Journal of Economics

Effect of Production Capacity on the Financial Performance of Manufacturing Firms in Kenya

Dorothy Mutunga & Dr. Edward Owino

Stratford Peer Reviewed Journals and Book Publishing
Journal of Economics
Volume 1||Issue 1||Page 15- 24||December||2017|
Email: stratfordjournals.org

Effect of Production Capacity on the Financial Performance of Manufacturing Firms in Kenya

[1*]Dorothy Mutunga, [2]Dr. Edward Owino

[1]post graduate student

KCA University

[2]Lecturer

KCA University

***Corresponding email: dmutunga83@gmail.com**

How to cite this article: **Mutunga, D. & Owino E. (2017). Effect of Production Capacity on the Financial Performance of Manufacturing Firms in Kenya.** ***Journal of Economics, 1*****(1), 15 - 24.**

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 objectives were; examine the relationship between production capacity and firm financial performance. Wealth Maximization Theory and the resources based theory were used. 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. Production capacity was found to be satisfactory variables in explaining financial performance of manufacturing firms in Kenya. The results indicate that the model was statistically significant. The results imply that production capacity, are good predictors of financial performance in manufacturing firms. The study concluded that there is a positive relationship between production capacity and manufacturing firms' financial performance. The study recommends capacity building through training to improve manufacturing firms' financial performance.

Keywords: *production capacity, financial performance, manufacturing firms, Kenya*

Stratford Peer Reviewed Journals and Book Publishing
Journal of Economics
Volume 1||Issue 1||Page 15- 24||December||2017|
Email: stratfordjournals.org

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).

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, Castallanos & 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.

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 capacity production affects financial performance of manufacturing companies in Kenya.

1.3 Research Objective

To assess the effect of production capacity on the financial performance of manufacturing firms in Kenya.

2.0 Literature Review

2.1 Theoretical Framework

The theories explaining the effect of production capacity on the financial performance of manufacturing firms in Kenya is Recourse-based theory.

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.

2.3 Empirical Literature

The production capacity of a firm is largely influenced by the number, quality and expertise of the employees in the firm and more so the manufacturing firms. One of the major concerns of manufacturing companies is focused on improving worker productivity, which is one of the job performance measures, (Borman, 2004). The performance of the employees on the specified task is also critical. Greguras (2006) describes job performance as the extent to which an organizational member (production worker) contributes to achieving the objectives of the organization.

Leadership effectiveness, time management, process change and among others, influences the production worker performance in the medium and large-scale manufacturing industry. Improvement of workers' productivity is usually the biggest component and step towards increase in production capacity. According to Borman (2004), one of the major concerns of manufacturing companies is improving workers' productivity, which is one of the job performance measures. The definition and context of job performance are diverse. Keller (2006) points out that, when you expect the best output from your employees, they will be given the best treatment. On the other hand, when you give employees low incentives and motivation, you receive low performance in return, which was named by Marizoni and Barsoux (2004) as set-up to fail syndrome.

Production capacity and firm productivity are linked concepts and studies have established that invariably, better production capacity leads to better productivity. A study done by Griffith, Redding and Simpson (2004) on foreign ownership and productivity, found out that there is more productivity dominating from multinational establishments than there owned by purely domestic firms on account of production capacity. The study sorts the reason being foreign multinationals are operating outside their home market which may require them to possess some additional advantage in order to compete effectively through improved production and the attendant enlargement of market share. The production capacity is usually tied to the refinement of processes and use of innovations in production. For instance, a study by Maria (2014) on innovation and foreign ownership affirmed that increased levels of investment activities upon foreign investment are predicted to lead to higher productivity for acquitted firms.

