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Lean Management Practice and Organizational Success

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Abstract: *The study examines how lean management practice enhances organizational success. The objectives of the study were to examine how quality control and value stream mapping enhances organizational success. Based on the objectives the study reviewed extant related literature on lean management practice and organizational success. The study found that control and value stream mapping enhance organizational success. Therefore, the study concluded that failure to use quality control and value stream mapping affect organizational success. Hence, the study recommended that Management should use quality control mechanism such as production control and total production maintenance to attain organizational success in terms of goal attainment and customer loyalty. Management should use value stream mapping such as supply chain, product flow, information flow and waste elimination to attain organizational success evidenced in goal attainment and customer loyalty.*

Keywords: Lean management practice, quality control, value stream mapping, organizational success, goal attainment, customer loyalty.

INTRODUCTION

Background of the Study

The ability of an organization to accomplish its goals is almost always tied to the presence of a well-defined strategy or plan. However, a plan is not considered a success unless it accomplishes its stated goal. Value in goods and services is created by successful companies. However, organizations exist in many forms and sizes, as well as a wide range of flavour profiles and colours, so what constitute success to one organization may be different from the other. Organizational success is the goal which many companies seek today, and it can no longer be achieved just via production of goods and services. Rather, the goods and services must be produced with quality to compete in the global market.

To achieve success, companies must use their products and services as a major method of ensuring continuing profitability and success now more than ever. It is widely considered that an organization is successful when it achieves specific objectives that enable it to be profitable and competitive within its particular sector or market (Crowell, 1998). The precise form of these outcomes or success varies per company, but may include the achievement of certain sales, revenue, or market share targets, the achievement of specific production targets, the preservation of specified quality standards, or even the occurrence of specified safety records. In particular, firms will be able to achieve goals and gain customer loyalty. Each of these outcomes is a global or composite measure of a company's overall success. Organizations have realized the need to continuous assessment of their own global results as a common component of monitoring their own health and performance.

When it comes to today's global competition, manufacturing, service, and public sector organizations must find ways to improve their efficiency and competitiveness by adopting suitable manufacturing management practices such as lean management practice into the company's culture. Manufacturing and service firms have benefited from Kaizen's operational and strategic advantage

because it enabled firms to gain competitive advantage in terms of goal attainments and customer loyalty (Smith, 2009). Customers want high-quality products with minimal wastes, and lean management practice is a way to achieve this goal. An organization's culture must be infused with

the lean idea so that it is understood and embraced at all levels of the organization's human resource pool towards lean transformation. Lean transformation is a long-term commitment that requires a lot of time and resources to complete. Although, scholars over the years have tried to promote the concept of lean management practice, yet literature on lean management practice and how it could be adopted to attain organizational success is still lacking in literature. Given the advantages of Lean manufacturing in both the manufacturing and service sectors, it is critical to examine how the application of Lean management practice enhances organizational success to bridge this gap literature.

Statement of the problem

Organizations are faced with new and varied pressures to succeed in today's highly competitive industry. In many businesses, a plethora of extremely identical items and services developed to the point that customers often struggle to distinguish one from the other (Crowell, 1998). Many industrial and service organizations have been pushed in recent years to improve their attention on product quality to gain customer satisfaction. With the problems of global competitiveness in mind, many firms have been challenged to discover methods to lower costs, improve quality, and fulfill the ever-changing wants of a more knowledgeable class of consumers.

Wheatley (2005) addressed why firms are attempting to replicate and apply Lean concepts in their own contexts. According to Womack and Jones (2003) emphasized the need of effective leadership throughout the lean transition process. They went on to say that executives should instigate a crisis to push the firm to embrace Lean thinking, and that this should be the corporate strategy. Womack and Jones (2003) also promoted the need to cultivate Lean thinking and should be adopted first in a strategic business and serves as an operational strategy on which organizations compete. In their order of rank, Nyamwange (2001) asserts that the focus of Wheatley (2005), the top five business reasons include ongoing pressure to enhance operational efficiency, maintaining a competitive edge in pricing and service, pressure to increase profit, consumers seeking shorter order-cycle times, and customers demanding lower prices. Lean management is currently a key and frequent technique for achieving corporate performance. Some firms, such as those in the manufacturing sector, have been using the lean method for many years; yet, there are still organizations that have a long way to go before becoming leaner. Many organizations suffer from non-competitiveness in this respect due to the issue of wide production, which has remained in place while new technology takes root in today's corporate operations.

lean management practice should include high quality, low cost and time/speed, innovativeness, and flexibility, all of which are rated similarly. Due to the problem of broad production, which has remained in place while new technology takes root in today's business operations, many companies suffer from non-competitiveness in this regard. Therefore, it becomes necessary for the present study to examine how lean management practices enhance organizational success to provide solution to the problem.

