

**THE RELATIONSHIP BETWEEN TOTAL QUALITY MANAGEMENT PRACTICES  
AND FIRM PERFORMANCE: A CASE OF MANUFACTURING FIRMS IN KENYA**

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**DECLARATION**

**STUDENT DECLARATION**

I declare that this project is my original work and has not been presented to any other University for award of a degree. Any work done by other people has been duly acknowledged. To the best of my knowledge and belief, the project contains no material previously published or written by another person.

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March,2022.

**SUPERVISOR'S APPROVAL**

This research has been submitted for examination with my approval as the University supervisor.

Ms. Mary Aming'a

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March,2022

## ABSTRACT

The main reason of the study was to establish relationship between total quality management practices (TQM) and firm performance in manufacturing firms in Kenya. A case study design was because it allows an in-length investigation and brings about deeper insight of the problem. The objectives of the study were to determine the relationship between continuous improvement and firm performance of manufacturing firms in Kenya, to determine the relationship between supplier relationship management and firm performance of manufacturing firms in Kenya and to determine the extent to which top management commitment affects the performance of manufacturing firms in Kenya.

The study should assist the manufacturing firms to show the relationship between TQM practices and firm performance. The findings of this research were also an eye opener for how organizations can use TQM practices, to ensure top notch quality in the firms. The unwillingness of managers to tell strategic information in the name of confidentiality and uncooperativeness from some of the respondents in answering the questions was a limitation in this study. The conceptual framework was used to show the interrelationships of variables. This study targeted manufacturing firms in Kenya with a target population of 129 food and beverages manufacturing companies out of the 900 companies listed in the Kenya Association of Manufacturers (KAM) directory as members.

Questionnaires were used to collect information (data) and analyzed using qualitative and quantitative techniques. The presentation of the data was done by use of tables for easier understanding of the research results. This research informed the cultures of firms with TQM practices and encouraged those without to incorporate TQM practices in their organizations. The data was examined with SPSS and descriptive statistics, as well as correlation and regression analysis. A total of 200 questionnaires were distributed, but only 104 were returned, resulting in a response rate of around 52 percent. It may be inferred, based on the data, that total quality management (TQM) has a beneficial impact on business performance. As a result, management should devote more resources to implementing TQM to improve the organization's operational performance.

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## LIST OF ABBREVIATIONS AND ACRONYMS

<b>TQM</b>	Total Quality Management
<b>KAM</b>	Kenya Association of Manufacturers
<b>RDT</b>	Resource Dependence Theory
<b>QIT</b>	Quality Improvement Theory
<b>CI</b>	Continuous Improvement
<b>SRM</b>	Supplier Relationship Management
<b>KEBS</b>	Kenya Bureau of Standards
<b>ISO</b>	International Organization for Standardization
<b>JIT</b>	Just-In-time
<b>TPS</b>	Transaction Processing Systems

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## DEDICATION

This project is first and foremost devoted to the Almighty God, whose providence, grace, and care I treasure. I gratefully thank my father, John, my mother, Rose, and my brother, Moses for their moral support. I would not have gone this far were it not for you. May God bless each one of you.

## CHAPTER ONE: INTRODUCTION TO THE STUDY

### 1.1 Introduction

Quality has evolved into a competitive and strategic instrument that may help a company endure competition, attract new consumers, and strengthen its market position (Islam et al., 2011). This has forced businesses to implement quality management techniques that help them stand out from their competitors, allowing them to thrive in today's competitive marketplaces. Quality management practices are proving to be successful tools for obtaining and maintaining competitive advantage all around the world (Flynn, Sakakibara, & Schroeder, 1994). Furthermore, understanding how quality management methods affect performance and customer happiness have become critical for management within firms.

Total Quality Management (TQM) is a set of management theories and practices that have been used to improve the performance and competitiveness of organizations (Jaafreh & Al-abedallat, 2012). Total quality management is a company-wide process that requires changes in production and decision-making processes, employee training and development, participation as well as involvement (Jung et al., 2010). Deming's Theory, Crosby's Theory, Joseph Juran's Theory, The European Foundation for Quality Management (EFQM) Framework, and Ishikawa's Theory are some of the theories that have influenced the development of TQM techniques.

In the 1950s, Edward Deming developed Deming's Theory. The foundations of this research were Deming's Theory, Joseph Juran's Theory, and the EFQM Framework. TQM is defined by Deming's Theory as the creation of an organizational system that fosters cooperation and learning to enable the implementation of continuous product, process, and service improvement, as well as employee satisfaction (Deming, 1986). Joseph Juran's Theory defines TQM as a series of actions aimed at customer happiness, staff fulfillment, high revenue, and cost reduction (Juran and Gryna, 1993). The EFQM Model is a quality management model that aspires for long-term excellence in a company, including TQM as a key component. It consists of globally acknowledged ways that assist companies in sharing information with others, regardless of the industries, cultures, or life phases in which they are situated.

## 1.2 Background of the study

### 1.2.1 Firm Performance

Organizational performance refers to the extent to which an organization fulfills its stated objectives, and there is a wide range of measures available to assess levels of performance in the current literature, including both financial and non-financial measures (Jabeen et al., 2014). Firm performance is described as the relationship between what businesses do in terms of quality management systems and the outcomes they receive in various types of outcomes (NIST, 2010).

For staff to perform well, the company must establish clear performance requirements. According to this study, people must be willing to do the work, know how to do it, be able to execute it, and receive feedback on how they're doing. It is management's obligation to coach and support personnel. Previous research has found that individual performance is influenced by their motivation and abilities (Fox, 2006). This finding is consistent with that of Fotopoulos et al. (2009), who discovered that firms that focus on increasing product and process quality generate higher revenues and lower expenses. The increase in sales revenue, as well as the cost-per-function level.

A company's financial success can be measured by the increase in sales revenue, cost performance, return on investment and assets, and market share gained because of quality initiatives. Non-financial success can be measured using sales margin, market share, and client satisfaction. Material flaws and product cost are used to measure operational success. According to performance measurement systems, managers are supposed to use performance measurement data to make better judgments. Their key finding is that seven companies that received a quality award outperform the control companies in terms of operating income-based measures.

(Richard et al., 2009) was more concerned with financial success than Fotopoulos. Financial success (profits, return on assets, and return on investment), product market performance (sales, market share), and shareholder return are the three distinct features of corporate results (total shareholder return, economic value added) Richard et al. (2009) are among those who have

contributed to this study. Companies that outperform their competitors often have a competitive advantage, allowing them to provide more products and services.

On the other hand, according to (Schoenherr & Swink, 2012), an enterprise is measured using standard or specified criteria such as cycle times, productivity, waste reduction, regulatory compliance, efficiency, and environmental liability. Product quality, on-time delivery, manufacturing flexibility, and production costs are all factors that contribute to improved organizational performance.

This research concentrated on both financial and non-financial methods of gauging corporate success. Financial indicators are measurements used by businesses to track, measure, and analyze their financial health. They are classified into several areas, such as profitability, liquidity, solvency, efficiency, and valuation. Non-financial performance measurements, on the other hand, can be used to predict future financial performance and provide insight into an organization's impact on stakeholders and society. They can provide more in-depth insights into the inner workings of your company. They can also be utilized to determine why particular financial results occurred and what must be changed to enhance your financial metrics. They are divided into four categories: firm reputation, customer influence and value, competitiveness, and innovation.

### **1.2.2 TQM Practices**

Numerous TQM Practices have been identified by scholars and institutions such as the Malcolm Baldrige Award, the European Foundation for Quality Management (EFQM), and the Deming Prize. TQM contains eight qualities that increase organizational performance, according to (Zehir et al., 2012): leadership management, personnel management, fact-based decision making, customer focus, supplier participation, continuous improvement, system approach to management, and process management. According to Chauhan et al.,(2014) significant aspects of TQM include employee empowerment, process management, teamwork, continuous improvement, creativity and innovation, benchmarking, housekeeping, and kaizen .

TQM may considerably increase the organizational performance of industrial businesses in Cameroon, according to (Ngambi & Nkemkiafu, 2015). Employee training, employee involvement in quality choices, quality control, assurance, and inspection, benchmarking, customer focus, and leadership are among TQM methods used in Cameroonian manufacturing companies. Continuous improvement, supplier management and top management commitment was the subject of this study.

According to Fening et al. (2013), there is a tremendous demand for a better understanding of quality because of the changes and increased competition in the business sector. As a result, management must believe in TQM and ensure that all employees in the organization understand the concepts, strategies, and benefits of TQM. According to (Sidin, 2014), senior management support is one of the most important determinants of effective TQM adoption. They also stressed the significance of senior executive leadership in improving organizational performance and setting goals, values, and processes that meet customer demands and expectations.

Continuous improvement is focused on the connection between improvement programs, services, materials, and the organization's consumers, suppliers, competitors, and capital markets (Singh and Singh, 2013). The quality management environment, according to Chauhan et al. (2014), must be monitored and revised on a regular basis. The process of progress, according to Harrington et al. (2012), never ends. As a result, TQM management must stimulate technological and management advancements. Heavey et al. (2014) proposes customer value co-leadership, customer value centered strategic objectives, improvement knowledge specialization, and methodology improvement as part of a continuous improvement framework. According to the findings, the framework increased the organization's return on investment.