An organization's capacity position is often the culmination of decision-making processes that involve a number of factors. If an organization carries too much spare capacity, operations may become inefficient. Too little spare capacity may result in a loss of sales or other constraints on action (Bradley et al., 2010). The specific role that an organization's capacity cushion takes in the strategic process is often influenced by the environment as well as organizational characteristics. Both scholars and practitioners agree that most organizations operate with at least some slack (Cyert ad March, 2013), but the literature remains inconsistent with regards to its depiction of the performance effects of an organization's capacity position over time. Because the competitive value of a firm's capacity position is a function of both time and sizing, a firm's return on its capacity is likely to vary substantially over time (Hendricks and Singhal, 1995; Daniel et al., 2004).

Capacity plays an important role in firms' efforts to accommodate demand growth or variability (Olhager et al., 2001). Because capacity changes tend to be lumpy, require large capital investments, and have long lead times, decision makers must carefully weigh the advantages and disadvantages as to when capacity changes are needed (Olhager et al., 2001). According to Hayes and Wheelwright (2004) there are three strategies for responding to anticipated changes in demand: lead, lag or track (Olhager et al., 2001).

2.4 Conceptual Framework

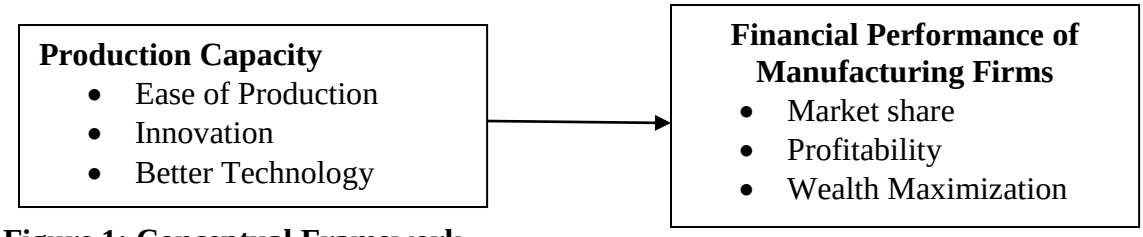

Figure 1: Conceptual Framework

3.0 Research Methodology

The study adopted a descriptive survey design. The 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 1: Response Rate

Response	Frequency	Percent
Returned	172	95.56%
Unreturned	8	4.44%
Total	**180**	**100%**

4.2 Influence of Production Capacity on Financial Performance

This section presents the descriptive results on statements on production capacity on financial performance. Descriptive statistics were obtained through running the statements of each objective using descriptive custom table and presenting in percentages. The mean and the standard deviations were obtained through running the descriptive statistics. In this study, production capacity on financial performance was measured by eight questions. The respondents were asked to give their opinion regarding production capacity on financial performance. Specifically, they were asked to rate on a scale of 1 to 5 1= Strongly disagree, 2-Disagree, 3-Neutral, 4-Agree and 5-Stronly agree. The analysis is on Table 4.2. The highest of the mean was 5 while the lowest was 1. Therefore, a mean of 1=Strongly disagree, 2disagree, 3-Neutral, 4-agree and 5-Strongly agree.

Table 2: Production Capacity

Statements	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Dev
Production capacity has been on an increasing trend	4.7%	7.6%	10.5%	47.7%	29.7%	3.90	1.06
Production capacity planning has enable increase in production	5.2%	9.9%	13.4%	37.2%	34.3%	3.85	1.15
Several trainings on production effectiveness has improved the production rate	9.9%	5.8%	15.1%	40.7%	28.5%	3.72	1.22
The quality of production has been maintained despite the increase in production	19.2%	14.5%	3.5%	45.3%	17.4%	3.27	1.42
Increase in revenue is main mainly caused by the high production capacity	49.4%	33.7%	1.7%	2.3%	12.8%	1.95	1.33
Innovation has led to increase in production capacity	14.5%	6.4%	9.3%	17.4%	52.3%	3.87	1.48
New technologies have aided in the production of quality and quantity units	4.7%	12.8%	9.3%	40.7%	32.6%	3.84	1.15
The ease of production has increase revenue and hence financial performance	4.7%	4.7%	10.5%	40.1%	40.1%	4.06	1.06