Conceptual Framework

As a study, it's important to first identify and then explain the core components of your variables, and then to link them with the numerous other aspects and impacts on the work (Ravitch & Riggan, 2012). Therefore, the below conceptual framework aids in identifying and clarifying the dimensions of lean management practices and measures of organizational success adopted din the study.

Conceptual Framework

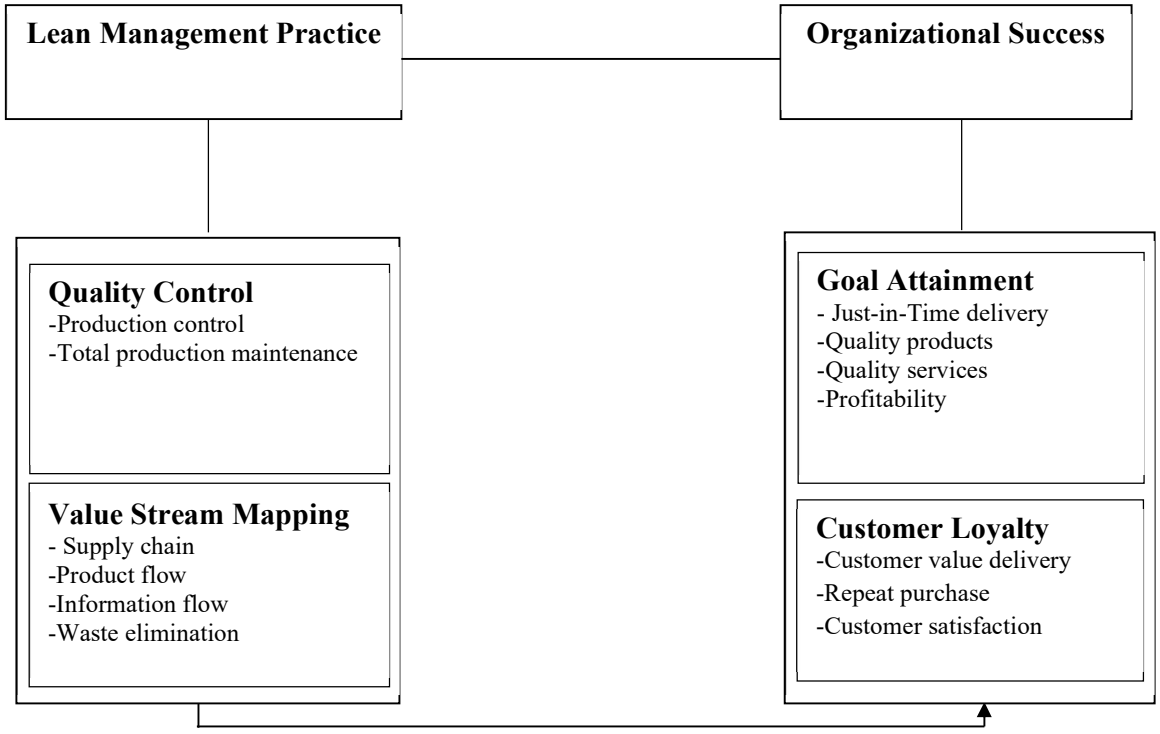

Figure1. Conceptual framework on lean management practice and organizational success
Source: dimensions of lean management practice were adopted from the work of Nwachari (2018). Measures of organizational success were adapted from the work of Smith (2009).

Aim and objectives of the Study

The aim of the study was to examine how lean management practice enhances organizational success. The objectives of the study are to:

i. Examine how quality control enhances goal attainment
ii. Ascertain how quality control improves customer loyalty
iii. Examine how value stream mapping enhances goal attainment
iv. Examine how value stream mapping improves customer loyalty

Research Questions

The following research questions were developed to guide the study.

i. How does quality control enhances goal attainment?
ii. How does quality control improves customer loyalty?
iii. How does value stream mapping enhances goal attainment?
iv. How does value stream mapping improves customer loyalty?

Significance of the Study

When it comes to making strategic and investment choices in the face of increased global competition, this study's findings will be invaluable. In the Supply Chain Management field, the study's results will assist them discover possibilities to acquire competencies that might lead to a

competitive advantage via Lean Manufacturing implementation. Manufacturers and distributors in the supply chain will benefit from the findings of this research since it will help them improve their pricing and costing strategies. Researchers and academics who are interested in lean manufacturing processes and supply chain performance would benefit from this study's conclusions.

