of a Bank is determined by how well it can gather funds from the customers at the lowest cost; buy money, do something with the money, and then sell it to their profit.

The Strategic Balanced score card provides a framework in which both financial and nonfinancial success measures are linked by the firm’s strategy (Banker, Chang, Pizzini, 2004). It looks at performance from four perspectives: financial, customer, internal process and learning and growth. According to Kaplan and Norton (1996) the strategic balanced score card can translate a company’s vision and strategy into a coherent and linked set of firm performance measures; these measures should include both outcome measures and the performance drivers of those outcomes.

Financial performance indicators in the form of ratios include profitability, liquidity, utilization financial structure and investment – shareholder ratio (Philip, 2004). Measure of profitability is by gross profit margin; the amount of money made after direct costs of sales have been taken into account, operating margin; lies between the gross and net measures of profitability and net profit margin; takes all costs into account. Liquidity ratios indicate the ability to meet short-term obligations, efficiency ratios indicate how well the business assets are in use and financial leverage/gearing ratios indicate the sustainability to the exposure of long-term debt (Leah, 2008). These ratios can be combined to determine the rate of return for a company and its owners and the rate at which the company can grow the sustainable rate of growth. By adding data about the company's stock market performance, the analyst can gain insight into how financial markets view the company's performance (Qayyum and Bodla, 2010). Financial performance of could also be as a result of financial planning, financial control and decision making by the management.

There are many subjective and objective measures of financial performance of firms with equally many indicators of such performance. The financial performance of a firm is described as a measure of an enterprise’s gains over its operative years, and it is determined by several factors. According to Stierwald (2009) the size of the firm is one of the specific firm level characteristics which can impact on the firm’s performance (Bauer, 2004; Joshua, 2008). The size of the firm influences the option of financing that a firm may go for. Larger firms have a tendency of leveraging while smaller ones are inclined to employ equity. The firm size has a significant effect on the financial performance of the firm no matter the industry and other micro-economic variables (Raheman, Afza, Qayyum and Bodla, 2010).

Kenya is a favorite destination for investors willing to put their money in manufacturing. While the country is not endowed with the mineral wealth most of its neighbors flaunt, it more than makes up for it, thanks to the following: one of the best workforces in Africa, a productive agricultural sector and hence a dependable source of raw materials for agro-based manufacturing, a fairly versatile financial services sector, bankable telecommunications and proximity to port facilities (Wambua, 2016).
Kenya also has locational advantages as the gateway and a natural launch pad to the markets of the mostly Landlocked East and Central African countries like Uganda, Southern Sudan, Rwanda, Burundi, parts of northern Tanzania and Eastern Democratic Republic of the Congo (DRC). According to the Economic Recovery Strategy for Employment and Wealth Creation Report, the manufacturing sector in Kenya is a major source of growth, still with high potential for growth and investment. The role of the manufacturing sector in Vision 2030 is to create employment and wealth (Muthui, 2014).

Manufacturing sector in Kenya is among the key productive sectors identified for economic growth and development because of its immense potential for wealth, employment creation and poverty alleviation (Kagechu, 2013). The firms face a number of challenges that include limited access to the market, high labour costs and start-up capital. According to research (Kagechu, 2013), Kenya's manufacturing sector contributes to 10% of the Gross Domestic Product (GDP) and 12.5% of exports (Were, 2007). In recent years, manufacturing firms have increased exports of textiles, mainly targeting the US market. This is attributed to the export-led growth as a policy priority in Kenya.

Most of the firms registered under this sector are owned and operated by families. The bulk of the products manufactured include food and beverages, building and construction materials, household items and chemicals. The sector is key to achieving the country’s vision of becoming prosperous and globally competitive by 2030 (Were, 2007). The manufacturing sector in Kenya has been the main conduit for the country’s integration into regional and world markets like Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) (Were, 2007). The sector has attracted international investors as well (Muhoro, 2011).

1.2 Statement of the Problem

The manufacturing industry in Kenya has been beleaguered by obstacles. Manufacturing share of total Kenyan economic output has stagnated at 10% with a declining contribution to total wage employment (Kenya Economic Report, 2013). Nearly every news outlet has covered the closing of factories, labor disputes between companies and their employees or reductions in force due to the shift of labor off-shore (Muhoro, 2015). The reputation of the industry has been marred by low production, lack of staff motivation, remuneration and staff training, in addition to quality-control problems (Were, 2016). The assessment and projections of economic growth of is pegged on the increase in the contribution of the manufacturing sector to the economy (GOK, 2013). However, this has not been achieved despite prominence in the government development blueprints such as vision 2030.

