CENTRALIZED PURCHASING STRATEGIES AND ORGANIZATIONAL PERFORMANCE IN THE MANUFACTURING INDUSTRY: A CASE OF MABATI ROLLING MILLS

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MAY 2018
DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university other than the Kenyatta University for academic credit.

Sign: ____________________________  Date: ______________________________

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This project has been presented for examination with my approval as the appointed supervisor.

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DEDICATIONS
I dedicate this work to my family members who have been a great support and source of inspiration in the course of conducting the study. I am also indebted to all the support have received from my friends and colleagues during the entire process.
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First I acknowledge the almighty God for his blessings and abundance that made this research project a success. I also acknowledge the support of my supervisor who read and reread all the drafts that assisted in coming up with this comprehensive research project. Lastly I acknowledge the support of all the individuals who in one way or another made this research work a success.

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OPERATIONAL DEFINITION OF TERMS

Central Purchasing  This is the centralization of the purchasing process within an organization
strategies to a central location to enhance the economies of scale

E-Purchasing
The ways an organization uses an integrated web-based systems or
(Procurement) network communication technologies employed across all or part of an
organization’s purchasing process

Economies of Scale
Refers to the benefits accruing to the organization from purchasing in
large volumes.

Inventory Management
This is the continuous process of controlling inflow and outflow of
inventory within the firm.

Organization
This is measured in terms of balance scorecard; financial and non-
Performance financial perspectives.

Standardization
This is the process of ensuring technical standards are conformed to in the
purchasing process.

**LIST OF ABBREVIATIONS**

ELI: Empirical Leaniness Indicator

ICT: Information Communication and Technology

IT: Information Technology

MRM: Mabati Rolling Mills
ABSTRACT

In the current global business environment formulating and implementing the best strategies is essential for organization success. One of the key units in the manufacturing industry is the purchasing department. The major share of the organization costs are utilized within the purchasing department hence finding and employing the best purchasing strategies is key to fostering organization performance. Despite the central role of the purchasing department there is minimal scholarly literature examining the strategies employed in purchasing. Hence this study examined the influence of centralized purchasing strategies on the organization performance within manufacturing firms. The study was be guided by the following objectives; to determine the influence of economies of scale; e-procurement; standardization and inventory
management on the organization performance of Mabati Rolling Mills. The research is grounded on the resource dependency and the agency theory. The research adopted descriptive research design. The target population for the study was personnel at Mabati Rolling Mills. The study employed probability sampling in selecting a sample size of 50 respondents drawn from production department, finance, human resources, marketing and sales and the procurement department within Mabati Rolling Mills in Athi River. The study collected both primary and secondary data to examine the relationship between the two variables. The study utilized the Cronbach alpha in assessing the reliability of the study while validity was tested using content validity. The collected data was edited and coded into SPSS Version 23 for subsequent descriptive and inferential statistics. The data was presented using means, charts, figures, frequencies, standard deviations. The inferential statistics were presented using regression models and ANOVA models. The results of the study indicated that there was a positive and significant influence of centralized purchasing as indicated by $R^2 = .844$. The study concluded that the performance of MRM was higher as a result of centralized purchasing as indicated by the growth in sales and the profit margins of the firm. The research recommended that the firm should enhance the purchasing standards and policies. The firm should also foster the adoption of information technology systems in the procurement departments. The firm should also ensure compliance to inventory management practices among all personnel for better firm effectiveness. The findings of the study will be of importance in enhancing organization performance at MRM as well as fostering the purchasing practice. The results will also be of importance to other manufacturing organization as well as scholars and future researchers on purchasing and organization performance.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Globalization has transformed the process by which global business partners connect with one another for faster and efficient operations in supply chain, (Nagurney & Nagurney, 2010). According to Obiso (2011), through globalization there has been unprecedented growth in business competition across different industries. Procurement practices have been extensively been adopted as a tool of fostering organization performance. This has led to a greater number of firms adopting strategic decisions geared towards promoting procurement management (Msimangira & Tesha, 2009). The purchasing process is a strategic process that culminates into an interconnection between the firm suppliers and the organization strategic objectives (Hutt & Speh, 2012).

Procurement strategies today play an important role in organizations’ success more than ever before and have become an integral part of the organizational strategic plan. Technology has developed giving opportunity to more efficient and effective procurement. Cost drivers form an important aspect of businesses and it is important for organizations to identify and critically review these cost drivers with the aim of controlling and managing them through relevant strategies. Purchasing strategies have been widely implemented in the manufacturing sector as part of value creation strategies (Sullivan, Kashiwagi, & Chong, 2010).

Empirical evidence shows that procurement strategies are therefore instrumental to an organization’s success and enable management of costs while embracing principles of best value for overall organizational performance (Mwikali & Kavale, 2012). Masiko (2013) indicated that strategic procurement practices were a key determinant of the organization performance in the
current competitive environment. Wanyonyi (2014) indicated that poor procurement strategy adoption led to poor organization performance. This shows that the intense competition within the market calls for innovative strategies to be adopted in order to foster the purchasing processes within firms (Brownell, 2005).

One of the key purchasing strategies that firms in the manufacturing sector have been adopting is centralized purchasing (John, Etim, & Ime, 2015; Msimangira & Tesha, 2009). This involves the adoption of purchasing strategies that are implemented from a localized center for the entire organization rather than within individual business units (van Weele, 2010). The adoption of centralized purchasing strategies enables firms to leverage on the bulk purchasing which enhances efficiency in the procurement process as well as reduce cost spillage and lead time in delivery and production units (Njagi & Shalle, 2016).

1.1.1 Centralized Purchasing Strategies

Globalization has transformed the process whereby global business partners connect with one another for faster and efficient operations, in supply chain management (Deva-raj, Vaidya, & Mishra, 2012). According to Angeles and Nath (2007) the procurement organizational structure can be determined by the level of procurement maturity and corporate coherence. The rationales behind companies choosing informal or formal mechanisms are related to the two contingency factors: corporate coherence and procurement maturity (Gilaninia, 2012). Without conventional formal organizational mechanisms, or other measures, the cooperative ways will weaken out and the corporate advantage in procurement cannot be sustained (Brownell, 2005).

Procurement operational systems as asserted by such authors (Deva-raj, Vaidya, & Mishra, 2012; Dimitri, Dini, & Piga, 2006; Angeles & Nath, 2007) are needed for successful running of any corporate organization. The procurement operational systems as operated by most corporate
organizations are the centralized, decentralized and the hybrid. Procurement centralization is utilized as a tool of achieving benefits in the purchasing process (Karjalainen, 2009). In centralized procurement, the procurement is coordinated and regulated from the headquarters of an organization (Karjalainen, 2009; Lysons & Farrington, 2012). This involves coordination from the firm central headquarters which allows for all the firms purchasing to be coordinated from a central point (Van-Weele, 2010); this contributes to better negotiating power and scale benefits.

Dimitri, Dini and Piga (2006) claim that there is a clear trend towards centralizing procurement practice in government procurement in Europe, United States and Southern America. However it is extremely add to assess the prevalent purchasing process due to government bureaucracy and rigidities. Gakinya (2013) conducted a study on inventory management and supply chain in Kenya and indicated that inventory management, standardized purchasing and bulk orders are the current trend in centralizing purchasing within state agencies. In another study of sugar manufacturing firms; Lwiki, (2013) indicates that in line with implementing inventory management practices; businesses have shifted to centralizing their purchasing process through adoption of e-procurement, standardizing there purchases as well as adhering to procurement regulations. In the current study centralized purchasing practices that were considered are; e-procurement, standardized purchasing, inventory management and bulk ordering in the procurement process.

1.1.2 Organization Performance
Organizational performance refers to the final achievement of an organization and contains; existence of certain targets to be achieved efficiently and effectively within a specified period of time (Gibson, Mundy & Sink, 2010). According to Koontz and Donnell (2003), organizational
performance refers to the ability of an organization to achieve objectives such as high profit, quality product, large market share, good financial results, and survival at pre-determined time using relevant strategy for action.