Operational Definition of Terms

The following terms used in the study were defined as follows:

Customer loyalty: A positive appraisal that is held with sufficient strength and stability to result in a consistently favourable reaction to a product/brand or shop

Goal attainment: The process by which human and other resources are mobilized for the purpose of achieving group objectives and purposes.

Lean management practice: Lean production is a thought process and philosophy that is used to examine businesses, whether manufacturing, service, or any other activity that involves a supplier or customer relationship, with the goal of eliminating non-value added tasks.

Organizational success: The achievement of specific objectives that enable a firm to be profitable and competitive within its particular sector or market.

Quality control: The policies and procedures established by an organization to ensure that a service or product complies with a specific set of quality standards and satisfy the demands of the customers

Value stream mapping: This is a lean manufacturing tool that is used to design and assess the manufacturing process.

REVIEW OF RELATED LITERATURE

Conceptual Review

Ohno (1988) associates lean manufacturing with the Toyota Production System (TPS), a Toyota-developed integrated socio-technical system that encompasses the company's management philosophy and practices. It manages firms' production and shipping operations, as well as interactions with suppliers and consumers (Ohno, 1988). Due to the inability of mass manufacturing to handle urgent or unique requests, lean production was developed to address this issue. Just as mass production was the dominant mode of production in the twentieth century, lean production has emerged as the dominant mode of production in the twenty-first. Businesses may become far more adaptable and responsive to client requests by using this strategy. By removing redundant procedures, reorganizing workers into cross-functional teams committed to a single task, and always aiming for improvement, businesses may create, manufacture, and distribute goods with half or less human effort, space, equipment, time, and total cost.

Concept of Lean Management Practice

Lean management approaches advocate for the elimination of all non-value-adding parts of the production system in order to achieve superior product and service. Salaheldin (2009) concurred that the reduction of waste or non-value-added activity, as well as methodical workflows, are critical strategies for improving quality in businesses and thus increasing organizational performance. Because lean management approaches incorporate all the high variability values of chosen lean practices, they push managers and change agents to pursue improved methods of leanness (Anvari et al., 2011). Toyota, a Japanese automobile manufacturer, pioneered this idea in the 1950s. Previously, it was referred to as TPS, and its main purpose was to cut costs and increase productivity by reducing waste and non-value-added operations (Ohno, 1988).

Ohno (1988) noted that firm cannot provide a lean strategy unless the manufacturing processes inside the company are stable. According to him, just in time implies that in a flow process, the correct components for the assembly arrive to the assembly line at the precise moment and quantity required. The objective is to construct a flow production system with no work in progress. Lean management is described as a philosophy or approach that is based on a collection of methods for reducing waste with the goal of increasing an enterprise's performance (Womack & Jones, 2003). Lean manufacturing is a sociotechnical system that consists of a collection of management strategies for eliminating waste and reducing the unpredictability of suppliers, customers, and internal resources and processes (Anvari et al., 2011).

Lean management approaches include a range of management techniques with an emphasis on supplier management, quality, and waste reduction. Lean management can be thought of as a synergistic collection of integrated modern manufacturing management practices, which are frequently classified as subsets of just-in-time (JIT), total quality management (TQM), and total productive maintenance (TPM), as well as a collection of supportive human resource management practices, such as teamwork and employee empowerment (Alam, 2009). Clark et al. (2013) emphasized the critical importance of grasping the Lean concept of eliminating waste and non-value-added operations in order to execute Lean Management methods flawlessly.

However, it is impossible to construct a comprehensive definition that encompasses all aspects of lean manufacturing, which is always evolving. According to Womack, Jones, and Ross (1990), lean production is a thought process and philosophy, not a technique that is used to examine businesses, whether manufacturing, service, or any other activity that involves a supplier or customer relationship, with the goal of eliminating non-value added tasks. Lean manufacturing is based on the principles of collaboration, communication, resource optimization, and continuous improvement.

Dimensions of Lean Management Practice

Focused on this work's lean management practices in this phase of the research. A critical review and discussion of the components of lean management practices were conducted in this part. According to Gama and Cavenaghi (2009; Gama & Cavenaghi), there are numerous aspects of lean management practices such as technology adoption; Andon; intellectual knowledge; manufacturing process; manufacturing equipment; visual information system; product development; and workforce management and supplier/customer relationship (among others) However, this research focused on two aspects of lean management, namely quality control and value stream mapping, which are critical for companies to implement.

Quality Control

Quality control is a subset of total quality management, a concept of integrated management that is applicable to both public and private companies. It fosters a culture of continuous improvement in which successful firms strive to satisfy consumers' quality expectations in order to increase customer happiness and organizational performance. TQM is a collection of guiding concepts and practices that focuses not only on quality management but also on management quality (Sadikoglu & Olcay, 2014).