Continuous improvement, supplier management, and top management commitment were the emphasis of this research. The procurement processes that a company chooses to have a significant impact on manufacturing companies. Internal customer focus through top management commitment and ongoing development, as well as good relationships with suppliers, are critical components in delivering a solution to poor quality issues.

### **1.2.3 Analysis of the Manufacturing Industry in Kenya**

Kenya's manufacturing sector is vast, supplying both domestic and export markets, particularly in Eastern Africa (Kenya National Bureau of Statistics Economic Survey, 2014). Political stability, increasing electricity supply, increased agricultural product supply for agro-processing, improved tax incentives, aggressive export promotion, and liberal trade incentives to take advantage of the expanded market are all factors contributing to this continuous growth. However, when contrasted to cheaper imported items, demand for locally produced goods is limited by their higher costs and perceived lower quality.

In terms of industry, Kenya is the most developed country in East Africa. According to the Economic Recovery Strategy for Employment and Wealth Creation Report (2015), Kenya's manufacturing industry is a major contributor to growth, but there is still a lot of potential for expansion and investment. In Vision 2030, the manufacturing sector's goal is to create jobs and prosperity. Manufacturing has a huge, untapped potential for job development and economic growth. So far, industrial development has been concentrated in Kenya's three main cities: Nairobi, Mombasa, and Kisumu (Magutu et al., 2010).

The manufacturing sector, as a substantial contributor to overall economic growth, deserves a thorough assessment at both the trade and industry levels. According to the Kenya Association of Manufacturers, Kenya's manufacturing industry has been implementing quality management approaches to improve product quality and procedures to improve performance (KAM, 2014). In today's highly competitive business market, firms in Kenya, on the other hand, should focus on customer happiness as a strategy for improving performance (Macharia, 2010).

Manufacturers are focusing on Total Quality to ensure long-term quality, accurate planning, less waste, and cheap manufacturing costs. To compete effectively in the market and gain a strong position as a market leader, manufacturers must embrace Total Quality Management.

#### **1.2.4 TQM Practices and Firm Performance**

Karia and Asaari evaluated the impact of TQM methods on employees' work-related attitudes (2006). Training and education have a significant positive effect on job involvement, job satisfaction, and organizational commitment, according to the findings of their empirical study. Empowerment and cooperation improve job involvement significantly. Job happiness, career fulfillment, and organizational commitment are all critical considerations. According to the conclusions of this study, problem avoidance and continuous improvement have a significant impact on customer satisfaction and organizational performance.

Total Quality Management (TQM), according to Sila (2017), aids in the enhancement of product quality, waste reduction, and the establishment of a stable production process. The continual improvement aspect of TQM is thought to reduce product cycle time, resulting in improved performance. TQM practices like as training, information system management, supplier relationships, and others have a positive impact on operational performance. Effective management of these procedures will boost efficiency and, without a doubt, affect the firm's profitability by providing superior service.

Total quality management, according to Blecken (2009), is a management philosophy that emphasizes delegating responsibility to front-line personnel. It ensures that everyone is involved in the decision-making process through activities such as quality cycles and teamwork. TQM guarantees that every employee in the company completes their work to a high standard the first time, resulting in increased operational efficiency and lower waste costs. Customers were happier as a result, as they will receive greater value in terms of price and service quality.

TQM assures that organizations change how they operate to reduce inefficiencies, increase customer happiness, and attain best practices. Several scholars have also pointed out that the success of Total Quality Management, as well as the size of the potential benefits that can be obtained through these methodologies, is reliant on several factors. In a similar vein, (Jaafreh & Al-abadallat, 2012) found that customer focus has a strong positive association and significantly enhances Jordan bank's favorable organizational performance.

Furthermore, Al-Damen (2017) discovered that continuous improvement has a significant positive impact on the operational efficiency of the Jordan Oil petroleum sector. The continuous improvement part of TQM reduces product cycle time and thereby enhances performance. Customers are satisfied, and as a result, they form a tight bond with the business, leading to client loyalty. This passion translates into higher income and market share in the corporate sphere. Implementing complete quality management concepts can help businesses enhance their internal processes more efficiently.

As a result, this research will contribute by providing empirical evidence on the relationship between Total Quality Management (TQM) and organizational performance. A review of performance-related TQM literature also demonstrates that performance measurement frameworks include a wide range of criteria. Non-financial outcomes such as customer satisfaction, process improvement, staff satisfaction, and social outcomes are not considered in some research, but this one will. As a result, this research will investigate this topic and examine the link between TQM procedures and organizational success using non-financial performance metrics.

### **1.3 Problem Statement**

While some firms have implemented a TQM-like program that is supposed to function and perform the magic on its own, others have taken a more ad hoc approach, including bits and pieces of the philosophy. This has accounted for the failure of most associations to meet their likely aim to put these principles into practice. The manufacturing sector has not yet reached the 20% GDP target set out in Kenya Vision 2030. (Waiganjo, 2016). Locally, the manufacturing industry must compete with imports from well-established multinational corporations while also attempting to gain a global competitive advantage (World Bank, 2016).

The results of previous studies on the impact of TQM on organizational performance have been controversial. While some researchers (Prajogo & Olhager, 2012) argue that TQM is mostly associated with internal process improvement and cost reduction, particularly in the manufacturing context, others (Zatzick, Moliterno & Fang, 2012) argue that TQM is mostly associated with differentiation orientation due to the intense customer focus and has no effect on cost minimization. Furthermore, customer focus may trap firms in captive markets, where they

will focus on serving the demands of existing consumers and, as a result, view their business solely through the eyes of their customers, missing the market's untapped potential (Zatzick et al., 2012).

In Kenya, the Kenya Bureau of Standards(KEBS) was established for standardization and conformity services that consistently meet its customers' requirements. Organizations have been putting off implementing TQM because of noncompliance with TQM implementation practices. Sweis et al., 2020 noted that the implementation of TQM Practices leads to improving quality, reducing costs, and increasing productivity even though the application is a challenge. Phan et al., 2019 claim that customer involvement and supplier involvement have a significant positive impact on the flexibility performance of international manufacturing firms. Azuka.M, 2019 highlighted some methods in which comprehensive quality management increases organizational performance, as well as the obstacles it poses to modern businesses. Senior management is a driving force behind TQM adoption, defining values, goals, and procedures to meet the requirements and expectations of consumers while also improving organizational performance.

The aim of the study therefore is, to determine the relationship between total quality management practices and firm performance in manufacturing industries in Kenya, where there hasn't been a lot of research done on the subject. Many firms use tactics to accelerate supplier improvement, top management commitment, and continuous improvement, cautiously using them in response to a specific organization's strengths and needs. Total quality management is gaining popularity. However, there is still some misunderstanding about what TQM is, how it is implemented, and how it relates to company performance. This study adds value to existing literature by providing empirical evidence and fills the existing contextual and conceptual gaps.

Almost every organization that has attempted continuous improvement has run into issues such as fostering collaboration among multiple stakeholders, determining which process improvements to prioritize, ill-suited process management tooling, governing/controlling change (to meet compliance obligations), and employee disengagement. Your organization may assure a more seamless and comprehensive adoption of continuous improvement by planning for these

problems ahead of time. Examine each obstacle and consider what you'll need to do to overcome the challenges it presents.

What data do you need to obtain to make better decisions and prioritize your tasks? What resources would you require to establish effective communication and governance? What kind of instruction do you need to give? Who should oversee various aspects of continual improvement? The firms were able to mitigate these issues because of this investigation. Top management in every company should be able to demonstrate their commitment. This study demonstrates how senior management can demonstrate their commitment to the firm's daily operations, thereby enhancing the firm's success.

#### **1.4 Research Objectives**

##### **1.4.1 General Research Objective**

To determine the relationship between total quality management practices and firm performance.

##### **1.4.2 Specific Research Objectives**

1. To determine the relationship between continuous improvement and firm performance of manufacturing firms in Kenya
2. To determine the relationship between supplier relationship management and firm performance of manufacturing firms in Kenya
3. To determine the extent to which top management commitment affects the performance of manufacturing firms in Kenya

#### **1.5 Research questions**

1. What is the relationship between continuous improvement and firm performance of manufacturing firms in Kenya?
2. What is the relationship between supplier management and firm performance of manufacturing firms in Kenya?
3. What is the relationship between top management commitment and firm performance of manufacturing firms in Kenya?

## **1.6 Scope of the Study**

The association between comprehensive quality management methods and firm performance in Kenyan manufacturing enterprises is investigated in this study. The research was carried out on ISO certified manufacturing companies in Nairobi County, Kenya. The study focused on middle managers, with a target population of 117 people from diverse companies. The study's purpose was to conduct a survey of Kenyan businesses.