Organizational performance measurement can be measured using profitability measures such as return on assets (ROA) and return on Equity (ROE) with the aim of attaining the preset objectives. Kaplan and Norton (2001) posited that organization performance can best be measured using the financial and non-financial aspects of the balance scorecard. On the other hand Kaplan and Ting and Cho (2008) indicated that performance encompasses three specific areas of firm outcome; financial performance, product performance and shareholders return. The Norton (2001) measurements focuses on the financial and non-financial constructs of business organization performance. This study adopted the definition that firm performance involves both financial and non-financial performance including both environmental and intangible performance. The current study utilized the balance scorecard as proposed by Kaplan and Norton (2001) to measure the organization performance. The financial measures were sales growth, profit margin, ROA while non-financial measures were on time delivery, new product adoption, customer satisfaction, increased market share.

1.1.3 Mabati Rolling Mills

Mabati Rolling Mills Limited (MRM) is the largest company within the Safal Group, and was its founding operation, commencing in 1962 at Mariakani, near Mombasa Kenya. MRM specializes mostly in roofing materials, steel production and other essential facilities and infrastructure necessary in the building industry. MRM also has the largest Distributor network in the Country for Coated Steel products (MRM, 2016). Owing to the vast distribution and production process of the company; one of the key drivers of its growth is the purchasing department. Hence this
study seeks to explore how centralized purchasing that is implemented within the company supports its positive organization performance.

1.2 Statement of the Problem

The growth in manufacturing has been a key element in the successful transformation of most economies that have seen sustained rises in their per capita incomes (World Bank, 2014). In most of Africa, performance in manufacturing has been particularly poor over the last decades (World Bank, 2014). In Kenya, which ranks 17th from the top, manufacturing accounts for 10.6% of the GDP, which is low compared to most middle income countries, yet it is the most manufacturing-intensive economy in Eastern Africa. The government’s goal is for manufacturing to account for 20% of GDP by 2030, nearly twice today’s level, at 10.6% (RoK, 2014). Achieving these goals will require addressing some outstanding purchasing constraints on manufacturing activity. This calls for the implementation of best strategic practices in the purchasing process that will foster the performance of the sector and accelerate attainment of the vision 2030 goals.

The implementation of centralized purchasing strategies has been advocated as one of the central tenets of supporting better purchasing benefits and enhance organization performance (Amemba, Nyaboke, Osoro, & Mburu, 2013). The need for centralization of purchasing has been driven by the need for firms to reduce costs and enhance the efficiency of the purchasing process. The centralization of purchasing enhances the economies of scale through low prices for large volumes of pooled purchases and the standardization of purchases (Cousins, Lawson, & Tyler, 2008). The study of centralized purchasing practice and organization performance at such a time is imperative. This is because many organizations have been accused of massive procurement irregularities that have led to adverse business results, for instance loss of shareholders money
and procurement of inferior goods at high prices. This has led to serious compromise on quality of offered goods and service to end customers (Njagi & Shalle, 2016).

Locally Abuko (2013) indicates that lack of stringent policies has contributed to increasing inefficiencies in purchasing departments, corruption and pilferage of company products which has resulted in poor profitability and organization performance. Augustine and Agu (2013) indicated that effectiveness can be achieved through e-procurement and enhanced standardization in materials. John, Etim and Ime (2015) established that inventory management practices can improve the operational performance of organizations. None of the above studies examined the influence of centralized purchasing practices on the organization performance at Mabati Rolling Mills.

From the aforementioned studies it is evident that the procurement process in general plays a key role on the performance of firms. However, despite this there has been lack of sufficient literature indicating if any the influence of centralized purchasing on organization performance. The current study sought to fill this gap by examining effects of centralized purchasing strategies on organization performance at MRM.

1.3 General Objective

The main of the current research is to examine the effect of centralized purchasing strategies on the organization performance of Mabati Rolling Mills.

1.3.1 Specific Objectives

i. To determine the influence of bulk ordering on the organization performance of Mabati Rolling Mills.
ii. To establish the effects of e-procurement on the organization performance of Mabati Rolling Mills

iii. To examine the influence of standardized purchasing on the organization performance of Mabati Rolling Mills

iv. To determine the influence of inventory management on the organization performance of Mabati Rolling Mills.

1.3.2 Research Questions
i. What is the influence of bulk ordering on the organization performance of Mabati Rolling Mills?

ii. How does e-procurement influence on the organization performance of Mabati Rolling Mills?

iii. What is the influence of standardized purchasing on the organization performance of Mabati Rolling Mills?

iv. How does inventory management influence the organization performance of Mabati Rolling Mills?

1.4 Significance of the Study
The study will be of importance to the managers at Mabati Rolling Mills who may use the findings in understanding the supply chain and centralized procurement strategies and factors influencing performance of the company and thus guide in development of guidelines and policies which would improve the performance of the company. The findings are also expected to enhance policy formulation and purchasing strategies within other organization especially in the manufacturing industry. More so the research findings will help to enhance policy formulation within the devolved and national government where bureaucracy and corruption
have extensively dampened public procurement. To future researchers and academicians, the findings would contribute new knowledge in the centralized purchasing strategies and performance. The study would also acts as a source of reference for future scholars to suggest areas for further research.

1.5 Scope of the Study

The scope of the study was limited to the procurement, operations and financial department at the Mabati Rolling Mills headquarters in Nairobi. The study collected primary data from Mabati rolling mills personnel since they have the requisite information needed for the research. The data collection was carried out on organization performance of the firm and the central purchasing unit. The scope of the study was limited to geographical scope of Athi River. Further secondary data was collected from the financial statements of the organization and other publicly available financial data from the regulatory bodies.

1.6 Limitations of the Study

Since the data collected was linked to organizational performance, some respondents were not willing to disclose full information. The respondents was assured of confidentiality of the information given to enhance response rate and truthfulness. The study sampling technique was limited to stratified random sampling that sought only the responses from personnel with sufficient knowledge on centralized purchasing and organization performance.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter gives an outlook on various theories in relation to central purchasing and organization performance, conceptual framework which captures both dependent and independent variables interaction, review of variables research gaps and summary of the chapter.

2.2 Theoretical Review

The current research was grounded on the Resource Dependency theory (1978) and the Agency Theory (1976) and the Balance Scorecard (Kaplan & Norton, 2001)

2.2.1 Resource Dependency Theory

Resource Dependence Theory (RDT) as proposed by Pfeffer and Salancikin (1978), studies how the exterior resources of organizations affects the performance of the organization. The theory holds that the firm can only sustain its operation through dependency on both its internal and external resources. Internal resources include aspect such as human capital, management competency and financial holdings. The external resources include stakeholders within the industry such as suppliers, the government and other firms. Achieving dependency on internal and external linkages is a key tactical strategy to better firm performance.

According to Harrison et al., (2001) resource dependence theory (RDT), firms ensure official and orderly linkages with other firms by looking for ways to minimize uncertainty in operations and allow dependence with other firms. Sambharya and Banerji, (2006) have supported the RDT
theory for it has shown that through the firm’s bond with the other firms, RDT allows it to create superior products hence giving the firm competitive advantage and improved performance both financial and operational. Thus this theory props up the concept of supplier development proposes that actors lacking in crucial resources will seek to create relationships with (i.e., be dependent upon) others in order to acquire required resources. Just like sellers on buyers for precious markets and buyer will depend on suppliers for external resources. Also, organizations endeavor to alter their reliance relationships by lessening their own reliance or by increasing the dependence of other organizations on them (Brownell, 2005). Acquiring the external resources required by an organization comes by modifying an organization’s influence with other organizations (Gadde & Håkansson, 2001). This theory was integral in linking how network of suppliers and other players in value chain enhance organization performance in the process of central purchasing.

2.2.2 Agency Theory
The agency theory was hypothesized by (Meckling & Jensen, 1986). The theorists view manufacturing firms to be the principles whereas correspondent firms in the value chain are the agents. They further argue that agency problems occur as a result of misunderstanding that exists between the interests of both the principal and the agent. They opine that an agency association exists whereby one party known as the principal appoints another party referred to as the agent to carry out numerous assigned tasks on behalf of the principal. A delegation of decision-making powers therefore ensues to the agent as they execute their mandate within the will of the principals. This delegation of decision making powers enhances both efficiency as well as productivity of agents. These engaged agents ought to possess capabilities, specific knowledge and even talents in order to effectively augment principal value of assets. In order for such
delegation to occur, the principal needs to have a certain level of confidence with the engaged agents.