Quality control is an integrated management perspective that strives on improves the quality of processes and products to achieve customer satisfaction (Ahire, 2012). Quality control methods are described as those crucial areas which a corporation must accomplish in order to realize its purpose via classification and assessment of their implications (Oakland, 2015). Lee et al. (2010) defined quality control techniques as those critical activities targeted at guaranteeing that a product created or delivered service adheres to a stated set of standards of quality and/or satisfies the demands of the client.

Quality control in the context of the consumer would be the never-ending process of ensuring that goods, in both their design and production, are created to meet and exceed the expectations of customers (Kaynak, 2003). The goal of quality control is to guarantee that certain processes are in compliance with the standards established by the company.

Production control is one of the indices of quality control (Arora, 2010). In the manufacturing industry, production control is a systematic approach to planning, organizing, and controlling all industrial operations and influences in order to guarantee that things are produced on time, with appropriate quality, and at a fair price. Controlling a given production or operation is the action of monitoring and controlling that production or operation. It is common for production control to be carried out from a dedicated control room or operations room. Production control, along with inventory control and quality control, is one of the most important roles in operations management (Arora, 2010). It is the activity of monitoring and regulating a huge physical facility or a service that is provided in a geographically scattered manner. In manufacturing, it is defined as a "set of actions and decisions taken during production to regulate output and obtain reasonable assurance that the specification will be met (Ghosh, 1991).

Hipkin and Cock (1999) recommend learning preventative maintenance, breakdown maintenance, corrective maintenance, and maintenance prevention. Before attaining TPM, there is a progression of maintenance complexity in the sequence of reactive maintenance, planned maintenance, and preventive maintenance. According to Wilson et al. (2000), accomplishing TPM's key goals decreases the "six big losses." Breakdowns, setup and adjustment losses, idling and small stoppages, decreased speed, defects and rework, and startup and yield losses are the six productivity drainers.

Value Stream Mapping

In the words of Mohd et al. (2014), value stream mapping is a lean manufacturing tool that is used to design and assess the manufacturing process. It is intended to provide managers with a straightforward approach to view the value flow. Customers who are willing to pay for a product's value define value as that which transforms the product into the shape sought by those who are prepared to pay for it (Kocakulah, Brown & Thomson, 2008). Each stage in the value stream mapping process is referred to as a step. First, a product family is selected to serve as the focal point of the improvement endeavour. This product family is based on comparable processing processes and equipment requirements (Daan, 2012). Aims of value stream mapping are to assist managers in identifying waste in all of their processes in order to eliminate it. Examples of waste include the time wasted during the production process due to a faulty organization of the working equipment (motion), waiting, the time spent moving products from one stage of the production process to another, from the production workshops to warehouses (transportation), and producing more product than is required for the next stage of the product (Mohd et al., 2014).

Value stream mapping (VSM) is the practice of graphically mapping the movement of information and content (Mohd et al., 2014). A improved process, methodologies, and performance will be employed to generate the future state mapping based on the information included in this mapping. VSM aids in the visualization of the station time cycle, inventory, labour, and, most importantly, the flow of information across the supply chain. VSM allows an organization to observe the complete process in both its present and future states with clarity and precision.

Supply chain is critical to value stream mapping. Without using the word "Supply Chain Management," no research in the aspect of lean management practice is completed. The concept of “supply chain” is well established in the literature and is generally referred to as the alignment of

firms that bring products or services to market (Lambert et al., 1998). The supply chain includes manufacturer, suppliers, transporters, warehouses, wholesalers, retailers, other intermediaries and even customers themselves (Felea & Albastroiu, 2013). Mentzer et al. (2001) describes a supply chain as "a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer. A supply chain is a network of sellers of raw materials, processing factories that convert those resources into useable goods, and distribution hubs that distribute those products and services to clients (Felea & Albastroiu, 2013; Christopher, 2005). Suppliers, managers, and consumers are all stakeholders engaged in meeting customer demand, and the supply chain includes all of them.

Product flow is another important aspect of value stream mapping. The movement of goods throughout organizations has been studied and classified in a variety of ways. Medina-Mora et al. (1992) identified two distinct forms of product flow in organization s: material flow, or the movement of tangible items, and information flow. Juran (1993) classified products into three categories: things, services, and software (refers to intangible products such as information and computer software). Kock and Tomelin (1993) created the quality flow matrix as a graphical tool for identifying internal and external providers and buyers of products in businesses, therefore distinguishing three sorts of products: goods, services, and information in the conventional sense. Three product categories were identified in the product flow across corporate processes: products, services, and information. Business processes were modeled using flow charts and quality flow matrices in accordance with that concept (Kock & McQueen, 1996).