Top management commitment, continuous improvement, and supplier management were all examined in the study. The precise goals were to highlight how top management may demonstrate or practice commitment in the organization, how continuous improvement can be achieved and made effective, and how supplier relationship management can be maintained. The results are confined to that time because the study was conducted between June 2021 and February 2022.

## **1.7 Significance of the Study**

Manufacturing companies benefited from this research. Kenyan manufacturing executives will have a better grasp of competitive strategies used by companies and the need of implementing TQM in their businesses. The manufacturing enterprises can then apply TQM from a more informed position.

Academics will find the study useful. Many scholars have researched the relationship between competitive tactics and organizational performance, but the mediating influence of TQM on this because of this research, the body of knowledge will grow. Other researchers can use the findings as a point of reference. Furthermore, it may promote further research in this area, providing a solid foundation for future researchers.

This study provided great knowledge on the contribution of the TQM system to the success of businesses to relevant authorities such as the Kenya Association of Manufacturers and others, and thus encouraged them to set programs that would promote these good management practices and create an environment that would enable companies to be ISO certified.

## **1.8 Chapter Summary**

This chapter introduced the concept of total quality management practices and their impact on firm performance. It also highlights the factors that brought the study about. General and specific objectives are also covered along with research questions with an aim of filling contextual gaps. Finally, the chapter covers the scope and the significance of the study.

## CHAPTER TWO: LITERATURE REVIEW

### 2.1 Introduction

This chapter examines previous research on TQM practices and organizational performance conducted by other scholars. The chapter is broken down into four pieces. The following theories are discussed in the first section: knowledge-based theory, resource dependence theory, and quality improvement theory. The theoretical framework is presented in the second section. The third component is an empirical evaluation based on the study objectives, and the fourth section is a conceptual framework that connects Total Quality Management Practices to performance.

### 2.2 Theoretical Framework

#### 2.2.1 Knowledge Based Theory of the Firm

Originating from the strategic management literature, this theory builds upon and extends the resource-based view of the firm initially promoted by Penrose (1959) and later expanded by (Conner 1991). Although the resource-based view of the firm recognizes the important role of knowledge in firms that achieve a competitive advantage, proponents of the knowledge-based view argue that the resource-based perspective does not go far enough. Specifically, the resource-based view treats knowledge as a generic resource rather than having special characteristics. It therefore does not distinguish between different types of knowledge-based capabilities.

Information technologies can play an important role in the knowledge-based theory of the firm in that information systems can be used to synthesize, enhance, and expedite large-scale intra- and inter-firm knowledge management (Alavi and Leidner 2001). This theory considers knowledge as the maximum strategically sizable resource of the company, a firm's competitive benefit relies upon what it is aware of and how it uses what it is aware of and how fast it could create something new (Duran, Centinder & Sahan, 2014).

The capability to learn, or the potential to create and observe new information is taken into consideration (Islam et al., 2011). The intention of knowledge management is to create a “gaining knowledge of employer” which evaluates, shops, makes use of, and commercializes information and proper knowledge of the employees in the organizations if you want to create a corporation more powerful and treasured and more competitive than its competition (Duran et al., 2014). Total quality management and knowledge management represent and interact in vicinity of non-stop improvement and employee empowerment.

Companies which have applied total quality management practices are better within the fields of acquiring knowledge from customers and personnel participation in dissemination of understanding. According to (Hung et al., 2010) one of total quality management benefits is its emphasis on continuous development of business methods in order to enable the improvement of firms’ competitiveness, effectiveness and flexibility. To attain continuous development, firms have to promote organization mastering to create knowledge that may be utilized in future to enhance enterprise strategies (Islam et al., 2011).

Hung et al., 2010) posited that understanding management projects has an indirect effect on innovation performance thru total quality management practice; with the Resource of specializing in assembly customers’ wishes and encouraging groups to continually become aware of new patron’s needs and expectancies. Thereby inducing firms to innovate, constantly develop and introduce merchandise that meet markets changing needs. Total quality management attention on top management Resource and employee involvement is also visible as essential to expertise management and sequentially organization innovation.

Corporations must be able to examine from past reviews, successfully use understanding, correct mistakes and practice this understanding of inside groups if they are to change and adapt to continuously converting markets (Akgün et al., 2014). When systems empower personnel throughout first-class development tasks, their expertise and talents are implemented extra effortlessly, consequently those structures create opportunities for employees to disseminate their expertise during a corporation. Firms in which all personnel have been equipped with the vital and proper kind of statistics have a competitive advantage over its competition (Han & Anantatmula, 2007). Knowledge management has many benefits. (Hooshyar, 2010) considers

knowledge management as an essential supply of competitive advantage that results in fee reductions.

Hurdles usually emerge from the divergence of interests between employee conditions and owner expectations and can hamper smooth coordination of specialized knowledge. As such, firms that seek to entrench uniformity of interests should pursue coordination of specialized knowledge by encouraging cooperation among all employees in the organization. However, the pursuit of cooperation may lead to bureaucratic imposition of coordination objectives through hierarchical structures, a situation that can be avoided through incorporation of other administrative and enforcement tools such as recognition of organizational culture and process designs.

### **2.2.2 Resource Dependence theory (RDT)**

The resource-based theory developed by Penrose(1959) later expanded through (Wernerfelt,1984; Barney, 1991; Conner, 1991) stipulates that during strategic management the essential sources and drivers to the companies' competitive advantage and superior performance are specially associated with the attributes in their resources and skills which can be valuable and costly to copy. Organizational resources and systems were conceptualized so that it will extensively predict the level of competitive advantage (Ismail et al., 2011). The resource-based theory builds its assumptions on the premise that strategic assets are heterogeneously allotted throughout corporations and are immobile.

A firm is stated to have a competitive advantage while imposing a cost creating method now not concurrently being applied by means of any current or abled competitors and whilst these competitors are not able to copy the benefits of this method (Barney, 1991). Barney (1991), Collis and 1st viscount Montgomery of alamein (1995) gives a sequence of 5 tests for precious resources; inimitability (hard for competitors to copy the Resource); sturdiness (how quick does the Resource depreciate); Appropriability (who seize the cost that the resource creates, employer, customers, elements employees); substitutability (can a unique resource be trumped through

special assets) and competitive superiority (is the useful resource actually higher relative to competitors).

Many firms are dependent on their surroundings for the delivery of natural resources; however, these are getting increasingly scarce and highly priced (Cetinkaya,2011). In keeping with Resource Dependence Theory (RDT), firms aren't self-sufficient and embeddedness in a community of relationships is a reaction to the uncertainty involved in the Resource dependence (Pfeffer & Salancik,1978). A firm may additionally increase in safety inventory of a strategic herbal Resource following a buffering approach principle (could set up collaboration with a provider of this scarce natural resource following a bridging approach (Bode et al., 2011). Resource dependence theory (RDT) assisted the study in determining the impact of supplier relationship management on performance of manufacturing firms in Kenya.

Resource dependence theory (RDT) argues that firms need to exchange with their environments to gain assets. (Scott 1987). It centers totally on assets that ought to be received from outside sources for a firm to live on or thrive (Barringer & Harrison, 2000).Current literature on supply chain management makes an ambiguous assumption that the constituents of the supplier-consumer duo are willing and able to domesticate together beneficial relationships (Hong et al., 2012). Firms live on or become successful if they can make the most of their dependence on other corporations or different companies' dependence on them to achieve important resources (Hofer et al., 2012).

However, dependency no longer always results in hostile relationships among purchasers and suppliers. The need for outside resources makes companies rely on different things. To efficaciously manipulate dependencies, RDT argues that companies need to gain management over critical sources to lessen reliance on others and boost others' reliance on them (Min et al., 2005). In keeping with (Addae-Korankye, 2013) Total quality management (total quality management) presents resources which might be invisible, intangible and extremely tough for a competitor to copy for example; a corporation particular tradition, transformational leaders, superior customer service consequently it has a long lasting competitive gain.

(Silva et al., 2014), conceptualized total quality management as a set of integrated organizational assets that contribute to attaining and maintaining competitive gain. When a firm keeps

tremendous linkages to the external surroundings, they are most likely to be powerful inside their organizational community (Prajogo & Olhager, 2012). Extending the good judgment of Resource dependence theory from the supply chain to the company stage, supply chain partners as an entirety are less relying on their environments through sources sharing. A supply chain cannot be responsive unless there are happy suppliers (Benton & Maloni, 2005) working their downstream buyers to service or supply to the end consumer.

Resource dependence theory has been under scrutiny in several review and meta-analytic studies: (Hillman et al., 2009); (Sharif & Kyid, 2014), indicate and discuss the importance of this theory in explaining the actions of organizations, by forming interlocks, alliances, joint ventures, and mergers and acquisitions, in striving to overcome dependencies and improve an organizational autonomy and legitimacy. While resource dependence theory is one of many theories of organizational studies that characterize organizational behavior, it is not a theory that explains an organization's performance per se. But still in many ways, resource dependence theory predictions are like those of transaction cost economics, and it also shares some aspects with institutional theory.