The performance and contribution of the manufacturing firms to the economy has been worrying especially in the wake of realizations that other sectors of the economy such as real estate and telecommunications have surpassed it on the contribution to the GDP (GOK, 2014). Job loss in the industry has been ongoing in the past five years preventing the sector from moving out of the infancy stage. This is as a result of companies stopping production altogether or moving production plants to neighboring countries (Muthui, 2014). Even though several macro factor challenges are faced by the manufacturing sector that include poor infrastructure, market access
and local markets being flooded by cheap imports, improvement in micro factors can counter the effect leading to improvement in performance. It is this fact that has necessitated an enquiry on the role of micro factors on the financial performance of manufacturing firms in Kenya.

Previous research studies relevant to this study include Gill, Singh, Mathur, and Mand, (2014), study on the impact of operational efficiency on the future performance of Indian manufacturing firms, Krasnikov, and Jayachandran, (2008), study on the relative impact of marketing, research-and-development, and operations capabilities on firm performance, Tybout, (2000), study on manufacturing firms in developing countries and Muthui, (2014) study on Challenges facing Kenya’s soap manufacturing firms exporting to East Africa Community. There is so far little study and evidence on how firm size moderates the relationship between Micro Factors and Financial Performance of Manufacturing Firms in Kenya.

1.3 Research Objective

Moderating Role of Firm size on the relationship between Micro Factors and Financial Performance of Manufacturing Firms in Kenya

2.0 Literature Review

2.1 Theoretical Framework

The theory explains the moderating role of firm size on the relationship between micro factors and financial performance of manufacturing firms in Kenya.

2.1.1 Resource-based theory

According to the resource-based theory, a firm’s competitive advantage is based on the possession of tangible and intangible resources, which are difficult or costly for other firms to obtain. In order to sustain the firm’s competitive, advantage these resources must be valuable, rare, inimitable and substitutable (Barney, 1991). A major contribution of resource-based theory is that it explains long-lived differences in firm profitability that cannot be attributed to differences in industry conditions (Peteraf, 1993). It can be argued that considerable resource heterogeneity exists among various shareholder categories. For emerging economy firms, these differences arise from shareholders being either foreign or domestic and financial or strategic. The impact on firm performance of these owners with diverse resource endowments is expected to differ as a consequence of this heterogeneity in resources and organizational capabilities.

The work carried out by scholars supporting the RBV merges with that of Prahalad and Hamel (1990) in as much as the latter state that an organization’s competitiveness should be based on the development of core competencies. These competencies should follow the criteria of difficult limitability, providing actual benefits to customers, providing access to different markets, and fostering an environment of fast learning that must be put to work before the competitors do it.

According to these authors, the most powerful way to face competition is associated with the ability to identify, nurture, and exploit core competencies that enable growth (Prahalad and Hamel, 1990). In their opinion, it amounts to securing a portfolio of core competencies, rather than a portfolio of businesses. According to Prahalad and Hamel (2000), core competencies
result from collective learning, especially in relation to integrating multiple chains of technology, organizing work, and delivering value to the customer. Here we find a fundamental point of RBV: Customers must clearly see these core competencies as unique. In these authors’ opinion, the actual sources of competitive advantage are found in the ability to consolidate technologies and the production capacity in competencies that allow fast adaptation to changes and/or new opportunities.

2.2 Empirical Literature

Firm size, as a construct for firm characteristics, is one of the most acknowledged determinants of a financial performance (Beard & Dess, 2011). Indeed, firms with the greatest market share and assets report relatively better performance. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones (Amato and Wilder, 2012). With this investment power, such big firms are able to diversify their portfolios and hedge their operating risks better. It is no surprise that bigger firms when managed well spread their influence in many sectors of the economy they operate. Past research also shows that the probability of firm growth, firm failure, and the variability of firm growth decreases as firm’s age (Yasuda, 2005). According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies.