Information flow is also very important in value stream mapping when engaging in lean management practices. The flow of information is the organization's lifeblood, and the organization cannot live without it (Yinshuo et al., 2012). In companies, information flows perform a variety of critical functions (Jivan & Zarandi, 2012). Increased familiarity with the material by the subject increases the probability and magnitude of attitude change. Employees' knowledge with the organizational purpose and methods leads their conduct in a consistent way, resulting in enhanced congruence with the organization's other levels. Between functions, information flows via five distinct sets of elements: input, output, guidance, constraint, and feedback (Levin et al., 2002).

Waste elimination is the critical factor to consider in value stream mapping**.** The advantages of lean manufacturing stem from the removal of waste at all stages of the production process. However, Dobler and Burt (1996) assert that to save time; decreasing the amount of time required to complete a task from start to end is one of the most efficient methods to remove waste and decrease expenses. Reduce total costs in order to keep costs down, a business must create exclusively in response to client demand. Overproduction drives up a company's inventory expenditures due to storage requirements (Dobler & Burt,1996).

Concept of Organizational Success

The success of an organization is measured by its ability to successfully complete a project while also fulfilling the competing demands of quality, timeliness, cost, and various stakeholder needs and expectations (Aga et al., 2016). Financial performance, customer satisfaction, internal procedures, learning, and organizational development are all examples of how an organization's objectives might be achieved (Donsophon et al., 2016). The extent to which an organization is able to meet its long-term sustainability goals is a measure of its performance (Fleck, 2009).

Measures of Organizational Success

In this study, goal attainment and customer loyalty were used as measured of organizational success

because these enable the study to examine organizational success from financial and non-financial aspects. The measures and their indicators were discussed below

Goal Attainment

The process by which human and other resources are mobilized for the purpose of achieving group objectives and purposes is called goal accomplishment. The term "Goal Attainments" refers to an individual's or organizations particular, targeted accomplishments. In companies and management practice, goals have a pervasive impact on employee behaviour and performance (Locke & Latham, 2002). Almost every contemporary company employs some type of goal planning. Specific goals are developed as part of programmes such as management by objectives (MBO), high performance work practices (HPWPs), management information systems (MIS), benchmarking, and stretch targets, as well as systems thinking and strategic planning. Additionally, Fred said that goal planning that assists employees in achieving their goals serves as the basic explanation for all main theories of work motivation. Managers often consider goal setting as a method of enhancing and maintaining performance (DuBrin, 2012). In a social system, goal achievement is accomplished via political actions, and mobilization happens through the development and use of power by a person or group.

Goal attainment might be seeking towards achieving Just-in-Time delivery. It is possible for organizations to reduce the amount of human labour, space, money, and time required to manufacture high-quality goods at a cheaper cost by eliminating waste across the whole production process (Sylva, 2012). Continuous one-piece workflow and customer pull were used in the lean manufacturing system, which eliminated seven wastes (Jamaludin & Haron, 2005). As a mindset, just in time encompasses everyone in the company and covers every process toward a continuous improvement culture by eliminating wastes and non-value-adding procedures (Chung & Bakar, 2007).

According to Goofin and Price (1996), customer service is critical since it results in improved product quality, competitive advantage, lucrative possibilities, and ultimately, increased sales and money. As seen in the accompanying image, according to Newby & McManus (2000), outstanding customer service is dependent on not just the individual's knowledge and talents, but also on how the business as a whole operates.

Profitability is the prime factor for goal attainment. Profitability is often characterized as an investment's capacity to produce a profit from its utilization. The phrase "profitability" is made up of two components: "profit" and "ability." Profit, which has been defined in a variety of ways, is the amount left over after subtracting total expenses from sales income. The word "ability" refers to an enterprise's capacity to generate profit (Akinsulire, 2010). The capability is often referred to as the investment's earning power, earning capacity, or operational performance. The overarching goal of a firm is to produce a reasonable return on investment while maintaining a stable financial position.

Profitability is determined by the use of a "income statement." This is basically a breakdown of revenue and costs for the whole firm over a certain time period (often a year). Profitability growth is one of the most critical jobs for company managers. Managers are continuously looking for methods to enhance profitability, which may be characterized in two ways: accounting profits or economic profits. Profits in accounting is Net Income. Accounting profit is the difference between revenue and associated expenses for a single transaction, a collection of transactions, or the transactions of an operating period (Toshniwal, 2016).