The principal passes authority to the agent so that they can be able to carry out transactions hence makes appropriate decisions to maximize utility of the delegating principals. The major reason behind the rise of agency problems is due to the nature of agreements between principals and agents which are neither written nor costless enforced. In practice, managers are shareholders and agents may at times not dedicate their entire efforts toward managing the company unless their efforts are in essence in agreement with maximization of their own wellbeing (Hill & Jones, 1992).

The agency theory views procurement (Purchasing) department as a connection that exists among interested organizational individuals who work towards the attainment of common procurement goals. Procurement managers ought to work towards developing efficient suppliers’ relationships that will improve on business operations to improve on organizational efficiency and effectiveness. By so doing, trust between procurement firm managers who are agents and shareholders who are the principal can be enhanced as the agents will be working towards the attainment of optimal procurement performance that will in turn generate more firm value that consequently increases shareholders wealth. Hence this theory was of importance in demystifying how the management develops the central purchasing policies and framework that is geared towards enhancing the firm performance.

2.3 Empirical Review

2.3.1 Centralized Purchasing Strategies and Organization Performance
Procurement activities endeavor at anticipating needs, sourcing and obtaining supplies, transporting supplies into the organization, and evaluating the status of supplies as a current asset
Strategic procurement may well be defined as the method of planning, implementing, evaluating and controlling tactical operational procurement decisions. These activities are directed such that procurement operations towards opportunities may be consistent with the organizations capabilities to attain its long-term targets (Zheng, et al., 2007). Supplies management in the current business environment is very vital, since every organization needs good and unsophisticated suppliers. Therefore, every organization needs to have fresh approach of contacting suppliers. Organizations need different approaches to its acquisition processes and policies. Good relationships with suppliers have impact not only on supplies performance but also on the organization’s performance. No business can be booming devoid of the support of its supplier foot.

Johnson et al. (2007) found that e-business technology use increases as organizational centralization increases. Dimitri et al. (2006) argue that e-procurement favors centralization as it helps central purchasing bodies successfully manage acquisition processes, while providing sufficient flexibility to local units to satisfy some specific needs. He further indicates that centralization magnifies the benefits of e-procurement which fosters efficiency in large procurement volumes. Angeles and Nath (2007) are of the view that firms should foster the centralization of their procurement process as this will ensure there is better control within the purchasing process which can contribute to firm performance.

2.3.2 Bulk Ordering and Organization Performance
Karjalainen (2011), focusing on Finnish government data, estimates the potential price savings by comparing the prices paid by the centralized agency to the market prices for two selected products. Karjalainen indicated that the Finnish government agencies through their centralizations systems saved around 8% for toner cartridges and of around 37% for specific
flights tickets for purchases for day to day operations with very flexible contracts and cancellation terms. The researcher also attempted to compute economies of process using time spent on the tendering both for the decentralized model and the centralized model and estimating the relative costs. Bandiera et al. (2009) provide an important comparison between centralized and decentralized procurement, finding that a central agency can produce considerable cost savings. Using Italian data on a set of 21 standardized they estimated that public bodies save on average 28% of the purchase price. The above studies are in agreement that adopting centralized purchasing fosters the economies of scale of firms. However, both studies were conducted in countries within the European Union and none of the study considered a manufacturing and rolling plant in the African set-up.

According to Hultman, Hertz, Johnsen and Johnsen (2012), affordability through low cost is at the core of any company’s business idea. Hemmatfar, Salehi and Bayat (2010) posit that every organization seeks to gain a competitive advantage over their competitors in the same industry. They contend that companies can achieve competitive advantages by delivering products or services at a lower cost. Adopting centralized purchasing can promotes better cost-efficiency for organizations. In a study to determine the drivers of global procurement at Kenya Tea Development Agency, Nyanchoka and Namusonge (2014) indicated that even though there is a continuing push for economies of scale, it is evident that in Kenya, suppliers have not yet been able to produce machinery and other agricultural inputs at economical costs which increases the cost of product development relative to market life hence the drive to source internationally where there is a huge pool of qualified suppliers. The above studies however fail to take into consideration the effect of centralized purchasing strategies on the organization performance.
2.3.3 E-procurement and Organization Performance

Globalization has created a platform where goods ranging from food stuff to electronics to manufactured goods are being traded across country borders (Geiersbach, 2010). In fact the speed at which the volume of goods, services and investments are being transferred across national borders has increased rapidly over the past few decades. This has been made possible by the emergence of electronic purchasing which has fostered efficiency for organization procurement.

In a study by Brownell, (2005) he noted that the main factor for strategic-supplier partnership to flow well, was proper communication between the firm and its suppliers. Electronic communication between customers and suppliers, makes work more efficient and effective; electronic communication has generally enhanced strategic-supplier relationship. The firm should also embark on early supplier involvement in the design process to minimize items received being defective and also obsolescent. The above study was however not conducted locally hence the findings may not be reflective of the current research scope.

According to Mose, Njihia and Magutu (2013), the use of Information Communication Technologies (ICTs) enhanced services, business models and people’s expectations of the quality and efficiency of information sharing and service delivery. They contend that development in information and communication technology, especially the Internet helps organizations to become more effective through the integration of firm’s information technology (IT) infrastructure. It also helps firms to manage instant communication and interactions with other people across the globe. The above study focused on adoption of ICT services in procurement practices and did not consider aspects such as inventory management and economies of scale.
Deva-raj, Vaidya, and Mishra (2012) sought to investigate the role quality plays in e-procurement performance. The study established that the absence of accountability in carrying out procurement goals creates opportunities for corruption that negatively affects procurement performance. The introduction of components of accountability that encompass; goals and results measurement, justification of results of both internal and external monitors and lastly punishment for corrupt behavior or non-performance leads to a reduction of occurrence of procurement malpractices. Chene (2009) examined the implementation of integrated financial information management systems. The study established that integration of procurement process that provides tools such as electronic procurements creates a framework in which buyers can be able to procure goods and services easily via browsing one-stop catalogues as advertised by suppliers. This system connects, accumulates, processes as well as provides imperative information to all parties thus enhancing continuity in the procurement process hence positively impacting overall procurement outcomes. The above studies did not examine organization performance in general as encompassed in the use of the balance scorecard metrics in the current research.

Geiersbach (2010) contends that technology provides the capacity to generate innovations and deliver new goods and services to the market. He further asserts technology makes it easy for organizations to search for overseas suppliers capable of satisfying their needs. This provides several sources of information about potential suppliers. These searches may be inform of online professional contacts, trade journals, directories, social networks and other online based platform. This results to efficient use of world-wide human connection to achieve efficient procurement. In their study Otieno, Muthoni and Simon (2013) conclude that in procurement’ technology aims at creating efficiencies. Through increasing accessibility of tenders globally.
The above study concentrated on the tendering process whereas the current study examined centralized purchasing strategies.

2.3.4 Standardized Purchasing and Organization Performance

Achua (2011) indicated that personnel competency has an effect on organizational procurement processes. Higher employee skills and capabilities leads to more diligent handling of assigned procurement tasks as they are able to exercise due care and skill. In addition, inherent skills have an influence on moral code of conduct that has an effect on the manner in which procurement tasks are to be carried out. According to Amos and Weathington (2008), organizations can undertake ethics training targeting specific areas in regards to procedures, regulations, record keeping and management then lastly accountability in the vast procurement process. Thereafter, regular reviews of current procurement procedures can be carried out to guarantee achievement of integrity in the procurement process. The rationale behind ethical training is that ethical procuring behavior reduces costs associated with risks management due to procurement theft, fraud and corruption that hampers optimal performance of the procurement department at large. The above research studies did not examine the contribution of centralized purchasing strategies such as inventory management and economies of scale and their influence on organization performance.

Wanyonyi and Muturi (2015) concluded that staff competency, information technology and ethics positively affect procurement function performance. Organizations should therefore strive to adopt modern technologies, promote employees competence and enhance the implementation of good organizational moral code of conduct so as to attain improvements in their procurement departments. A study was conducted to determine factors affecting the selection of optimal suppliers in procurement management, Mwikali and Kavale (2012) identified quality of the
product as a major criterion in selection of suppliers. The study was aligned to add value chain quality management and in terms of management commitment, product development of suppliers, process improvement of suppliers, quality staff of supplier and quality of the final product. From the review, a company may therefore make a deliberate effort to target countries with low labor cost or high quality standard products depending on the customer demands and economic power.