Firm diversification is a corporate strategy to increase sales volume from new products and new markets. Many researchers have studied the relationship between firm diversification and performance Ramanujam and Varadarajan (2010), provide excellent surveys, analyses, and critiques of previous findings. The observation is that there does not seem to be any consistent or conclusive findings between firm diversification and performance. Stimpert and Duhaine (2007), argue that the inconsistencies are due to the fact the diversification impacts other variables, which in turn determines firm performance. Since firm size and diversification are positively correlated, the arguments about inertia and constraints on action related to firm size could also apply to diversification.

Firm leverage is the degree to which a company uses fixed-income securities, such as debt and preferred equity. With a high degree of financial leverage come high interest payments. The trade-off between agency costs of debt and equity (Jensen and Meckling, 2006); the limited liability effect of debt (Brander and Lewis, 1986); and the disciplining effect of debt all suggest a positive effect of leverage on performance. They suggest that leverage opens up opportunities for rivalry predation in concentrated product markets, thus conditioning the performance effect of leverage on the degree of competition in the life insurance industry.

Firm size is one of the most acknowledged determinants of a financial performance (Beard & Dess, 2001). The causal relationships between size and financial performance have been widely tested with ambiguous results. Several studies suggest that a positive relationship exists between company size and financial performance. Bigger firms are presumed to be more efficient than smaller ones. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones (Amato and Wilder, 1985). Firm size helps in achieving economies of scale.
Firm age (measured as the number of years a company is operating in the market since it was founded) is an important determinant of financial performance. Past research shows that the probability of firm growth, firm failure, and the variability of firm growth decreases as firm’s age (Yasuda, 2005). According to the life cycle effect, younger companies are more dynamic and more volatile in their growth experience than older companies. Maturity brings stability in growth as firms learn more precisely their market positioning, cost structures and efficiency levels. Becker et al. (2010) have studied the effects of firm size on performance in the firms operating in manufacturing sector in USA using the data of years 1987 to 2002. Results of the study showed that negative and statistically significant relations exist between the total assets, total sales and number of employees of the firms and their financial performance.

Krasnikov, and Jayachandran (2010) study found a positive relationship between firm size and financial performance. They used different measures of size, sales and total assets and profitability, profit margin and profit on total assets while applying model on a sample of 15 companies operating in South India in their study, which was based on a simple semi-logarithmic specification of the model. Lee (2009) who used fixed effect dynamic panel data model and performed analysis on a sample of more than 7000 US publicly-held firms. According to him absolute firm size plays a remarkable role in explaining performance. Ozgulbas et al. (2006) have studied the effects of firm size on performance over the firms operating in Istanbul Stock Exchange between the years of 2000 to 2005. As a result of their study, they have found that big scale firms have a higher performance as compared to small scale firms. Jonsson (2007) has studied the relation between profitability and size of the firms operating in Iceland. Results of the analysis showed that bigger firms have higher financial performance as compared to smaller firms.

Size-profit relationship for the firms functioning in the financial services sector was tested by Amaton and Burson (2007). They tested both linear and cubic form of the relationship. A negative influence of firm size on profitability was revealed with the linear specification in firm size, evidence of a cubic relationship was detected between return on assets and firm size. Velnampy (2005) pointed a study on investment appraisal and financial performance of toddy bottling project in Sri Lanka which found that the management of the project failed to attain the budgetary results, even though the Net Present Value (NPV), Internal Rate of Return (IRR) and benefit cost ratio showed the project as commendable.

Velnampy (2006) studied the financial position of the companies and the relationship between financial position and profitability with the sample of 25 public quoted companies in Sri Lanka through the use of Altman Original Bankruptcy Forecasting Model. According to his verdicts, out of 25 companies only 4 companies were in the danger of going bankrupt in the near future. Moreover, he also found that in deciding the financial position of the quoted companies, earning/total assets ratio, market value of total equity/book value of debt ratio and sales/total assets in times were the most significant ratios. Banchuenvijit (2012) studied factors affecting performances of the firms operating in Vietnam. A positive relation has been found between total sales and profitability of the firms but on the contrary, a negative relation has been found
between profitability and total assets. Additionally, the author found statistically non-significant results between number of employees and profitability.

Velnampy and Nimalathasan (2010) studied the relationship between firm size and financial performance of all the branches of Bank of Ceylon and Commercial Bank in Sri Lanka over the period of 10 years from 1997 to 2006. They observed that there was a positive relationship between firm size and profitability in Commercial Bank, but there was no relationship between firm size and profitability in Bank of Ceylon. Velnampy (2013) discovered that there was no correlation between corporate governance and firms’ performance measures. The sample of 28 manufacturing companies using the data representing the period of 2007 to 2011 revealed that the determinants of corporate governance were not correlated to the performance measures of the organization.