Customer Loyalty

According to Liu-Thompkins et al. (2010), attitudinal loyalty is defined as a positive appraisal that is held with sufficient strength and stability to result in a consistently favourable reaction to a

product/brand or shop. According to Kumar and Shah (2004), consumer loyalty seems to be determined by a number of variables. The first is confidence. Consumers must have faith in the seller or product they come across. Second, the transaction or connection must have a perceived value that is larger than the perceived value provided by rivals. Thirdly, if marketers build on the first two characteristics, they may be able to foster a favourable emotional relationship among customers. This emotional reaction may stem from a brand loyalty that is resistant to change (Pitta, et al, 2006). Today, every business provides a range of reward programmes designed to set one rival apart from another and each time consumers make a purchase, they moves through a purchasing cycle (Griffin, 2002). Customer loyalty was evidenced in terms of repurchase intentions, word-of-mouth communication, and organization recommendations (Nadiri et al., 2008; Karatepe & Ekiz, 2004).

Customer value delivery is another aspect of customer loyalty that is worthy to consider. For firms, customer value is a crucial source of competitive advantage (Porter, 1985). Identifying and developing client value is seen as a necessary condition for a company's long-term existence and success (Porter, 1986; Huber et al., 2001). Scholars such as Heskett et al. (1997) and Kotler et al. (2010) demonstrated the critical importance of offering greater customer value through the application of the service profit chain as a means of enhancing the firm's financial performance. As a result, marketing academics have released a number of research papers that empirically investigate the value that businesses provide for their consumers while also giving critical insights into how marketing tactics should be customer-centric (Graf and Maas, 2008; Sheth et al.,, 2000). Customer value refers to the advantages that consumers obtain as a consequence of acquiring a product or service at a certain price (Evans, 2002). Benefits are fundamentally divided into utilitarian and emotional categories.

Functional advantages are obtained from the characteristics of the product that meet the customer's utility requirements (Keller, 1993). Thus, knowing consumer demands and desires is critical for organizations to ascertain the kind of value customers want (Kotler et al., 2010). As a result, organizations may create goods and services that meet the expectations of consumers by providing higher customer value (Kotler & Keller, 2009). This results in mutually beneficial trade connections between the business and the client.

Customer loyalty is evidenced in repeat purchase. Jones and Sasser (1995) claim that customers must be satisfied with the brand and devoted to it in order to become a brand's loyalist or apostle. As a result, repeat purchase intention may be used to forecast actual purchasing behaviour. Businesses are increasingly focused on retaining customers' repeat purchases since it not only results in a sustainable competitive advantage, but also helps enhance profitability in the face of strong competition while lowering the expenses associated with obtaining new consumers (Reichheld & Sasser, 1990). Anderson & Mittal (2000) assert that there is a dependent relationship between how effectively product characteristics work and customer happiness, hence boosting the customer experience and likely resulting in a repeat purchase.

Quality Control enhances Organizational Success

Theoretical Review

Two relevant theories were adopted in this study. These theories are Deming Theory **Deming (1982)** (and Reliability Theory which supported the concepts. Hence, in this section, these theories were discussed in detail.

Deming Theory

A systematic, comprehensive strategy for improving the quality of services and goods has evolved into total quality management as an approach to quality (Tenner & DeToro, 1992). An examination

of the literature reveals that TQM encompasses a broad variety of issues and viewpoints. In terms of quality management, Deming (1986) has been linked to the movement. One of the most prominent industrialists of the twentieth century was William Edwards Deming. He is credited for developing the quality systems that pushed Japan's industrialization after world war II, transforming it from a humiliated and damaged backwater at the conclusion of the war to a modern leader in technology and invention by the end of the century. This resulted from Deming's theory of prioritizing quality above quantity, which was embraced by Japanese industry leaders and transformed into some of the most successful production systems, most notably the Toyota production system. Deming incorporates his understanding of how organizations function into his deep knowledge system: The profound knowledge system is made up of four components that look at the world at the same time. These elements act as glasses through which we see what we see, and they're all connected:

i. Appreciation for a system,
ii. Understanding of variety
iii. Knowledge theory, and
iv. Psychology knowledge

To remain competitive in the industrial and service industries, his management philosophy was founded on ideas such as management leadership, dedication to statistical process control, removal of hurdles to employee input and quality control and continuous process improvement. For Juran (1989), the focus was on product design and planning, quality audits, as well as directing quality management toward both consumers and suppliers.

Goldhar (1993) based his reasoning on this idea, stating that superior quality raw materials, technically skilled staff, and trustworthy and adaptable suppliers are essential for producing superior quality final goods or services. In addition, he claimed that a successful quality control system should include a firm-wide quality assessment, supplier quality management, competitive benchmarking, a quality information system, and management mechanisms that encourage quality improvement and collaboration within an organization. The overall quality management viewpoint on work performance is arguably most significant in understanding the link between quality and work performance and how to manage such performance, which is why this theory is very valuable in this research. There is no end in sight when it comes to product innovation and consumer happiness, and this idea gives insight into how quality control processes may be improved.