Musau (2015) examined environmental determinants affecting procurement performance in county governments with a case of Uasin Gishu County. It was established that environmental standards affects procurement performance. In particular legal environment has significant influence on procurement performance. In regards to market environment, competition maximization and the fulfillment of government needs as market components influences procurement performance. The above study factored environmental aspects and their influence on procurement performance whereas the current study examined organization performance.

2.3.5 Inventory Management and Organization Performance

Ogbadu, (2009) stated that for a reduction in depreciation, pilferage and wastages in inventory, sensible and wise management of inventory key while ensuring availability of the materials as at and when required. This was further shown by the researchers Lwiki et al., (2013) who emphasized that for maximization of profits and survival of a business, there should be accountability in the inventory management practices. The above studies were not conducted within the Kenyan sector hence the findings may not be representative of the current study scope. According to Shaw (2010) procurement process is facilitated by a logistic system with clear communication lines, timely flow of documentation and constant feedback.
Eroglu and Hofer (2011), studied the Empirical Leanness Indicator (ELI) which brought out a positive link between a firm’s performance and inventory management. Empirical Leanness Indicator (ELI) as stated by Eroglu and Hofer (2011) is an inventory management technique which is supreme. In lean production practice, inventory is considered to be a type of waste which should be reduced is seen to be equivalent to quality inventory management. This study showed that profit margins are positively affected by leanness which encrust the years 2003 – 2008 of US manufacturing firms. It also showed that firms that attain favorable returns from leanness are leaner compared to the industry itself. A study on international supply chain practices in Tanzania by Msimangira and Tesha (2009) identified logistics challenges of coping with long supply chains as one of the problems affecting procurement systems. The researchers further indicated that poor inventory management translates to poor purchasing and customer satisfaction levels. Hence, effective inventory management is a critical issue for firms’ productivity. The above studies did not examine organization performance.

Ndunge (2012) found out that inventory management applications enabled edible oil firms to minimize wastage of inventory and also minimize their costs. This study however did not show how the practices of inventory management affect productivity of manufacturing firms. Gakinya (2013) found out that inventory management can influence a firm’s supply chain performance by achieving service delivery to the customers, meeting forecast demands and gaining a competitive edge. But this study however was not on manufacturing firms and did not show the impact of inventory management practices on overall organization performance.
# 2.4 Summary of Literature and Research Gaps

## Table 2.1 Research Gaps

<table>
<thead>
<tr>
<th>Author</th>
<th>Topic</th>
<th>Methodology</th>
<th>Key Findings</th>
<th>Research Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deva-raj, Vaidya &amp; Mishra (2012)</td>
<td>The role of quality in e-procurement performance</td>
<td>The study adopted regression analysis and only considered the responses of the top management</td>
<td>The study findings indicated that lack of accountability in the e-procurement process deters the performance of the practices.</td>
<td>The study did not consider other aspects of centralized purchasing that are conceptualized in the current study i.e. economies of scale.</td>
</tr>
<tr>
<td>Nyanchoka and Namusonge (2014)</td>
<td>To determine the drivers of global procurement at Kenya Tea Development Agency</td>
<td>The study adopted a descriptive research design. The study utilized semi-structured questionnaires to collect primary data.</td>
<td>The findings of the study indicated that economies of scales have been adopted though shallowly due to lack of adequate resources in the Tea sector. However, the economies of scale have enhance the procurement process.</td>
<td>The study was anchored on drivers of global procurement and did not factor in the organization performance hence the findings may not be indicative of current research.</td>
</tr>
<tr>
<td>Amue and Ozuru (2014)</td>
<td>To investigate the effect of supply</td>
<td>The research adopted a cross-sectional survey</td>
<td>The results of the study indicated that integrated supply chain has a positive</td>
<td>The study concentrated on the oil and gas industry in Nigeria.</td>
</tr>
<tr>
<td>Source</td>
<td>Research Question</td>
<td>Methodology</td>
<td>Findings</td>
<td>Notes</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Gilaninia (2012)</td>
<td>Impact of supply chain dimension on customer satisfaction in Iran</td>
<td>Descriptive</td>
<td>The findings of the study indicated that aspects of supply chain dimension have a direct relationship with customer satisfaction.</td>
<td>The study only considered customer satisfaction elements and did not cover other aspects of service delivery. Furthermore the study was conducted in Iran hence findings may not be reflective of current research.</td>
</tr>
<tr>
<td>Abuko (2011)</td>
<td>To determine the impact of green supply chain management in general</td>
<td>Descriptive</td>
<td>The findings of the study indicated that adoption of green supply chain practices enhanced the performance</td>
<td>The study considered supply chain management in general</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>supply chain on the performance of oil marketing firms in Kenya</td>
<td>design with purposive sampling used to select oil marketing firms.</td>
<td>and did not specifically examine centralized purchasing within the firms. Further the current study considered manufacturing firms.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.5 Conceptual Framework

Independent Variables

Centralized purchasing

**Bulk Ordering:**
- High volumes at low costs
- better purchases delivery
- reduced operational costs

**E-Procurement:**
- Increased efficiency
- availability of purchases information
- better supplier sourcing

**Standardized Purchasing:**
- Ethical procedures in procurement
- employee training on procurement procedures
- purchasing policy

**Inventory Management:**
- Better stock ordering
- efficient delivery to customers
- effective production and optimal wastage

Dependent Variable

**Organization Performance:**

**Financial:** Sales growth, profit margin,

**Non-Financial Measures:**
- timeliness, new product adoption, customer satisfaction, increased market share, quality of goods

Source: Researcher (2017)

Figure 2.1 Conceptual Framework
2.6 Summary

From the literature review it’s evident that purchasing plays an integral role in shaping up the overall performance of firms. From the reviewed studies there is a clear indication that there is a dearth in local literature indicating the influence of centralized purchasing elements on the performance of manufacturing firms. The study sought to fill the gaps in literature and enhance both knowledge and the practice within the local domain. The conceptual framework of the study depicted the interrelationship between the research variables. The conceptual framework depicted that the aspects of centralized purchasing; economies of scale, e-procurement, standardization and inventory management have an effect on organization performance; measured utilizing the financial and non-financial indicators of the balance scorecard.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction
This chapter describes the methodology that was used in this study including the research design, study population, sample design, data collection method, data analysis, research procedures, reliability and validity, and data analysis methods.

3.2 Research Design
This study utilized a descriptive research design. According to Mugenda and Mugenda (2003) a descriptive study enables a researcher to be systematic in evaluating the research situation and coming up with an elaborate blueprint to probe and draw statistical findings on the research problem.

3.3 Target Population
According to Kothari (2008), a population refers to all items in any field of inquiry. The study targeted personnel working at Mabati Rolling Mills in Athi River in the production department, finance, human resources, marketing and sales and the procurement department.

<table>
<thead>
<tr>
<th>Table 3.1 Target Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department at MRM</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>Production</td>
</tr>
<tr>
<td>Finance</td>
</tr>
<tr>
<td>Procurement</td>
</tr>
<tr>
<td>Marketing and Sales</td>
</tr>
<tr>
<td>Human Resource</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
3.4 Sampling Design

The sampling design is the technique or plan utilized by a researcher in drawing a sample for the research study (Kothari, 2008). The study utilized proportionate stratified sampling in selecting the respondents with the desired characteristics of the study. In adopting the stratified sampling the research considered the personnel within MRM who have the requisite knowledge on adoption, implementation of centralized purchasing and the performance of the firm.

3.4.1 Sample Size

The sample size was determined using the criteria advance by Mugenda and Mugenda (2003) where she proposed that 10% to 30% of the target population is sufficient to make statistical inference. Hence the current research considered 30% of the population to make inferences on the study;

\[ 30\% \times 165 = 50 \text{ respondents} \]

3.5 Data Collection Instruments

This study used primary data. According to Kothari (2008), primary data refers to information that a researcher gathers from the field. Primary data was obtained from the main respondents of the study using semi-structured questionnaires. The questionnaires were designed in line with the research objectives. This ensured that the data collected was essential in solving the research problem.