In conclusion, resource dependence theory has become an excellent idea in analyzing the impact of supplier relationship management on overall performance of manufacturing firms.

### **2.2.3 Quality Improvement Theory (QIT)**

Quality improvement theory postulates that a function of quality management doctrine is that it places obligation for manufacturing organizations squarely at the door of top management (Deming, 1986). The concept states that the management is accountable for the systems, and that it is the system that generates 80 percent of the issues in corporations (Hill, 1995). Deming (1986) noted that no good management system may succeed without top-notch senior management commitment; it is by far the management that invests inside the processes, creates corporate culture, selects providers, and develops lengthy-time period relationships.

Deming's quality improvement theory gives businesses a plan to do away with poor quality management troubles through effective managerial techniques. It's a fact that management's behavior shapes the company attitude and defines what is important for the success and survival

of the company. Hubert (2000) has targeted the theoretical method of Deming (1986) in admiration to the fine management gadget, and it envisages the creation of an organizational machine that fosters cooperation and learning to facilitate the implementation of process management practices. This, in turn, leads to the continual development of the approaches, merchandise, and offerings and helps to instill employee satisfaction. These are essential to promoting purchaser consciousness and in the long run, helping in the survival of any enterprise.

Deming (1986) believed in a scientific technique to hassle-solving and promoted the widely recognized Plan-Do-check-Act cycle. The Plan-Do-check-Act cycle of non-stop development is a universal development idea whose purpose is to continuously improve performance, thereby lowering the difference among consumers requirements and the overall performance of the manufacturing companies (Goetsch & Davis, 2006).

The theoretical essence of the quality improvement theory centered on quality issues in the creation of an organizational system that fosters cooperation and learning for facilitating the implementation of procedure management practices, which, in turn, results in performance (Anderson et al., 1994). Oakland (2013) insisted that the duties of top management must take the lead in converting techniques and structures. Management performs an essential position in ensuring the success of satisfactory quality management because it is the top management's obligation to create and communicate the vision to move the firm towards overall performance improvement.

Senior management is liable for maximum quality issues; Kamanda (2010) asserts that it must supply personnel with clear directions on what is considered ideal work and provide the methods to achieve it. Those methods include an appropriate working environment and weather for work that is freed from fault finding, blame or fear and as an alternative provide readability of problems, speak efficiently, and provide suitable surroundings for work to enhance performance (Lamport et al., 2010).

The top management must be devoted to applying the principles and practices of system of profound knowledge (SOPK), where a business can simultaneously lessen costs through reducing waste, transformation, group of workers litigation and at the same time as increasing quality, consumer loyalty, employee satisfaction and ultimately, profitability (Deming, 1986).

Deming's quality improvement theory is relevant to study in that it supports the variable of system automation to enhance products and services through non-stop improvement, employee schooling and companies can use it to realize performance. This concept is relevant to the study because total quality management is a comprehensive and structured method to organizational management that seeks to improve the excellence of services and products through ongoing refinements in response to continuous feedback.

## **2.3 Empirical Framework**

### **2.3.1 Continuous Improvement and Firm performance of manufacturing firms**

Continuous Improvement adopts an approach to enhancing organizational overall performance, with small incremental steps over the years. (Carpinetti & Oiko, 2007). Many of the key approaches to Continuous Improvement (CI) within the recent beyond years among others; Total Quality Management, Six Sigma, Just-In-Time, Lean Logistics, Global Sourcing, and Supply Chain Management. Best in class companies are using those strategies and continue to set the pace for new entrants making it very tough for them to compete.

Production and service are often unique in phrases of what is done, however similar in terms of how it is done (Carpinetti & Oiko, 2007). Total quality management is an integrative philosophy of management for continuously improving the best of products and procedures. Total quality management is based on the idea that the better of merchandise and services is the obligation of each person concerned with the creation or intake of the goods or services presented by means of incorporation, requiring the involvement of management, workforce, providers, and customers, to meet or exceed customer expectations (Opondo, 2010).

Six Sigma is a set of equipment and strategies for manner development that first evolved through Motorola in 1986 and have become well known after Jack Welch made it a relevant recognition of his enterprise approach at General Electric in 1995. Six Sigma seeks to improve the quality of process outputs by means of identifying and casting off the causes of defects (errors) and minimizing variability in manufacturing and business strategies. It makes use of a set of exceptional management techniques, consisting of statistical strategies, and creates a unique

infrastructure of humans within the organization who are professionals in those very complex methods (Opondo, 2010).

Each Six Sigma task accomplished within a business enterprise follows a described sequence of steps and has quantified monetary goals (cost reduction and/or profit boom). The maturity of a production system can be defined by means of a sigma score indicating its yield or the proportion of disorder-free merchandise it creates. A six-sigma manner is one wherein 99.99966% of the products manufactured are statistically anticipated to be freed from defects (3.4 defects consistent with a million). Motorola set a purpose of "six sigma" for all its production operations, and this aim has become a byword for management and engineering practices used to acquire it (Opondo, 2010).

Just in time (JIT) is a manufacturing approach that strives to improve a business return on funding by way of lowering in-process stock and associated carrying charges. To fulfil JIT objectives, the system is based on indicators or kanban between unique points in the technique, which tell production when to make the next element. Lean production is a technique for manufacturing which arose in Toyota between the end of World War II and the seventies. It comes from the ideas of Taiichi Ohno and Toyoda Sakichi which might be focused on the complementary notions of just in Time and Autonomation, all aimed toward lowering waste (Nadia, 2005).

A sequence of tools was developed specifically with the goal of replicating Toyota success: a totally commonplace implementation including small playing cards is known as kanbans. Lean production is a management philosophy derived mostly from the Toyota production system (TPS) (therefore the term Toyotism is likewise regular) and identified as "Lean" best within the Nineties. TPS is renowned for its recognition of discounts of the unique Toyota seven wastes to enhance typical purchaser fee, but there are various views on how that is best done. The regular growth of Toyota, from a small employer to the world's largest automaker, has focused interest on the way it has achieved this fulfillment. It is evident from acronyms like 'Toyotism', Lean is centered on maintaining freedom with fewer paintings (Oakland, 2004).

Lean Logistics is the continuous improvement of price movement to the consumer and non-stop elimination of waste within the internal and outside logistics through lean practice. The value

stream and the elimination of waste include the middle concept of just-in-time: turning in the right product, at the proper amount, at the right first-class, on the right time, at the right location at a low-cost fee. continuous improvement issues to Kaizen, as the muse of Lean machine (Patrizia et al, 2004).

The internal logistics deals with the motion, storage and coping with of substances inside the operation and external logistics offers with the supply of materials (inbound) and distribution of merchandise (outbound). “Enterprise logistics covers all dealing with and storage activities that facilitate the drift of products from factor of starting place to the end consumption of product, as well as information flow that positions merchandise in motion, with the motive of providing adequate carrier degree to customer at an inexpensive fee (Oakland,2004).” All factors of Lean structures such as adding fee, elimination of waste, stock reduction, waft, balance, balance, and levelling are present in Lean Logistics.

Global sourcing is the practice of sourcing from the worldwide market for goods and services across geopolitical limitations. It often aims to make the most global efficiencies inside the shipping of products or services (Opondo, 2010). These efficiencies encompass low price skilled work, low value raw material and different monetary factors like tax breaks and occasional exchange tariffs. Common examples of globally sourced services or products encompass exertions-intensive synthetic products produced using low-price Chinese labor, call centers staffed with low-price English-speaking workers inside the Philippines and India, and IT works completed through low-fee programmers in India and Eastern Europe.

While these are examples of low-cost country sourcing, global sourcing is not limited to low-cost countries (Oakland, 2004).Most studies mainly examined performance measurement techniques as the basis for the development of reward and recognition mechanisms in TQM where they focused on the effectiveness of performance measurement instead of the relationship of TQM practices and firm performance in which this research clearly shows.

### **2.3.2 Supplier Relationship Management and Firm performance of manufacturing firms**

Supplier relationship is a key strategy for a company to stay competitive inside the dynamic business surroundings and to reduce the risk of uncertainty. This allows a company to gain

competitive advantage (Raut et al., 2012). In their take, Von Haartman & Bengtsson (2015) found high-quality consequences of supplier relationship management and skills on product innovation using a sample of 679 manufacturing firms in Europe, the USA, and Canada. Moreover, Peng et al., (2013) found that to enhance a firm's innovation capability and thereby improve performance then supplier management is paramount.

Castelli & Brun (2010) are of the opinion that the linkage and communication exchange between a firm and its customers is precious to customers. Supplier relationship management provides value by making the right product available to clients on the right time, through ensuring the proper components are provided at the proper rate and amount to the company. It additionally results in a seamless float of statistics between the organization and its providers and in the end its customers (Sundram et al., 2011).

Divesh & Zillur (2016) performed a study on how purchaser and dealer relationships cause supply chain sustainability. A study was conducted to perceive the elements affecting sustainability adoption in the Indian vehicle supply chain and investigate the inter-relationships present among them. The study found that retaining good relationships with suppliers of the firm stepped forward the performance of the enterprise on the regions of, monetary performance, environmental performance and social overall performance which is typically called the triple bottom line. The supplier relationship becomes assessed after breaking it down to three constructs - dealer choice, provider improvement and supplier performance evaluation (Divesh & Zillar, 2016).