Reliability Theory

In the early 1930s, Shewhart, Dodge, and Romig laid the theoretical groundwork for the use of statistical techniques to the quality control of manufactured items. The Reliability theory of quality management was adopted by Rausat and Hoyland (2014) using Shewhart, Dodge, and Romig as a basis. Product dependability may be described as the ability of a product to perform its intended purpose, under certain operating and environmental circumstances and for a predetermined amount of time. In reliability theory, success is defined as attaining a predetermined degree of statistical confidence while still meeting the stated probability of success. In order to be considered reliable, a product's intended use must be perfect (Kaynak, 2003). A product's quality, according to this notion, may be measured not only by how closely it adheres to specifications at the time of purchase by the customer, but also by how well it maintains that adherence throughout the course of its whole life. Reliability refers to an item's ability to meet its original requirements throughout its lifetime, whereas quality refers to the item's ability to meet its original standards as soon as it is made. As a result, quality may be thought of as a time-dependent extension of quality (Kaynak, 2003).

Reliability programmes, according to this theory, are used to record precisely what methodologies, tasks, analyses, tools, and tests are required for a certain system. An efficient quality control

programme requires a high degree of reliability (Kaynak, 2003). During the early stages of system development, this is established. It outlines the responsibilities of the reliability engineer and others (Kaynak, 2003). Assessment and testing requirements, as well as associated documentation and activities, are addressed by reliability. System and subsystem test plans, specifications, and contract statements all include reliability criteria.

Quality control techniques have a direct impact on the effectiveness and trustworthiness of an organization's operations and, as a result, on consumer satisfaction with the company's products and services. Since the implementation of the ISO 9000 standard series has become nearly mandatory, this theory is relevant to this study's focus on quality management and assurance. There is a strong connection between the notions of dependability and quality. In certain cases, reliability may be considered a quality attribute; it may even be the most significant one. Theoretically, every component, system, and sub-system of a technological system is made to do a certain goal. It's not enough to meet a quality standard or factory performance; a product must be able to perform for a predetermined period of time in the particular application for which it was designed. Thus, this study adopted these theories because they related to lean management practices to organizational success.

Empirical Review

Quality control procedures in Kenyan mobile telecommunications enterprises were examined by Oloo (2019) for their impact on organizational performance as well as the degree to which these quality control practices were adopted in these organization s. Deming's idea of Total Quality Management and Rausand and Hoyland's Reliability Theory were used in the investigation. A descriptive survey approach was used to meet the study's goals. The five Kenyan mobile telecommunications companies were the intended audience. A semi-structured questionnaire was utilized to obtain primary data. The data was analyzed using descriptive statistics and regression modeling. Mobile telecommunications companies in Kenya have a statistically significant link with quality control measures, according to the research. It rated the quality control procedures used by mobile telecommunications companies and explored the consequences of this. Leadership commitment and Supplier Quality Management were considered to be the most important quality control practises. Customer Focus and Process Management were next in line after Employee Relations. Quality control measures may enhance the performance of mobile telecommunications companies by one percent, providing all other independent factors are equal. Quality control techniques may account for up to 72 percent of the variance in organizational performance, whereas other variables or chance fluctuation account for just 28 percent of this variation in performance. Finally, the research found that implementing quality control procedures resulted in improved productivity, higher revenue, greater market competitiveness and increased market share, improved service delivery inside the organization and increased customer retention. To improve productivity, the research team advised mobile telecommunications enterprises to compare their quality control methods to those of their competitors and to look for innovative quality management systems. Another recommendation was to do further research on how internet service providers, courier services, as well as Kenya's Postal Corporation conduct quality control and organizational performance studies.

Dearden and Van Reenen (2000) conducted a study of 87 Belgian breweries to examine the relationship between employee survival strategy and organizational goal attainment. A structured questionnaire was administered to people, and the data generated were analysed using multiple regression to determine the relationship between survival strategy and organizational goal attainment. The study found that survival strategies had a favourable impact on organizational goals.