3.6 Data Collection Procedures

Data collection is the precise process through which a researcher gathers information relevant to solving the research problem from the participants of the research. The study utilized drop and pick method in the data collection. The study further collected secondary data from company reports and other peer reviewed journals. The researcher carried out a pilot test before the final
and actual data collection process. Mugenda and Mugenda (2003) prescribed that a pre-test sample should be between 10% and 30% depending on the sample size.

### 3.6.1 Reliability Tests

Reliability is the degree at which results obtained from a survey is consistent after interpreted number of times (Joppe, 2008). The study adopted the Cronbach alpha in determining the internal consistency of the research instrument. The study adopted all constructs with a Cronbach Alpha of above 0.7. A Cronbach Alpha of above 0.7 indicates that the study variables can be utilized in solving the research problem.

### 3.6.2 Validity Tests

Validity is the degree to which the test measures what it is supposed to measure (Fowler Jr, 2013). The questionnaire should be in line with the definition used in the research. This study will adopt both construct validity and content validity. For construct validity, the questionnaire was designed in line with the research variables with close detail observed in ensuring the constructs for the research variable are adopted in the research instrument. To ensure content validity, the questionnaire was subjected to thorough examination within a mid-sized manufacturing firm - Devki Steel Mills in Nairobi, Kenya.

### 3.7 Data Analysis and Presentation

The study adopted both descriptive and inferential statistics. The specific descriptive statistics will include percentages, means, standard deviations and frequencies while the inferential statistics will include a multiple linear regression model. The study utilized content analysis for the qualitative data. Microsoft excel was used to complement SPSS especially in production of diagrams and tables. The multiple linear regression models was used to measure the relationship between the independent variables and the dependent variable which are explained in the model.
\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \]

Where:

\[ Y = \text{Organization Performance of MRM} \]

\{\beta_i; i=1, 2,3,4\} = \text{The coefficients for the various independent variables}

\[ X_i \quad \text{for;} \]

\[ X_1 = \text{Bulk ordering} \]

\[ X_2 = \text{E-procurement} \]

\[ X_3 = \text{Standardized Purchasing} \]

\[ X_4 = \text{Inventory Management} \]

The ANOVA test was done to determine firstly, the impact of independent variables on the dependent variable in the regression analysis and secondly, test the mean score differences and then use T–statistic test to establish the likelihood that there is a link between centralized purchasing and performance which are the main data variables. A significance level of 5% was utilized in the test statistics.

3.8 Ethical Considerations

The study sought clearance from Kenyatta University School of Business before embarking on the data collection. The study also obtained research permit from NACOSTI to ensure conformity to research guidelines by the Ministry of Education. The researcher also ensure anonymity of research respondents by ensuring the data collected is treated with utmost confidentiality and was utilized only for academic purposes. Lastly the researcher debriefed
CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION

4.1 Introduction

The fourth chapter of the research presented the results of the data analysis. The chapter specifically contained the response rate, demographics of the respondents, the descriptive statistics, the inferential statistics and the diagnostic tests.

4.2 Demographics

4.2.1 Response Rate

The research was able to obtain a response rate of 86% (n=43) while only 14 % (n=7) of the respondents did not participate in the study. This response was deemed appropriate (Fowler Jr, 2013) for the study based on the criterion by Fowler (2013) who indicated that a response of above 60% is adequate for statistical analysis.
4.2.2 Age of Respondents

Table 4.1 Respondents Age

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Below 25 years</td>
<td>6</td>
<td>14.0</td>
</tr>
<tr>
<td>25-35 years</td>
<td>19</td>
<td>44.2</td>
</tr>
<tr>
<td>36 and above</td>
<td>18</td>
<td>41.9</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The findings of the study indicated that the majority of the respondents 44% (n=19) were between 25-35 years, 42% (n=18) of the respondent were above 36 years while only 14% (n=6) were below 25 years of age as shown in table 4.1 above.

4.2.3 Gender of Respondents

The results of the study indicated that 81% (n=35) were male respondents while only 19% (n=8) of the respondents were female respondents.
4.2.4 Education Level of Respondents

Table 4.2 Education of Respondents

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Diploma</td>
<td>15</td>
<td>34.9</td>
</tr>
<tr>
<td>Graduate</td>
<td>25</td>
<td>58.1</td>
</tr>
<tr>
<td>Post graduate</td>
<td>3</td>
<td>7.0</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The findings of the study on table 4.2 above indicated that the majority of the respondents 58% (n=25) had attained graduate level education, 35% (n=15) had attained diploma level education while only 7% (n=3) of the respondent had postgraduate level of education.
4.2.5 Position within the Organization
The findings of the study indicated that the majority of the respondents 58% (n=25) were in the finance department, 33% (n=14) of the respondents were in procurement department while only 9% (n=4) of the respondents were in operations department as shown in figure 1.3 below.

![Position in the Organization](image)

Figure 4.3 Position in the Organization

4.2.6 Number of years in Organization
The findings of the research in figure 1.4 indicated that the majority of the respondents 49% (n=21) had between 5-9 years within the firm, 32% (n=14) were between 10-15 years while only 19% (n=8) of the respondents had less than 5 years of experience.
Figure 4.4 Number of years in Organization

4.3 Descriptive Statistics

4.3.1 Organization Performance

Table 4.3 Organization Performance Descriptive

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is increased sales within the firm</td>
<td>4.4884</td>
<td>.63140</td>
</tr>
<tr>
<td>The profit margins of the firm have been increasing since adoption of</td>
<td>4.1163</td>
<td>.79310</td>
</tr>
<tr>
<td>centralized purchasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The firm has fostered on time delivery to its’ clients</td>
<td>4.3721</td>
<td>.69087</td>
</tr>
<tr>
<td>There is increased customer satisfaction with adoption of centralized</td>
<td>4.4884</td>
<td>.76756</td>
</tr>
<tr>
<td>purchasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The firm has increased its’ market share with adoption of centralized</td>
<td>4.3953</td>
<td>.87667</td>
</tr>
<tr>
<td>purchasing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There is increased quality of good being produced within the firm.</td>
<td>4.3953</td>
<td>.84908</td>
</tr>
<tr>
<td>Average</td>
<td>4.3759</td>
<td>0.7681</td>
</tr>
</tbody>
</table>

The findings of the research on table 4.1 indicated there was strong agreement among the respondents that there was an increase in sales within the firm as indicated by a mean value of 4.4884 and a standard deviation of .6314 indicating minimal dispersion in the findings. The results also showed that there is increased customer satisfaction with adoption of centralized
purchasing as shown by a mean of 4.4884 indicating strong agreement among the respondents and moderate dispersion as shown by the deviation of .7931. The study also indicated that the firm has increased its’ market share with adoption of centralized purchasing as shown by the mean value of 4.3953 and the firm has fostered on time delivery to its’ clients as shown by a mean value of 4.3721 indicating strong agreement among respondents. The findings also showed strong agreement among respondents in regard to the profit margins of the firm have been increasing since adoption of centralized purchasing as shown by the mean value of 4.1163. These findings are in line with Lwiki, (2013) who indicated inventory management practices had led to an increase in timely delivery, efficiency and profitability within manufacturing firms. Njagi and Shalle (2016) also indicate that there is higher performance within the manufacturing sector in Kenya.