Supply chain deficiencies pose threats to most companies, particularly folks who do not perceive the need for supplier relationship management (SRM) (Akintoye, et al, 2013). Shu Mei- Tseng (2014) performed an examination to analyze how firms use expertise to benefit, improve and preserve dealer family members and thereby improve agency performance. They observed that dealer courting positively affects the overall performance of a company. This implies that firms ought to decorate their expertise management that allows you to reap and retain valuable suppliers (Shu MeiTseng, 2014).

Hughes (2010) stated that inefficient supply chains were the most important cause of poor organizational performance. He insisted that companies with integrated supply chains recorded

higher income than those that paid little attention to supply chains. supplier relationship management necessitates a consistency of approach and a described set of behaviors that foster trust over the years Flynn (2010). Effective supplier relationship management requires new methods of institutionalizing, new ways of participating with key suppliers, but additionally actively dismantling current regulations and practices which can impede collaboration.

Corporations and their suppliers with extraordinary commercial enterprise practices come together into a running relationship through supplier relationship management (SRM) (McLachlin & Larson, 2011). According to Zimmermann, Rajal, Buchholz, Plinval & Geissmann (2015) techniques inclusive of supplier segmentation, SRM governance, supplier overall performance management, and supplier development are used to manipulate provider members of the firm. Supplier segmentation includes categorizing providers based on a particular set of standards to apprehend the sizable suppliers with which to participate in SRM (Chopra & Meindl 2013).

An observation by Goko (2012), found out that those providers want to preserve dependable records, errors to be diagnosed early, supermarkets to decentralize their management systems, suppliers should conform to 2 specs and that senior level management must be fully dedicated especially in supplier development programs to conquer the demanding situations faced in dealer first-class management. In his study, Ratemo (2011) found that suppliers didn't hold the right facts, long cycle times and accelerated costs in procurement. The enterprise also failed to maintain top relationships with their providers mainly due to negative supply chain performance.

Ratemo (2011) in his research concluded it was evident that suppliers did not hold proper records, long cycle instances and improved charges in procurement. The enterprise did not keep excellent relationships with their suppliers leading to terrible procurement performance. Wachira (2013) established that trust, communication, chance assessment and management in addition to strategic supplier partnership were the fundamental supplier relationship capabilities and had a helpful relationship on procurement performance. Kamau (2013) reviewed key supplier relationship management models in supplier management and concluded that communication, dedication, cooperation, and mutual goals are key components in a successful relationship, which in turn affects overall performance positively.

### **2.3.3 Top Management Commitment and Firm performance of manufacturing firms**

The commitment of top management is critical to the successful deployment of TQM in enterprises. Top management must convey TQM to the entire organization, according to Pheny and Teo (2003), to develop awareness, interest, desire, and action. They should present a high-quality vision and bring about a culture shift within the company. They should plan trainings, empower people by allowing them to grow, delegate authority, and reward them for excellent results. Top management must set aside resources and collaborate with suppliers to share knowledge about new breakthroughs and technologies in the market for high-quality materials.

Top management commitment and leadership are required for effective organizational culture transformation, which can only be achieved by top management's thorough involvement in the organization's continuous improvement plan, open communication, and cooperation throughout the organization. By impacting other total quality management dimensions, total quality management adoption increases organizational performance. According to Garvin (2004), management is to blame for most quality issues. This suggested that the level of top management commitment is critical to good quality management.

It necessitates top management commitment to quality, which must express the attitude that quality will take precedence over cost in the long run, resulting in improved operational performance and lower operational costs. Several research on the notions of quality improvement procedures and organizational performance have been conducted. Miller and Hartwick (2002), for example, discovered that training and top management commitment are critical in TQM implementations in publicly traded manufacturing organizations.

Quality cannot succeed without clear and consistent quality leadership. Everett is a character in the film *Everett* (2012). This necessitates making quality leadership a strategic goal, which entails the leader creating the most comfortable environment for group members to boost performance and production. Rao et al (2006)

## 2.4 Conceptual Framework

### Independent Variable

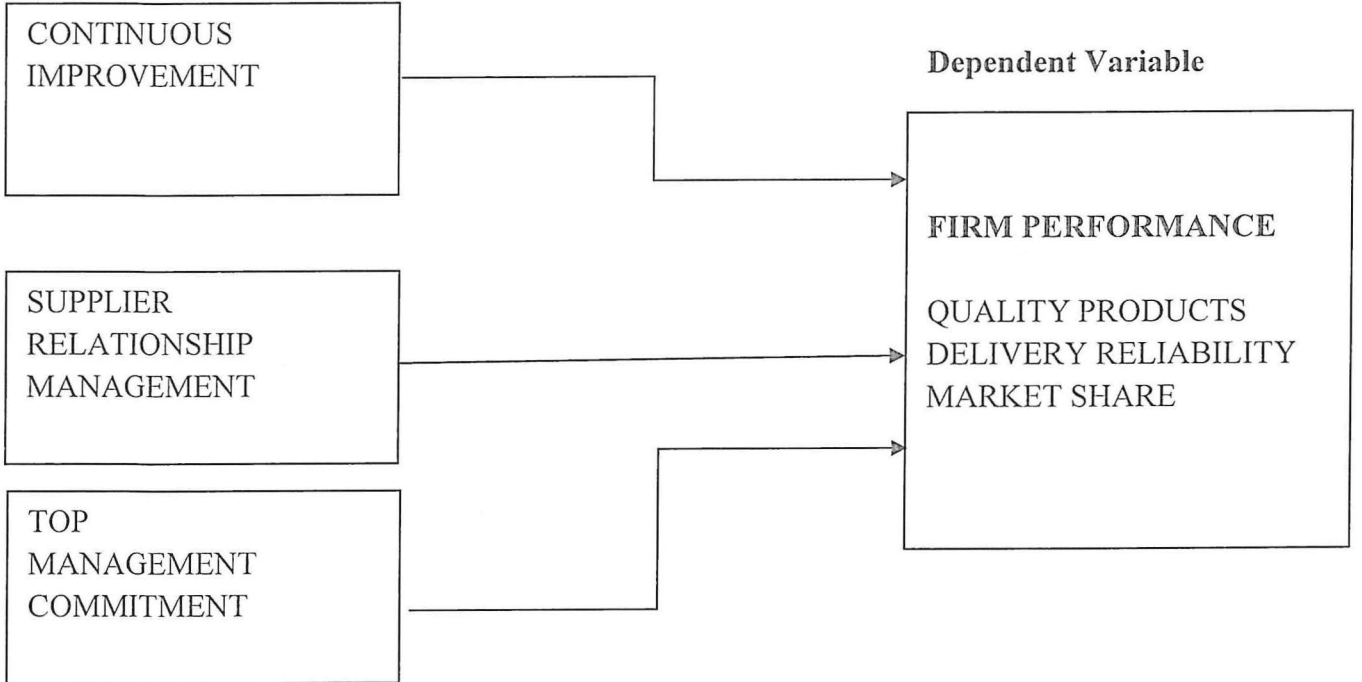
CONTINUOUS  
IMPROVEMENT

SUPPLIER  
RELATIONSHIP  
MANAGEMENT

TOP  
MANAGEMENT  
COMMITMENT

### Dependent Variable

FIRM PERFORMANCE  
QUALITY PRODUCTS  
DELIVERY RELIABILITY  
MARKET SHARE



## 2.5 Operationalization of Variables

Variables	Construct	Operational Definition	Measures
Independent variable	Continuous Improvement	A comprehensive philosophy of operations that is built around the concept that there are always ways in which a process can be improved to better meet the needs of the customer and that an organization should constantly strive to make those improvements.	Return on investment, product quality and time savings
	Supplier relationship management	The systematic, enterprise-wide assessment of suppliers' strengths and capabilities with respect to overall business strategy, determination of what activities to engage in with different suppliers, and planning and execution of all interactions with suppliers, in a coordinated fashion across the relationship life cycle, to maximize the value realized through those interactions.	Quality, Price, and cost
	Top Management Commitment	The direct participation by the highest-level management (top management) in all specific and critically important aspects such as safety, quality, environment, security,	Level of open communication between leaders and members, promotion of

		etc., or programs of an organization.	quality by top leaders and quality policy as an integral part of the group
Dependent Variable	Quality Products	The collection of all the features and characteristics of a product that contribute to its ability to meet the customer needs and requirements. It's the ability of the product to fulfil what the end user wants and perceives as value.	Velocity, cycle, and lead time
	Delivery Reliability	The degree to which a seller delivers a product according to the schedule promised at the time of sale.	Deployment frequency, mean restoration time and change fail rate
	Market Share	The portion of the total sales of a company within the entire market where it is operational. In much simpler terms, it can be defined as the percentage that a company has in the total sales of its industry or market.	Total revenues divided by total sales over a fiscal period.