3.0 Research Methodology

The study adopted a descriptive survey design. The target population was 180 CEOs of the manufacturing firms. This study used primary data which were collected through the use of a questionnaire. To check the validity and reliability of the questionnaires in gathering the data required for purposes of the study, a pilot study was carried out. Data analysis was conducted using SPSS version 20. Both descriptive and inferential statistics were generated. The specific descriptive statistics included percentages and frequencies while the inferential statistics included a multiple linear regression model and Pearson correlation.

4.0 Research Findings and Discussion

4.1 Response Rate

The number of questionnaires that were administered was 180. A total of 172 questionnaires were properly filled and returned. This represented an overall successful response rate of 95.56% as shown on Table 1. According to Mugenda and Mugenda (2003) and also Kothari (2004) a response rate of 50% is adequate for a descriptive study. Babbie (2004) also asserted that return rates of 50% are acceptable to analyze and publish, 60% is good and 70% is very good. Based on these assertions from renowned scholars 90 % response rate is adequate for the study.

<table>
<thead>
<tr>
<th>Response</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Returned</td>
<td>172</td>
<td>95.56%</td>
</tr>
<tr>
<td>Unreturned</td>
<td>8</td>
<td>4.44%</td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1: Response Rate
4.2 Influence of firm size on the relationship between micro factors and financial performance of manufacturing firms

4.2.1 Joint Regression model before moderation

A regression model was first run before moderation. A regression model was run to determine the relationship between independent and dependent variables. The results in Table 2 present the fitness of model used in explaining the relationship between production capacity, management practices, operational practices and financial performance of manufacturing firms in Kenya. The independent variables (production capacity, management practices, operational practices) were found to be satisfactory variables in determining the financial performance of manufacturing firms in Kenya. This was supported by the coefficient of determination also known as the R-square of 0.251. This means that production capacity, management practices and operational practices explain 25.1% of the variations in the dependent variable which is financial performance of manufacturing firms in Kenya. These results further mean that the model applied to link the relationship of the variables was satisfactory.

Table 2 Model Fitness

<table>
<thead>
<tr>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.501</td>
<td>0.251</td>
<td>0.237</td>
<td>0.402669</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Operational practices, Production capacity, Management Practices

Table 3 provides the results on the analysis of the variance (ANOVA). The results indicate F statistic of 18.734 which is statistically significant as supported by the reported p=0.00 which was less than the conventional probability of 0.05 significance level. Further, the results imply that the independent variables, production capacity, management practices and operational practices, were good predictors of financial performance of manufacturing firms in Kenya.

Table 3: Analysis of Variance

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>9.113</td>
<td>3</td>
<td>3.038</td>
<td>18.734</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>27.24</td>
<td>168</td>
<td>0.162</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36.353</td>
<td>171</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Regression of coefficients results in table 4 shows that Production capacity and Firm financial performance are positively and significantly related (r=0.092, p=0.000). The table further indicates that Management practices and firm financial performance are positively and significantly related (r=0.227, p=0.009). It was further established that Operational practices and firm financial performance were positively and significantly related (r=0.286, p=0.000).
A regression model before including firm size as a moderating variable was therefore of the form:

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots (3) \]

Where:

\( Y \) = Financial Performance
\( X_1 \) = Production Capacity
\( X_2 \) = Operational Practices
\( X_3 \) = Management Practices

\[ Y = 1.348 + 0.092 X_1 + 0.286 X_2 + 0.227 X_3 \]

The hypothesis was tested by running an ordinary least square regression model. The acceptance/rejection criteria were that, if the p value is greater than 0.05, the Ho is not rejected but if it’s less than 0.05, the Ho fails to be accepted.

### 4.2.2 Regression model after moderation

Regression analysis was performed by using the composites of the variables. The data was input to the SPSS software. Results were then presented in Tables 5, 6 and 7.