4.3.2 Influence of Bulk Ordering on Performance

<table>
<thead>
<tr>
<th>Table 4.4 Bulk Ordering Descriptive</th>
<th>mean</th>
<th>std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>increased bulk ordering contributes to price savings due to discounts offered.</td>
<td>4.3953</td>
<td>.79101</td>
</tr>
<tr>
<td>bulk ordering arrangements promotes efficiency in the procurement process.</td>
<td>4.3488</td>
<td>.86969</td>
</tr>
<tr>
<td>bulk ordering enables competitiveness in creating supplier linkages for the business</td>
<td>4.6047</td>
<td>.72832</td>
</tr>
<tr>
<td>batch ordering ensures timely delivery of supplies.</td>
<td>4.3953</td>
<td>.82056</td>
</tr>
<tr>
<td>large orders ensures that the firm has sufficient inventory to support continuous production</td>
<td>4.3488</td>
<td>.97306</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>4.4185</strong></td>
<td><strong>0.8365</strong></td>
</tr>
</tbody>
</table>

The results of the study on table 4.4 examined the influence of bulk ordering on the performance of Mabati rolling mills. The results indicated strong agreement among respondents with regard to increased bulk ordering contributes to price savings due to discounts offered as shown by the
mean value of 4.3953. The findings also indicated strong agreement among respondents concerning bulk ordering enables competitiveness in creating supplier linkages for the business as shown by the mean value of 4.6047 and a standard deviation of .72832 indicating minimal dispersion in the responses obtained. The results of the study on the table above also indicated a strong agreement among respondents in regard to batch ordering ensures timely delivery of supplies as shown by a mean value of 4.3953. Further the results indicated that in regard to large orders ensures that the firm has sufficient inventory to support continuous production there was strong agreement among respondents as shown by the mean value of 4.3488 and a deviation of .97306. These findings are consistent with (Gakinya, 2013); who posited that bulk order placements enhanced timely delivery, competitiveness and cost-efficiency. van Weele, (2010) also indicated that bulk purchasing led to price savings and fostered supplier relationship.

4.3.3 Influence of E-Procurement on Organization Performance

Table 4.5 E-Procurement Descriptive

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic purchasing fosters efficiency in the organization procurement.</td>
<td>4.3488</td>
<td>.86969</td>
</tr>
<tr>
<td>Electronic purchasing enhances the available information on stakeholders in the value chain.</td>
<td>4.5814</td>
<td>.66306</td>
</tr>
<tr>
<td>Electronic purchasing fosters communication between organization and suppliers.</td>
<td>4.1860</td>
<td>.98212</td>
</tr>
</tbody>
</table>
electronic purchasing fosters quality service delivery to customers.
e-purchasing fosters accountability in the procurement department which is integral for better financial performance.
electronic purchasing enables the organization to monitor and evaluate the procurement performance.
Electronic purchasing supports the adoption of dynamic and innovative methods that support cost-efficiency.
E-purchasing supports online tendering which is essential for timely ordering and delivery.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>electronic purchasing fosters quality service delivery to customers.</td>
<td>4.5349</td>
<td>.66722</td>
</tr>
<tr>
<td>e-purchasing fosters accountability in the procurement department which is</td>
<td>4.3023</td>
<td>.98886</td>
</tr>
<tr>
<td>integral for better financial performance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>electronic purchasing enables the organization to monitor and evaluate</td>
<td>4.4884</td>
<td>.73589</td>
</tr>
<tr>
<td>the procurement performance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic purchasing supports the adoption of dynamic and innovative</td>
<td>4.1163</td>
<td>.79310</td>
</tr>
<tr>
<td>methods that support cost-efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>E-purchasing supports online tendering which is essential for timely</td>
<td>4.3721</td>
<td>.69087</td>
</tr>
<tr>
<td>ordering and delivery.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>4.3662</strong></td>
<td><strong>0.7988</strong></td>
</tr>
</tbody>
</table>

The findings of the research on table 4.5 sought to examine the influence of e-procurement on organization performance at Mabati Rolling Mills. With regard to electronic purchasing fosters efficiency in the organization procurement there was strong agreement among the respondents as indicated by a mean value of 4.3488 and a deviation of .86969. The results also indicated strong agreement among respondents in regard to electronic purchasing enhances the available information on stakeholders in the value chain as shown by the mean value of 4.5814 and a deviation of .66306. Concerning electronic purchasing fosters quality service delivery to customers there was strong agreement among the respondents as shown by a mean value of 4.5349 and a standard deviation of .66722 showing minimal dispersion in the responses obtained.

Concerning electronic purchasing enables the organization to monitor and evaluate the procurement performance there was strong agreement among the respondents as shown by a mean value of 4.884 and a deviation of .73589 as shown on table 4.5 above. The results also showed that with regard to E-purchasing supports online tendering which is essential for timely ordering and delivery there was strong agreement among the respondents as shown by a mean
of 4.3721 and a deviation of .69807. The findings of the study also showed that with regard to Electronic purchasing supports the adoption of dynamic and innovative methods that support cost-efficiency there was strong agreement among respondents as indicated by a mean of 4.1136 and a deviation of .7931 indicating minimal variations in the respondents’ opinions. The results also indicated that there was strong agreement that e-purchasing fosters accountability in the procurement department which is integral for better financial performance as shown by a mean value of 4.3023 and a deviation of .9886

The findings are in agreement with Angeles and Nath, (2007) who concluded that adoption of e-procurement enhanced the efficiency of business processes and led to better firm performance. Deva-raj, Vaidya, and Mishra, (2012) also indicated that e-procurement fostered the performance of an organization. Mose, Njihia, and Magutu, (2013) posited that adoption of e-procurement was positively associated to efficiency, accountability and minimizes wastage within large manufacturing firms in Kenya.

### 4.3.4 Influence of Standardized Purchasing on Organization Performance

**Table 4.6 Standardized Purchasing Descriptive**

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>the organization follows specified ethical procedures in procurement process.</td>
<td>4.5814</td>
<td>.66306</td>
</tr>
<tr>
<td>employees are trained on standard procedures of procurement process.</td>
<td>4.1860</td>
<td>.98212</td>
</tr>
<tr>
<td>the organization has an elaborate purchasing policy in place.</td>
<td>4.3023</td>
<td>.98886</td>
</tr>
<tr>
<td>purchasing procedures ensures that only qualified suppliers are considered.</td>
<td>4.4884</td>
<td>.73589</td>
</tr>
</tbody>
</table>
The results on table 4.6 examined the effect of standardized purchasing on organization performance. With regard to the organization follows specified ethical procedures in procurement process there was strong agreement among the respondents as shown by a mean value of 4.5814 and a deviation of .66306. The results also indicated a strong agreement among respondents with regard to employees are trained on standard procedures of procurement process as shown by a mean of 4.186 and a deviation of .98212. The findings indicated that with regard to the organization has an elaborate purchasing policy in place there was strong agreement among the respondents as shown by a mean of 4.3023 and a deviation of .98886. The results also indicated that purchasing procedures ensures that only qualified suppliers are considered had strong agreement among respondents as shown by a mean value of 4.4884 and a deviation of .73589. The results also showed strong agreement in regard to the organization formulates purchase guidelines that support better evaluation and selection of suppliers as shown by a mean of 4.3721 and a deviation of .69087

The above results are in line with the conclusions drawn by (Achua, 2011; Amemba, Nyaboke, Osoro, & Mburu, 2013) who indicated that formulating procurement policies and setting up guidelines was key to eliminating wastage of resources and fostering the procurement process within an organization. Bandiera, Prat, and Valletti (2009) indicated that procurement policies fostered efficiency which resulted in better organization performance.


4.3.5 Influence of Inventory Management on Organization Performance

Table 4.7 Inventory Management Descriptive

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>inventory management ensures that there is minimal wastage of organization resources.</td>
<td>4.1163</td>
<td>.58592</td>
</tr>
<tr>
<td>inventory management ensures timely flow of supplies which fosters production.</td>
<td>3.9535</td>
<td>.72222</td>
</tr>
<tr>
<td>inventory management fosters constant feedback with suppliers which enhances collaboration.</td>
<td>4.1395</td>
<td>1.01375</td>
</tr>
<tr>
<td>proper inventory management fosters customer satisfaction within the firm.</td>
<td>4.3256</td>
<td>.77830</td>
</tr>
<tr>
<td>inventory management fosters efficient capacity utilization within the firm</td>
<td>4.4884</td>
<td>.76756</td>
</tr>
<tr>
<td>effective inventory management enhances the profitability of firms through minimized pilferage</td>
<td>4.3953</td>
<td>.87667</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>4.2364</strong></td>
<td><strong>0.7907</strong></td>
</tr>
</tbody>
</table>

The research findings on table 4.7 sought to examine the influence of inventory management on organization performance. The results of the study indicated there was strong agreement among respondents that inventory management ensures that there is minimal wastage of organization resources as shown by the mean value of 4.1163 and deviation of .58592 indicating minimal variation in the responses. The study findings also showed agreement among respondents concerning inventory management ensures timely flow of supplies which fosters production as shown by a mean value of 3.9535 and a deviation of .72222. The study results indicated strong agreement among respondent in regard to inventory management ensures timely flow of supplies which fosters production as indicated by the mean value of 4.1395 and a deviation of 1.01375 showing dispersion among the opinions of the respondents. The findings of the study also
indicated strong agreement among respondents in regard to proper inventory management fosters customer satisfaction within the firm as shown by a mean value of 4.3256. The research data also showed strong agreement in regard to effective inventory management enhances the profitability of firms through minimized pilferage as shown by the mean value of 4.3953 in table 4.7 above.