**Table 2.1**

## **2.6 Chapter Summary**

This chapter begins with discussing three hypotheses that are significant to this research. To understand the impact of Total Quality Management on firm performance, the Knowledge Based Theory of the Firm, Resource Dependence Theory, and Quality Improvement Theory were explored. The Chapter comprised an empirical analysis in which the TQM practices of supplier relationship management, continuous improvement, and top management commitment were explored in connection to performance. The research gap was emphasized because of disparities in empirical outcomes and variable conceptualization. The chapter concluded with giving the conceptual framework in diagrammatic form and discussing the operability of variables.

## CHAPTER THREE: RESEARCH METHODOLOGY

### 3.1 Introduction

The research design and methodology employed in this study are discussed in this chapter. It goes over the research design, target population, sampling process, data collection methodology, research quality, and ethical considerations in further detail. The statistical approaches utilized for data analysis are also explained and rationalized in this chapter. Methodology is critical for acquiring relevant information and providing effective and truthful representation.

### 3.2 Research design

Cooper and Schindler (2011) defined research design as "the plan and organization of studies intended to obtain answers to questions." According to Kothari (2011), a research design is a master plan that includes methods and procedures for gathering and analyzing data. As a result, research design serves as a road map for addressing the study questions.

A descriptive research design was used in this study. When data is collected to describe people, organizations, environments, or phenomena, this study design is used (Creswell, 2014). It is great for collecting unique data to describe views, opinions, attitudes, relationships, and orientations held by a group that is too huge to witness firsthand. The descriptive research design allows the researcher to collect detailed information that may be utilized to help generalize one's findings to a larger population (Pietersen & Maree, 2007).

It is argued by Kothari (2011) that a descriptive research design provides enough protection against bias and maximizes reliability. As a result, the descriptive survey strategy was selected as the most suited way for obtaining a broad overview of a sample representing Kenyan manufacturers. Following that, both quantitative and qualitative data was calculated to draw conclusions about the subject under research.

### 3.3 Target population and Sampling techniques

Mugenda and Mugenda, (2003) noted that population is the entire group of individuals or items under consideration in any field of inquiry and have a common attribute. Also, according to

Ogula (2005), population refers to any group of institutions, people or objects that have common characteristics. The study targeted a Population of 129 companies in the food sector of manufacturing companies, and a sample size of 200 respondents. The list used in this study has been acquired from the Kenyan Association of Manufacturers database in October 2021.

Data was collected using questionnaires which included a cover letter addressed to the respondents. A questionnaire was since it is the most common instrument used in primary data collection due to their simplicity in nature if well structured. The questionnaires consisted of closed-ended questions covering issues on relationship between TQM practices and firm performance and the variables of the study.

### **3.4 Data collection methods**

Cooper and Schindler (2011) and M Mugenda and Mugenda (2012) defined data collection instruments as the tools and procedures used in the measurement of variables in research. Data collection is the process used by the researcher in gathering information about a phenomenon using various data collection instruments (Eva, 2013). The study utilized primary data that was to be collected through use of questionnaires as the major data collection technique. Questionnaires refer to all techniques of data collection in which each person is asked to respond to the same set of questions (Sekeran, 2006).

Questionnaires were the main data collection tool as they are relatively cheaper, do not require as much effort of the researcher as other methods such as verbal and telephone surveys and the fact that it has standardized answers that make it simple to compile data. Also, they have an advantage of collecting data from large groups within a short time and less costs. Besides, questionnaires can provide time for respondents to think about responses and are easy to administer and score (Kothari, 2011). They also help to reduce the biases which might result from personal encounters and attitudes (Kasomo, 2010).

The study used closed- ended questionnaire covering the issue of total quality management processes and the variables of the study. The questionnaires were given to a target population of 129 companies in the food sector of manufacturing companies, and a sample size of 200

respondents. Closed-ended questionnaires will enable the responses of the respondents to be limited to the stated alternatives.

### **3.5 Data analysis**

Data analysis involves the interpretation of data. The statistical method that was used to collect data for this study is census sampling. After receiving the completed questionnaires, the collected data is to be checked for errors in responses, omissions, exaggerations, and biasness. Both quantitative and qualitative approaches were used for data analysis. Quantitative data from the questionnaires was coded and entered in the computer for computation of descriptive statistics. The data was then run through Statistical Package for Social Science (SPSS) version 25 where descriptive statistics (mean, standard deviation, median), correlation analysis (Spearman's rho) and multiple regression analysis were conducted in that order.

The regression model shown below was used:  $Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mu_i$

Where (Y) embodied the performance indicators of the manufacturing firms. The constant term was represented by (a). Continuous Improvement (X1), Supplier relationship management (X2), Top management commitment (X3) were the independent variables. Finally,  $\mu_i$  represented the error term and  $\beta$  represented the Beta (standardized regression coefficients).

The qualitative data generated was analyzed using descriptive statistics. Statistics including mean, mode, median, variance and standard deviation were used. The data was coded and themed then presented in a cohesive manner. Data presentation involves the use of graphs, charts, and tables to represent data that is used to present mostly the quantitative data. The quantitative data was presented in form of tables which helps the researchers in adding the visual aspect to the data, data will also be presented using pie charts and bar graphs.

### **3.6 Research quality**

#### **3.6.1 Validity of data collection instruments**

The degree to which the results of data analysis accurately reflect the phenomena under inquiry is referred to as validity. It demonstrates how well the study's data truly represents the variable

under investigation (Mugenda & Mugenda, 2011). The process of verifying whether a questionnaire is measuring what it purports to be measuring is referred to as "validity." This analysis focused on the face validity test and the internal validity test. The face validity of a research instrument relates to how effectively it is thought to cover the concept it is designed to measure.

Internal validity testing determines how well the study was conducted (in terms of research design, operationalization of variables used, measurement methods, and what was/wasn't measured) and how confidently one can conclude that the change in the dependent variable was caused solely by the independent variable and not by erroneous variables. Trochim, Donnelly, and Arora (2014) describe internal validity testing as the approximate correctness of conclusions about cause-effect or causal relationships.

This research will create a base for valid results through the diversity of including both senior leaders and department members in the respondents. Validity is also ensured by having all statements of the questionnaire related to the study.

### **3.6.2 Reliability of data collection instruments**

Reliability refers to a research instrument's capacity to consistently measure features of interest throughout time (Allan, 2013). A test's consistency, dependability, and stability are all factors in its reliability. The questionnaire's dependability was examined to see if it consistently measured what it was designed to assess. The instrument's reliability was determined using the test re-test approach

The study's dependability was determined using Cronbach's alpha. Internal consistency, or how closely a set of items are related to one another, is measured by Cronbach's alpha. In 1951, Lee Cronbach devised Alpha as a metric for determining the internal consistency of a test or scale; it is expressed as a number between 0 and 1. A Cronbach's alpha score of 0.5 or higher, according to Field (2009), is regarded a credible signal. Cronbach's alpha was 0.634, indicating that internal consistency was present.

The reliability of this study was ensured by tabulating all the data collecting and constant updating as more information is gained. Use of tables enabled quick interpretation of all the data that were acquired.

### **3.7 Ethical considerations**

This research was conducted in an open and objective manner. To avoid plagiarism, citations and references were employed to precisely recognize the information and concepts used to develop this study. This study's information was acquired only for academic purposes. During the analysis and presentation of the findings, respondent confidentiality was respected by keeping them anonymous. There was no mention of respondent identities or specific information about a corporation in the findings analysis.

### **3.8 Chapter Summary**

This chapter includes the research philosophy, research design, data collection method, data analysis, study quality, and ethical considerations. All TQM practices and measures of organizational performance were deemed trustworthy constructs with Cronbach's Alpha values above the necessary minimum value of 0.5, according to a reliability test of the items under review.

## CHAPTER 4: DATA ANALYSIS AND PRESENTATION

### 4.1 Introduction

This chapter presents the results of many statistical investigations in order to address the research topics. Descriptive statistics were used to describe the demographic information of respondents in Kenyan manufacturing businesses. It was also used to see how these companies implemented TQM (continuous, supplier relationship management, and top management commitment).

Finally, it was used to determine the status of the performance KPIs of the targeted organizations (Key Performance Indicators). Correlation analysis was used to evaluate the link between TQM methods and high-performance manufacturing businesses in Kenya. In addition, regression analysis was utilized to examine the influence of TQM procedures on the performance of Kenyan manufacturing businesses. During the months of January and February 2022, surveys were used to collect data.

### 4.2 Response Rate

The response rate for this study is displayed in Table 4.1 below. Out of a total of 200 questionnaires, 104 were completed and considered worthy of analysis. A response rate of 52 percent was found in the total number of completed surveys. This signifies that more than half of the respondents were able to provide the data required to achieve the study's goals. As a result, the information might be trusted. In addition, only 96 out of 200 respondents did not complete and return the surveys. A non-response rate of 48% resulted because of this.