#### Table 4: Regression of Coefficients before moderation

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>1.348</td>
<td>0.298</td>
<td>0.177</td>
<td>4.518</td>
<td>0.000</td>
</tr>
<tr>
<td>Production capacity</td>
<td>0.092</td>
<td>0.035</td>
<td>0.177</td>
<td>2.638</td>
<td>0.009</td>
</tr>
<tr>
<td>Management Practices</td>
<td>0.227</td>
<td>0.054</td>
<td>0.293</td>
<td>4.204</td>
<td>0.000</td>
</tr>
<tr>
<td>Operational practices</td>
<td>0.286</td>
<td>0.075</td>
<td>0.269</td>
<td>3.843</td>
<td>0.000</td>
</tr>
</tbody>
</table>

A Dependent Variable: Financial Performance

#### Table 5: Model Fitness

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.542</td>
</tr>
<tr>
<td>R Square</td>
<td>0.294</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.281</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.3909937</td>
</tr>
</tbody>
</table>

The results presented in Table 5 present the fitness of model used in the regression model in explaining the study phenomena. The composite variables were found to be satisfactory variables.
in explaining financial performance of manufacturing firms in Kenya. This is supported by coefficient of determination also known as the R square of 29.4%. This means that composite variables explain 29.4% of the variations in the dependent variable which is financial performance of manufacturing firms. This results further means that the model applied to link the relationship of the variables was satisfactory.

Table 6: Analysis of Variance of Moderated Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>10.670</td>
<td>3</td>
<td>3.557</td>
<td>23.264</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>25.683</td>
<td>168</td>
<td>0.153</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36.353</td>
<td>171</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 provides the results on the analysis of the variance (ANOVA). The results indicate that the model was statistically significant. Further, the results imply that the independent variables are good predictors of financial performance in manufacturing firms. This was supported by an F statistic of 23.264 and the reported p=0.00 which was less than the conventional probability of 0.05 significance level. A regression model was secondly run after moderation.

Table 7: Regression model after moderation

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td>1.202</td>
<td>0.285</td>
<td></td>
<td>4.221</td>
<td>0.000</td>
</tr>
<tr>
<td>Micro Factors</td>
<td>0.434</td>
<td>0.074</td>
<td>0.4</td>
<td>5.861</td>
<td>0.000</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.165</td>
<td>0.046</td>
<td>0.246</td>
<td>3.593</td>
<td>0.000</td>
</tr>
<tr>
<td>Interaction term</td>
<td>0.026</td>
<td>0.009</td>
<td>0.187</td>
<td>2.857</td>
<td>0.005</td>
</tr>
</tbody>
</table>

Regression of coefficients results after moderation in table 7 shows that micro factors and firm financial performance are positively and significantly related (r=0.434, p=0.000). It was further established that firm size and firm financial performance were positively and significantly related (r=0.165, p=0.000). Further the interaction between the independent variables and moderating variable (firm size) is statistically significant (0.005), therefore firm size moderate the relationship between production capacity, management practices, operational practices and firm financial performance.

A regression model after including firm size as a moderating variable was therefore of the form:

\[ Y = 1.202 + 0.434X + 0.165X_2 + 0.026X_4 \]

Where,

\[ Y = \text{Financial Performance} \]
\[ X_1 = \text{Micro Factors} \]
\[ X_2 = \text{Firm size} \]
Firm size is a moderator variable; thus, moderation is supported. Since the calculated p value of the interaction is $0.005 < 0.05$, the null hypothesis is rejected and thus firm size positively moderates the relationship between production capacity, management practices, operational practices and firm financial performance.

This finding is consistent with that of Beard & Dess, (1981) that the probability of firm growth, firm failure, and the variability of firm growth decreases as firm’s age. Firms with the greatest market share and assets report relatively better performance. The market power and access to capital markets of large firms may give them access to investment opportunities that are not available to smaller ones. Also, Amato and Wilder, (1985) that with the investment power, such big firms are able to diversify their portfolios and hedge their operating risks better. It is no surprise that bigger firms when managed well spread their influence in many sectors of the economy they operate.

5.0 Conclusion

The study further concluded that there is a positive relationship between the moderating effect on micro factors and manufacturing firms’ financial performance. Larger firms have a tendency of leveraging while smaller ones are inclined to employ equity. The firm size has a significant effect on the financial performance of the firm no matter the industry and other micro-economic variables.

6.0 Recommendation

The study recommends and firm size moderates the relationship between micro factors and financial performance of manufacturing firms in Kenya. Larger firms have a tendency of leveraging while smaller ones are inclined to employ equity. Firm size helps in achieving economies of scale.

7.0 References