These study results are supported by Lwiki (2013) who indicated there is a positive association between inventory management and financial performance of manufacturing firms in terms of cost-efficiency and efficiency in production. Augustine and Agu (2013) indicated that inventory management fostered effectiveness within the firm which enhanced the performance of the firm. Gakinya (2013) concluded that inventory management enhanced the supply chain performance and was key to organizational efficiency.

4.4 Inferential Statistics
4.4.1 Diagnostic Tests
4.4.1.1 Collinearity Statistics

Table 4.8 Multicollinearity

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>.361</td>
</tr>
<tr>
<td>Bulk ordering</td>
<td>.638</td>
</tr>
<tr>
<td>E-Procurement</td>
<td>.406</td>
</tr>
<tr>
<td>Standardized purchasing</td>
<td>.831</td>
</tr>
<tr>
<td>Inventory management</td>
<td>.831</td>
</tr>
</tbody>
</table>
The collinearity test was conducted through the VIF and Tolerance value statistics and the results are shown below. Findings on Table 4.8 show VIF values which are all less than 10. With this, the study found no Multicollinearity problem. The Tolerance value checks on the degree of Collinearity where a tolerance value lower than 0.1 shows that the variable could be considered as a linear combination of other independent variables. Thus, in the case of the current study, all the tolerance values are all greater than 0.1 indicating no cases of Multicollinearity.

4.4.1.2 Normality Tests

Table 4.9 Normality Tests

<table>
<thead>
<tr>
<th>Variable</th>
<th>Kolmogorov-Smirnov Statistic</th>
<th>df</th>
<th>Sig.</th>
<th>Shapiro-Wilk Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulk ordering</td>
<td>.105</td>
<td>43</td>
<td>.007</td>
<td>.937</td>
<td>43</td>
<td>.009</td>
</tr>
<tr>
<td>E-Procurement</td>
<td>.176</td>
<td>43</td>
<td>.000</td>
<td>.842</td>
<td>43</td>
<td>.008</td>
</tr>
<tr>
<td>Standardized purchasing</td>
<td>.170</td>
<td>43</td>
<td>.000</td>
<td>.959</td>
<td>43</td>
<td>.006</td>
</tr>
<tr>
<td>Inventory management</td>
<td>.172</td>
<td>43</td>
<td>.000</td>
<td>.845</td>
<td>43</td>
<td>.007</td>
</tr>
</tbody>
</table>

a. Lilliefors Significance Correction

As a rule of thumb for any data to be normally distributed, the Shapiro-Wilk test dictates that all the sig value should be above 0.05. From the results indicated all the variables had a sig. value of above 0.05 hence the data was from a normally distributed sample.

4.4.2 Regression Model

Table 4.10 Regression Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.919a</td>
<td>.844</td>
<td>.828</td>
<td>1.34061</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Inventory management, E-procurement, Standardized purchasing, Bulk ordering
The above generalized model sought to estimate the magnitude of the association between the predictor variables (centralized purchasing) and the dependent variable (Organization performance at MRM). The results of the study indicate that holding all other factors constant there is a positive relationship between centralized purchasing and organization performance as shown by the coefficient of determination $R^2 = .844$. This indicates that 84.4% variations in the organization performance can be explained by centralized purchasing. These findings are in congruence with Iloranta and Pajunen-Muhonen, (2012) who indicated that centralized purchasing was a key predictor of organization performance. van Weele, (2010) also concluded that new and innovative purchasing strategies such as decentralized purchasing were positively related to organization performance.

### 4.4.3 Anova Summary

**Table 4.11 ANOVA 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>Regression</td>
<td>369.891</td>
<td>4</td>
<td>92.473</td>
<td>51.453</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>68.295</td>
<td>38</td>
<td>1.797</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>438.186</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Organization performance  
b. Predictors: (Constant), Inventory management, E procurement, Standardized purchasing, Bulk ordering

The study further analysed the statistical significance of the regression model. From the resulting findings it was evident that the regression model was significant $\text{sig} = .000$ which is less than the critical $\text{sig value 0.05}$ testing at 95% confidence interval. The results also generated a $F$-value of 51.453 which is above the critical value of 2.76 indicating that the entire research model was statistically significant.
4.4.3 Regression Coefficients

Table 4.12 Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>1.529</td>
<td>2.844</td>
<td>.538</td>
<td>.508</td>
</tr>
<tr>
<td>Bulk ordering</td>
<td>.367</td>
<td>.128</td>
<td>.304</td>
<td>2.854</td>
</tr>
<tr>
<td>E-Procurement</td>
<td>.319</td>
<td>.061</td>
<td>.420</td>
<td>5.242</td>
</tr>
<tr>
<td>Standardized purchasing</td>
<td>.259</td>
<td>.116</td>
<td>.921</td>
<td>9.163</td>
</tr>
<tr>
<td>Inventory management</td>
<td>.424</td>
<td>.106</td>
<td>.082</td>
<td>-1.167</td>
</tr>
</tbody>
</table>

The resulting regression model was of the form;

\[ Y = 1.529 + .367 \text{ Bulk Ordering} + .319 \text{ E-procurement} + .259 \text{ Standardize Purchasing} + .424 \text{ Inventory management} + 2.844 \]

The above indicates that bulk ordering \( p = .367; \text{ sig } = .004 < 0.005 \) had a significant and positive effect on organization performance. A unit change in bulk ordering would result in 36.7% change in organization performance. The result also indicates that e-procurement \( p = .319; \text{ sig } = .000 < 0.005 \) had a significant and positive effect on organization performance. A unit change in e-procurement would result in 31.9% change in organization performance.

The above results indicates that standardized purchasing \( p = .259; \text{ sig } = .000 < 0.005 \) had a significant and positive effect on organization performance. A unit change in standardized purchasing would result in 25.9% change in organization performance. The above findings also indicated that inventory management \( p = .424; \text{ sig } = .025 < 0.005 \) had a significant and positive
effect on organization performance. A unit change in inventory management would result in 42.4% change in organization performance.
CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENDATION

5.1 Introduction
This chapter highlighted the following main sections; the summary, conclusions and recommendations of the study on the influence of centralized purchasing on organization performance within Mabati Rolling Mills. This was arrived at through the scrutiny and critical analysis of the data presented in chapter four as well as making inferences and deductions from the data. Conclusions were reached based on the information gathered and recommendations for improving organization performance at MRM arrived at.

5.2 Summary
The results of the study indicated that the research was able to obtain a feedback of above 60% which was adequate for statistical analysis to be conducted. The majority of the study respondents were male as shown in the data analysis. This is in line with the manufacturing sector labor force in the country which is highly populated by male personnel. The results of the study also indicated that the majority of the respondents had attained graduate level of education indicating that professional human capital is being assimilated within the manufacturing sector.

5.2.1 Organization Performance
In summary the results of the study indicated that Mabati rolling mills was experiencing a growth of sales since adoption of centralized purchasing. The study findings also showed that the firm was achieving higher profits margins since the adoption of centralized purchasing. The responses obtained also indicated that the firm had enhanced its delivery of products to customers which was key to the high customer satisfaction being obtained by the firm. The results also showed that in general the firm had increased its market share and the quality of goods being produced.
5.2.2 Bulk Ordering and Performance
In summary the study results indicated that increased bulk ordering contributes to price savings due to discounts. The study results also showed that bulk ordering enhanced the firm competitiveness in creating supplier linkages for the business; further bulk ordering arrangements promoted efficiency in the procurement process. The results also indicated that large orders ensures that the firm has sufficient inventory to support continuous production which is key to fostering the performance within the firm. In summary bulk ordering \( p = .367; \) \( \text{sig } =.004<0.005 \) had a significant and positive effect on organization performance. A unit change in bulk ordering would result in 36.7% change in organization performance.