According to results in Table 2, majority of the respondents who represented 47.7% of the respondents agreed that that production capacity has been on an increasing trend, 29.7% strongly agreed, 10.5% were neutral, and 7.6% disagreed while only 4.7% strongly disagreed. In general, 77.4% agreed with the statement that production capacity has been on the upward trend. Results also indicated that 71.5% agreed that production capacity planning has enable increase in production, 62.7% agreed that the quality of production has been maintained despite the increase in production, 83.1% disagreed with the statement that increase in revenue is main mainly caused by the high production capacity, 69.7% agreed with the statement that innovation has led to increase in production capacity, 73.3% agreed with the statement that new technologies have aided in the production of quality and quantity units while 80.2% of the respondents agreed that the ease of production has increase revenue and hence financial performance. On a five-point scale, the average mean of the responses was 3.56 which mean that majority of the respondents agreed with most of the statements; however, the answers were varied as shown by a standard deviation of 1.23. The highest of the mean was 5 while the lowest was 1. Therefore, a mean of 1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=Strongly agree.

4.3 Relationship between Production Capacity and Financial performance of Manufacturing Firms.

Simple linear regression was carried out to determine the relationship between production capacity and financial performance. Regression analysis was performed by using the composites of the two variables. The data was input to the SPSS software. Results were then presented in Tables 3, 4 and 5.

Table 3: Model Fitness

Indicator	Coefficient
R	0.224
R Square	**0.050**
Adjusted R Square	0.45
Std. Error of the Estimate	0.4506239

The results presented in Table 3 present the fitness of model used in the regression model in explaining the study phenomena. Production capacity was 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 5.0 %. This means that production capacity explains 5.0 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 4: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.832	1	1.832	9.023	.003b
	Residual	34.521	170	0.203		
	Total	36.353	171			

Table 4 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, production capacity, are good predictors of financial performance in manufacturing firms. This was supported by an F statistic of 9.023 and the reported p=0.003 which was less than the conventional probability of 0.05 significance level. Regression of coefficients results in Table 5 shows that financial performance of manufacturing firms and production capacity are positively and significant related (r=0. 117, p<0.05).

Table 5: Regression of Coefficients

sub construct variable	B	Std. Error	Beta	t	sig
(Constant)	3.084	0.155		19.885	0.000
Production Capacity	**0.117**	0.039	0.224	3.004	**0.003**

5.0 Conclusion

The study concluded that there is a positive relationship between production capacity and manufacturing firms' financial performance. 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.

6.0 Recommendation

The study recommends capacity building through training to improve manufacturing firms' financial performance. Production 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.

7.0 References

Gill, A., Singh, M., Mathur, N., & Mand, H. S. (2014). The Impact of Operational Efficiency on the Future Performance of Indian Manufacturing Firms. *International Journal of Economics and Finance*, *6*(10), 259.

Griffith, R., Redding, S., & Simpson, H. (2004). Foreign ownership and productivity: new evidence from the service sector and the R&D lab. *Oxford Review of Economic Policy*, *20*(3), 440-456.

Krasnikov, A., & Jayachandran, S. (2008). The relative impact of marketing, research-and-development, and operations capabilities on firm performance. *Journal of marketing*, *72*(4), 1-11.

Muthui, M. W. (2014). *Challenges facing Kenya's soap manufacturing firms exporting to East Africa Community* (Doctoral dissertation, University of Nairobi).

Rauch, A., & Frese, M. (2000). Psychological approaches to entrepreneurial success: A general model and an overview of findings. *International review of industrial and organizational psychology*, *15*, 101-142.

Tybout, J. R. (2000). Manufacturing firms in developing countries: How well do they do, and

Volberda, H. W., Foss, N. J., & Lyles, M. A. (2010). Perspective—Absorbing the concept of absorptive capacity: How to realize its potential in the organization field. *Organization science*, *21*(4), 931-951.

Wei, K. J., & Zhang, Y. (2008). Ownership structure, cash flow, and capital investment: Evidence from East Asian economies before the financial crisis. *Journal of Corporate Finance*, *14*(2), 118-132.