	Frequency	Percentage%
<b>Responded</b>	104	52
<b>Failed to respond</b>	96	48

**Table 4.1 : Response Rate**

**Source: Researcher (2022)**

### 4.3 Demographic Information

The results of the demographic data retrieval are shown in Table 4.2.

		Frequency	Percentage %
Gender	Male	56	53.8
	Female	48	46.2
Age	20 -29	52	50
	30 – 39	18	17.3
	40 – 49	23	22.1
	50 and above	11	10.6
Academic qualification	Certificate	7	6.7
	Post grad diploma	12	11.5
	Bachelor’s degree	70	67.3
	Doctorate	14	14
	Other	1	1
Time spent in firm	Less than 1 Year	32	30.8
	1-2 Years	28	26.9
	3-4 Years	15	14.4
	Over 5 Years	29	27.9
Duration the organization has existed	Less than 5 years	16	15.4
	5-10 years	24	23.1
	10-15 years	30	28.8
	More than 15 years	34	32.7
Permanent employees	Less than 20	48	47.1
	21-50 employees	34	33.3
	More than 51 employees	21	20.6
Ownership structure of organization	Locally Owned	71	68.3
	Foreign Owned	10	9.6
	Local and Foreign Owned	25	24

**Table 4.2 : Demographic Data Results**

#### 4.4 TQM Practices used by Manufacturing companies in Kenya

Three TQM practices that were strategic in nature were used in this study. Respondents were asked to rate how strongly they agreed or disagreed with four statements per variable on each TQM practice and performance indicator on a five-point likert scale. 1 denoted strong disagreement, 2 denoted strong disagreement, 3 denoted somewhat agreement, 4 denoted agreement, and 5 denoted strong agreement. Based on the responses to each question, descriptive analysis was used to calculate the mean scores, standard deviations, and total mean scores of each variable. In the following subsection, the results of the descriptive analysis are shown and described.

##### 4.4.1 Continuous Improvement

	Mean	Std. Deviation
The firm has quality awards	3.73	1.395
The firm incorporates internal and external consumer feedback into improving quality	3.67	1.03
Quality policies are constantly reviewed and well displayed	3.72	1.119
The firm adjusts products according to consumer preferences	3.86	1.118
<b>Overall Mean Score</b>	<b>3.735</b>	<b>1.166</b>

**Table 4.3: Continuous Improvement in Kenyan manufacturing firms**

This section provided several statements related to continuous improvement practices that organizations may undertake and required respondents to rate their level of agreement in the context of their organization to determine the relationship between continuous improvement and operational performance in manufacturing organizations in Kenya. 3.86 was the highest mean score, while 3.67 was the lowest.

Adapting products to consumer tastes was the most common method. The recognition of continuous improvement as a means of ensuring quality followed. With a standard deviation of 1.166, the overall mean score for continuous improvement was 3.735.

As indicated in table 4.3 above, most industrial organizations have integrated continuous practices.

#### 4.4.2 Supplier Relationship Management

	Mean	Std. Deviation
Level of partnerships with suppliers is high	4.06	1.173
Supplier feedback is used in the procurement and production process	3.72	.970
Communication and follow-ups are maintained with the suppliers	3.64	1.131
Quality of supplier service is ensured before dealing with suppliers	3.87	1.175
<b>Overall Mean Score</b>	<b>3.823</b>	<b>1.112</b>

**Table 4.4: Supplier Relationship Management in Kenyan manufacturing firms**

The study also intended to evaluate the association between supplier relationship management and manufacturing enterprises' operational performance in Kenya. As a result, respondents were asked to rate their opinions on numerous assertions pertaining to supplier relationship management practices used by various firms in this area. The highest mean score for supplier relationship management was 4.06, while the lowest was 3.64. The highest mean denotes the level of an organization's partnership with suppliers, while the lowest mean represents the level of follow-up with suppliers maintained by the organization. This indicates that the company communicates with its suppliers but does not always follow up. With a standard deviation of 1.112, the overall mean score was 3.823. This indicates that most of the respondents agreed with the statements made. Table 4.4 illustrates this.

#### 4.4.3 Top Management Commitment

	Mean	Std. Deviation
Top management work hand in hand with department members	3.89	1.269
Top management clearly understands the principles of total quality management	3.78	.975
Management takes full responsibility for product quality	3.84	1.044
Leadership proactively encourages change and constant improvement	3.87	1.025
<b>Overall Mean Score</b>	<b>3.85</b>	<b>1.08</b>

**Table 4.5: Top management commitment in Kenyan manufacturing firms**

The study also sought to determine the impact of senior management commitment on manufacturing businesses' operational performance in Kenya. In this section, respondents were asked to rate how much they agreed with a series of statements about practices at their company that support top management commitment. The highest mean score for senior management commitment was 3.89, while the lowest mean score was 3.78. Most leaders collaborated with their subordinates, according to the highest mean score. The lowest ranked practice was that leaders have a thorough understanding of whole quality management principles. This implies that more information about Total Quality Management (TQM) should be imparted. With a standard deviation of 1.08, the overall mean score was 3.85. Table 4.5 depicts this.

#### 4.5 Relationship between Total Quality Management Practices and Performance of Manufacturing Firms in Kenya

##### 4.5.1 Spearman's rho Correlation Analysis

		Correlations			
		Firm Performance	Continuous Improvement	Supplier Relationship Management	Top Management Commitment
Pearson Correlation	Firm Performance	1.000	.758	.712	.756
	Continuous Improvement	.758	1.000	.756	.726
	Supplier Relationship Management	.712	.756	1.000	.714
	Top Management Commitment	.756	.726	.714	1.000
Sig. (1-tailed)	Firm Performance	.	<.001	<.001	<.001
	Continuous Improvement	.000	.	.000	.000
	Supplier Relationship Management	.000	.000	.	.000
	Top Management Commitment	.000	.000	.000	.
N	Firm Performance	104	104	104	104
	Continuous Improvement	104	104	104	104
	Supplier Relationship Management	104	104	104	104
	Top Management Commitment	104	104	104	104

**Table 4.6: Spearman's rho Correlation Analysis results**

The independent variables were subjected to Spearman's rho correlation analysis to identify their link with the dependent variable and the strength of the relationship, if one existed. The relationship between the dependent and independent variables was determined using spearman's rho correlation in table 4.6. Correlation coefficients range from -1 to 1, indicating a weak to strong association. Very weak is 0.00 to 0.19, weak is 0.20 to 0.39, moderate is 0.40 to 0.59, strong is 0.60 to 0.79, and very strong is 0.80 to 1.0. (Yue, Pillon & Cavadias, 2002). Based on the results, continuous improvement, supplier relationship management and top management commitment have a strong monotonic relationship with firm performance.

#### 4.5.2 Regression Analysis

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.801	3	15.600	69.495	<.001 <sup>b</sup>
	Residual	22.448	100	.224		
	Total	69.250	103			
a. Dependent Variable: FP						
b. Predictors: (Constant), Top Management Commitment, Supplier Relationship Management, Continuous Improvement						

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.643	.230		2.789	.006
	Continuous Improvement	.308	.083	.351	3.686	<.001
	Supplier Relationship Management	.171	.088	.181	1.940	.055
	Top Management Commitment	.360	.086	.371	4.172	<.001

a. Dependent Variable: FP

#### Table 4.7: Regression Analysis results

To further understand the link between the dependent and independent variables, multiple regression was used. Internal integration, supplier integration, and customer integration were the independent factors, while operational success was the dependent variable.

The following regression equation was created using the data in table 4.7.

$$Y = 0.643 + 0.308 + 0.171 + 0.360$$

Where: -

1. When total quality management practices values are zero, the value of firm performance is 0.643.
2. The coefficient of Continuous Improvement is 0.308. Continuous Improvement operational performance improves by 0.308 for every unit increase in while all other factors remain constant.
3. 0.171 is the supplier relationship management coefficient. Holding all other variables unchanged, every unit increase in supplier relationship management improves firm performance by 0.171.
4. Coefficient of senior management commitment is 0.360. Holding all other variables fixed, every unit increase in top management commitment reduces firm performance by 0.360.

The analysis of variance was presented in the first section (ANOVA). The significant value p. indicates if any independent variables influence the dependent variable. When the p. value is less than 0.05, the independent factors have had a considerable impact on the dependent variable. The p-value in this case was.001, indicating that the model was significant.

Table 4.7's second section shows how the independent variables influence the dependent variable. When the p-value is less than 0.05, the level of significance rises. Continuous Improvement, Supplier Relationship Management, and Top Management Commitment have p-values of 0.001, 0.55, and 0.001 for the independent variables, respectively. Continuous Improvement and Top Management Commitment both have p-values less than 0.05, indicating that they have a substantial impact on firm performance.

#### **4.6 Chapter Summary**

This chapter shows how the data was examined to achieve the research goals. The initial goal was to determine the association between continuous improvement and manufacturing business performance in Kenya. The averages and standard deviations of the three independent variables were calculated, and the results revealed that top management commitment had the highest mean and standard deviation of the three. Supplier relationship management came next, followed by top management commitment.