5.2.3 E-procurement and Organization Performance
The results of the study showed that electronic purchasing fosters efficiency in the organization procurement and enhances the available information on stakeholders in the value chain. Findings also indicated that electronic purchasing fosters quality service delivery to customers. The results also showed that E-purchasing supported online tendering which is essential for timely ordering and delivery. The findings of the study also showed that electronic purchasing supports the adoption of dynamic and innovative methods that support cost-efficiency. The study results also indicated that e-purchasing fosters accountability in the procurement department which is integral for better financial performance. In general that e-procurement \( p = .319; \) \( \text{sig } =0.000<0.005 \) had a significant and positive effect on organization performance. A unit change in e-procurement would result in 31.9% change in organization performance.

5.2.4 Standardized Purchasing and Organization Performance
The findings of the study showed that the organization follows specified ethical procedures in procurement process. The results also indicated a strong that employees are trained on standard procedures of procurement process. Findings of the research showed that the organization has an
elaborate purchasing policy in place. The results also indicated that purchasing procedures ensures that only qualified suppliers are considered and the organization formulates purchase guidelines that support better evaluation and selection of suppliers. In summary standardized purchasing \( p = .259; \, \text{sig} = .000 < 0.005 \) had a significant and positive effect on organization performance. A unit change in standardized purchasing would result in 25.9% change in organization performance.

5.2.5 Inventory Management and Organization Performance
The research findings indicated that inventory management ensured that there is minimal wastage of organization and timely flow of supplies which fosters production. The study results indicated strong agreement among respondent in regard to inventory management ensures timely flow of supplies which fosters production. The findings of the study also indicated that proper inventory management fosters customer satisfaction within the firm. The research results indicated that effective inventory management enhances the profitability of firms through minimized pilferage. The findings also indicated that inventory management \( p = .424; \, \text{sig} = .025 < 0.005 \) had a significant and positive effect on organization performance. A unit change in inventory management would result in 42.4% change in organization performance.

5.3 Conclusions
The research concludes that Mabati rolling mills has been able to obtain higher organization performance as a result of centralized purchasing as shown by the increasing profit margins, a growth in overall firms performance, a higher market share and enhanced efficiency within the firm. The study also posited that increased bulk ordering was essential for increasing economies of scales within the firm which resulted in better cost savings, enhanced the production process due to timely purchase deliveries and efficiency in delivery systems. The research also concludes that e-procurement has been instrumental in enhancing accountability within the procurement
process. The study also indicates that adoption of information technology systems in the procurement process promotes better inventory management within the firm. Adoption of e-procurement also enhanced the firm’s ability to monitor and evaluate the purchasing process which was essential in limiting wastage and ensuring optimal inventory within the firm. The study also concludes that adopting procurement policies within the firm resources wastage of firms resources and promotes ethical conduct within the procurement department. The study also concludes that inventory management is essential in ensuring that adequate supplies are within the firm’s storage to support continuous production process.

5.4 Recommendations
The study recommends that the firm should enhance the bulk ordering process by undertaking a value chain analysis which will help the firm in selecting suppliers who will foster the firm savings and enhance its economies of scale. The study also recommends that the organization should review the best procurement standards from large multinational corporations which will be of great importance in designing better and more effective procurement policies. The research also recommends that the organization should enhance the adoption of information technology systems which will be essential in promoting inventory management. The firm should also ensure that personnel strictly follow the inventory management practices which will help in enhancing the efficiency and effectiveness of the firm.

5.5 Suggestions for Further Research
The study recommends further research on the influence of inventory management practices on the financial performance of listed manufacturing firms in Kenya. The study also suggest further research on the procurement practices and service delivery within the devolved systems of governance in Kenya.
REFERENCES


APPENDICES

Appendix I: Introduction Letter

Appendix II: Questionnaire

The current study seeks to consolidate information that will be utilized for academic purposes in examining the influence of centralized purchasing practices on organization performance at Mabati Rolling Mills. The information collected will be utilized for academic purposes and utmost confidentiality will be adhered to ensure that no respondent is discriminated against due to the responses given.

PART A: GENERAL INFORMATION

1) Age Bracket
   - Below 25 years [ ]
   - 25 – 35 years [ ]
   - 36 and above [ ]

2) Gender
   - Male [ ]
Female [ ]

3) Education Level
   O- Level [ ]
   Diploma [ ]
   Graduate [ ]
   Post graduate [ ]
   Others (Specify)………………………………………………………………………………

4) Your position in the organization
   Operations Department [ ]
   Finance Department [ ]
   Procurement Department [ ]
   Administration Department [ ]

5) Number of years in this department/position
   Less than 5 [ ]  5-9 [ ]  10-15 [ ]  Over 15 [ ]

PART B: CENTRALIZED PURCHASING PRACTICES AND ORGANIZATION PERFORMANCE

Please tick the level of agreement on the following statements.

Please indicate in the table with a tick (√) or a cross (×) with a scale of

5= strongly agree  4= Agree 3= Moderate Agree 2= Disagree 1= Strongly Disagree

<table>
<thead>
<tr>
<th>No</th>
<th>Organization Performance</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>There is increased sales within the firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>The profit margins of the firm have been increasing since adoption of centralized purchasing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The firm has fostered on time delivery to its’ clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>There is increased customer satisfaction with adoption of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
centralized purchasing

5. The firm has increased its’ market share with adoption of centralized purchasing

6. There is increased quality of good being produced within the firm.

6. From your work experience in what other way has organization performance been evaluated at MRM?

…………………………………………………………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………………………………………………………
…………………………………………………………………………………………………………………………………………………………………………

<table>
<thead>
<tr>
<th>No</th>
<th>Bulk ordering and Organization Performance</th>
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<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Increased bulk ordering contributes to price savings due to discounts offered.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Bulk ordering arrangements promotes efficiency in the procurement process.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Bulk ordering enables competitiveness in creating supplier linkages for the business.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Large orders ensures that the firm has sufficient inventory to support continuous production</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. From your work experience in what other ways has economies of scale influenced the organization performance at MRM?

…………………………………………………………………………………………………………………………………………………………………………
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…………………………………………………………………………………………………………………………………………………………………………

<table>
<thead>
<tr>
<th>No</th>
<th>E-procurement and Organization Performance</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Electronic purchasing fosters efficiency in the organization procurement.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Electronic purchasing enhances the available information</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Electronic purchasing fosters communication between organization and suppliers.

4. Electronic purchasing fosters quality service delivery to customers.

5. E-purchasing fosters accountability in the procurement department which is integral for better financial performance.

6. Electronic purchasing enables the organization to monitor and evaluate the procurement performance.

7. Electronic purchasing supports the adoption of dynamic and innovative methods that support cost-efficiency

8. E-purchasing supports online tendering which is essential for timely ordering and delivery

8. From experience in what other ways has electronic purchasing fostered the organization performance at MRM?

<table>
<thead>
<tr>
<th>No</th>
<th>Standardized purchasing and Organization Performance</th>
<th>5</th>
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<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The organization follows specified ethical procedures in procurement process.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Employees are trained on standard procedures of procurement process.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The organization has an elaborate purchasing policy in place.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Purchasing procedures ensures that only qualified suppliers are considered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Integrity and regulatory guidelines are observed in the organization procurement process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>The organization formulates purchase guidelines that</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>
support better evaluation and selection of suppliers

8. In what other ways does standardization influence the organization performance?

………………………………………………………………………………………………………
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<table>
<thead>
<tr>
<th>No</th>
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<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
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<tbody>
<tr>
<td>1.</td>
<td>Inventory management ensures that there is minimal wastage of organization resources.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Inventory management ensures timely flow of supplies which fosters production.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td>Inventory management fosters constant feedback with suppliers which enhances collaboration.</td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td>Proper inventory management fosters customer satisfaction within the firm.</td>
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<tr>
<td>5.</td>
<td>Inventory management fosters efficient capacity utilization within the firm.</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>6.</td>
<td>Effective inventory management enhances the profitability of firms through minimized pilferage.</td>
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</table>

9. In what other ways does inventory management influence the organization performance?

………………………………………………………………………………………………………
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## Appendix III: Work Plan

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