The second goal was to see if there was a link between supplier management and manufacturing business performance in Kenya. The results of a multiple regression analysis revealed that supplier relationship management had a significant impact on business performance. The third goal was to see how top management commitment influences the performance of manufacturing firms in Kenya, and it was discovered that top management commitment had a significant impact on company performance.

## CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Introduction

The findings of this investigation are summarized and concluded in this chapter. These conclusions' managerial ramifications for manufacturing companies are also examined. The study's limitations are also highlighted, along with suggestions for future research on the subject.

### 5.2 Discussion

#### 5.2.1 The relationship between Continuous Improvement and Firm Performance of manufacturing firms

Continuous Improvement had the lowest mean and standard deviation when compared to top management commitment and supplier relationship management. This shows that continuous improvement strategies were less aggressive in most industrial organizations than those that cultivated top management commitment and supplier relationship management. As a result, industrial firms should place a greater emphasis on continuous improvement initiatives.

Despite this, regression analysis demonstrated that the firm's performance was improved. Al-basheer et al (2015) found that constant improvement of banking operations has a significant positive impact on profitability ratios. In addition, the findings of this study matched those of Al-Damen (2017), who discovered that continuous improvement had a positive and significant impact on Jordan Oil's petroleum sector performance.

#### 5.2.2 The relationship between Supplier Relationship Management and Firm Performance of manufacturing firms

Supplier relationship management has the second highest mean and standard deviation among the three domains of comprehensive quality management. According to the findings of the study, supplier integration had the greatest impact on the organizations' operational performance. This is demonstrated using regression analysis.

Collaboration with suppliers in terms of production information sharing, strategic alliances, and engagement in product development and design processes received the highest scores. Functional processes are linked when supply chain partners collaborate, according to Zhang et al. (2015), resulting in more effective resource usage. This might lead to enhanced efficiencies and cost savings, which would help the company's operational success.

### **5.2.3 The relationship between Top Management Commitment and Firm Performance of manufacturing firms**

According to the descriptive data, top management commitment had the highest mean and standard deviation. This means that most corporations rated top management commitment as a high priority, indicating that this was the most developed aspect of total quality management among Kenyan manufacturing companies.

There is a link between top management commitment and both continuous improvement and supplier relationship management, according to the findings. This shows that top-level commitment can be used to manage supplier relationships and develop them over time. The regression study also shows that when top management commitment grows, so does operational performance.

## **5.3 Conclusions**

Total quality management, according to the study, has a considerable impact on operational performance. Continuous Improvement, Supplier Relationship Management, and Top Management Commitment all play a key role in enabling manufacturing companies to deliver high-quality products and services that satisfy customers and increase loyalty.

## **5.4 Recommendations**

The study's findings may lead to the following recommendations. To begin, managers in organizations should work to gain a better understanding of their comprehensive quality management and the activities that help to improve it. This might result in increased efficiencies, which would improve both their operational and financial performance.

That manufacturing companies should work closely with suppliers to improve their level of integration, which in turn improves operational performance by connecting both suppliers and the company to advanced information systems to facilitate the flow of materials, information, and experiences, as well as control inventory movement. Finally, management should aim to be great leaders in their organizations.

### **5.5 Areas for further research**

This study only looked at three TQM techniques that were deemed strategic, namely continuous improvement, supplier relationship management, and top management commitment. Other TQM practices should be investigated to see how they affect manufacturing business performance. This would allow for the expansion of Kenya's body of knowledge on comprehensive quality management approaches.

### **5.6 Implications of the Study**

This study adds to the body of knowledge by seeking to explain the impact of TQM methods on manufacturing company performance in Kenya. This current contribution to the body of knowledge in this field should serve as a foundation for future research by other researchers who are interested.

### **5.7 Limitations of the research**

This research was not without limitations. First, the study's scope was confined to a sample of 129 organizations from across Kenya. This may not fully represent the viewpoints of all manufacturing enterprises in the country when looking into the impact of Total Quality Management (TQM) methods on their performance. The enterprises that were left out could have provided a completely different perspective on the impact of TQM methods on manufacturing firm performance in Kenya. The unwillingness of certain respondents to share strategic information in the name of secrecy, as well as their uncooperativeness in answering the questions, were significant limitations in this study.

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## APPENDICES

### APPENDIX 1: List of Target Population

#### Source: KAM 2021

1. Almasi Beverages Limited
2. Agro chemical & Food Co
3. Al-mahra industries Limited
4. Al-Noor Feisal & Co Ltd
5. Agriner Agriculture Development
6. APT Commodities Limited
7. Arax Mills Limited
8. Azaavi collections
9. Bakex Millers Ltd
10. Bakers Corner Ltd
11. Bakemark Limited
12. Bdelo Ltd
13. Bio Food Limited
14. BIDCO Africa Limited
15. Belfast Millers Ltd
16. Brookside Dairy Ltd
17. Broadway Bakery Ltd
18. British American Tobacco Kenya
19. Blueplastics and Water Co. Limited
20. Carojim cookery enterprise
21. Capwell Industries Ltd
22. Capel Food ingredients
23. Candy Kenya Ltd
24. Caterina Bakery limited
25. Coca-Cola Central East and West Africa
26. Coastal bottlers Limited
27. Centrofood Industries Ltd

28. Crown Beverages LTD
29. Croft LTD
30. Cornbelt flour Mill
31. Confini Limited
32. CoffTea Agencies
33. Diamond Industries Limited
34. Deylin Ultimate Spring Limited
35. Del Monte Kenya Ltd
36. Danone Nutricia Africa & Overseas
37. DPL Festive Ltd
38. Doinyo Lessons Creameries Ltd
39. Eastern Produce Kenya Ltd (Kakuzi)
40. East African Breweries Limited
41. Edible Oil Products Limited
42. Elekea Limited
43. Eldoret Grains Ltd
44. Excel Chemical Ltd
45. Europack Industries Limited
46. Equator Bottlers Ltd
47. FRM EA Packers Ltd
48. Farmers Choice Ltd
49. Frigoken Ltd
50. Foods by Likii
51. Golden Africa Kenya Limited
52. Gold crown Foods (EPZ) Ltd
53. Global Tea & Commodities (K) Ltd
54. Glacier Product Ltd
55. Glacier Food Industries Limited
56. Githunguri Dairy Farmers Co-operative Society
57. Giloil Company Limited
58. Green Forest Foods Ltd

59. Grains Industries Limited
60. Gonas Best Ltd
61. Happy Cow Ltd
62. Halisi Maize Mills Limited
63. Honey Care Africa
64. Healthy U Two Thousand Limited
65. Isinya Feeds Ltd
66. Kabianga Dairy Ltd
67. Jungle Group Holdings Ltd
68. Jjasm Mini-distillery
69. Jetblack Foods Ltd
70. James Finlay Ltd
71. Italian Gelati& Food Products Ltd
72. Kapa Oil Refineries Ltd
73. Kamili Packers Ltd
74. Kenya Sweet Ltd
75. Kenya Nut Company Ltd
76. Kenya Highland Seed Co. Ltd
77. Kenchic Ltd
78. Kilimanjaro Biscuit Limited
79. Kigelia Fresh Produce Limited
80. Kibos Sugar and Alliance industries
81. Kibos Dairy & Farm Produce
82. Kevian Kenya Ltd
83. Kenya Wine Agencies Limited
84. Kenya Tea Packers
85. Kenya Tea development Agency
86. Kina Loaf Bakery Limited
87. Kwale International Sugar Company
88. Pwani Oil products Limited
89. Kulamawane Poultry Industries

90. Wines Of the World Limited
91. Krish commodities Ltd
92. Unga Farm Care (EA) Ltd
93. Unga Group Ltd.
94. Kitui Flour Mills
95. Kirinyaga flour mills
96. Kinangop Dairy Limited
97. Kina Loaf Bakery limited
98. L.A.B International Kenya Limited
99. Mars Wrigley Confectionery Kenya Ltd
100. Manji Food Industries
101. Mamboleo Distillers Ltd
102. British American Tobacco Kenya Ltd
103. Mama Millers Limited
104. Malachite Limited
105. Mafuko Industries Ltd
106. Melvin Marsh International Limited
107. Midrow Kenya Limited
108. Menengai Oil Refineries
109. Morani Limited
110. Milli Fruit Processors Ltd
111. Morani Limited
112. Mombasa Maize Millers Ltd
113. Nairobi Java House Ltd
114. Nairobi Flour Mills Ltd
115. Nairobi Bottlers Ltd
116. Mzuri Sweet Ltd
117. Mwakawa Investment Limited
118. Mwachaka Groupe Ltd
119. Muslons Impex Ltd
120. Nestle Kenya Ltd

- 121.Njoro Canning factory Ltd
- 122.Orchard Juice Ltd
- 123.Olivado EPZ Limited
- 124.Pembe Flour Mills
- 125.Palmhouse Diaries Ltd
- 126.Propack Kenya Limited
- 127.Pride Industries LTD
- 128.Premier Food Industry Limited
- 129.RAZCO Limited

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