Betinah et al. (2018) examined the relationship between Total Quality Management and the organizational performance of Nigerian manufacturing firms based on primary data collected using a structured questionnaire and a sample of 238 people from a total population of 588. In order to integrate the unit measurements of the utilized variables, this research uses dimensions such as Product improvement, Process improvement, and Customer Focus, as well as measures like as employee and customer satisfaction. An all-encompassing moderating variable is Technology. In Rivers State, the Manufacturing sector is being evaluated by this research. When it came to Total Quality Management (TQM), the researchers found that despite its obvious importance to companies and employees alike, managers were less likely to adopt it due to cultural norms such as gender and marital status. There was a positive and substantial correlation identified between the variables used, indicating that an increase in any aspect of Total Quality Management is quite likely to lead to an increase in their organisational success status. As a result, managers were encouraged to devote time and money to putting TQM initiatives into action. TQM deployment is more successful when it is supported by a supportive corporate climate, as this research shows.

Organizational culture may have an important influence in overall quality management, according to Alghamdi (2018). Public and commercial businesses alike have recognised the need of total quality management (TQM) in improving their performance. It has been shown that TQM and organizational culture have a significant impact on organizational performance. Organizational culture will be taken into consideration while examining the link between TQM and organizational performance in this research. Participants in the Albaha province included 163 managers at various levels of management. The association between TQM and company performance was shown to be both positive and statistically significant, according to the results of the Pearson correlation study. The relationship between TQM and organizational culture was shown to be statistically significant and positively connected to organizational performance using hierarchical regression analysis and structural equation modeling (SEM).

Findings

Based on literature on lean management technique, quality control and value stream mapping are essential to achieving organizational success. Quality control and value stream mapping were proven to be significant aspects in the performance of organizations. It is concluded that enhanced quality control and value stream mapping improves both the performance of individuals and the company as a whole towards organizational success. Thus, the findings of this research show that:

i. Quality control enhances organizational success
ii. Value stream mapping improves organizational adaptability
iii. Lean management practice enhances organizational success

CONCLUSION

The research found from its examination of the literature that lean management practices such as quality control and value stream mapping contribute to organizational sucess. As a result of the above, when quality control and value stream mapping are used to enhance product and service quality, firm operations will be improved in terms of goal accomplishment and gaining customer loyalty which contributes to organizational success.

RECOMMENDATIONS

In line with the in-depth review of related literature, the following recommendations were postulated to provide solutions to the issue of lack of quality control and value stream mapping that affect organizational success.

i. Management should use quality control mechanism such as production control and total production maintenance to attain organizational success in terms of goal attainment resulting in just-in-time delivery, quality products, quality services and profitability.
ii. Management should use quality control mechanism such as production control and total production maintenance to attain organizational success in terms of gaining customer loyalty resulting in customer value delivery and repeat purchase
iii. Management should use value stream mapping such as supply chain, product flow, information flow and waste elimination to attain organizational success evidenced in goal attainment resulting in just-in-time delivery, quality products, quality services and profitability.
iv. Management should use value stream mapping such as supply chain, product flow, information flow and waste elimination to attain organizational success in terms of gaining customer loyalty resulting in customer value delivery and repeat purchase.

Contribution to Scholarship

One of the areas in which this study contributes to knowledge is through developing a conceptual framework which provided better understanding of how lean management enhances organizational success. In this conceptual framework two dimensions of lean management practice were outlined with its indicators in line with two measures of organizational success. Therefore, the study asserts that by engaging in lean management practice, business organizations will attain organizational success.

Areas for Further Research

The actual evidence of the link between management practice and organizational success was not emphasized in the literature. As a result, more study will be done to empirically evaluate the relationship between management practice and organizational success through a quantitative technique to test hypotheses about how lean management practice relate to organizational success. Lastly, the research did not look into the elements that moderate the relationship between lean management practice and organizational success. As a result, more research is needed to determine the variable that moderates the link between lean management practice and organizational success.

REFERENCES

Aga, D. A., Noorderhaven, N., & Vallejo, B. (2016). Transformational leadership and project success: The mediating role of team-building. *International Journal of Project Management, 34(*5), 806-818. https://doi.org/10.1016/j.ijproman.2016.02.012

Ahire, S., Golhar, D. & Waller, M. (1996). Development and validation of TQM implementation constructs. *Decision Sciences,* 27(1), 23–56.

Anderson, E. & Mittal, V. (2000) Strengthening the satisfaction-profit chain. *Journal of Service Research, 3(2), November, 107-120*

Anvari, A., Zulkifli, N., Yusuff, R., Mohammad, S., Hojjati, S.M.H. & Ismail, M. (2011). A proposed dynamic model for a lean roadmap. *African Journal of Business Management, 5*(6), 6727-6737.

Arora, K.C. (2004). *Production and operations management*, 7

Betinah, H., Ojiabo, U. & A. D. Alagah, A. D. (2018). Total quality management and organizational success of manufacturing firms in rivers state. *International Journal of*

Christopher, M. (2005). *Logistics & supply chain management*. Printice Hall.

Clark, D., Silvester, K. & Knowles, S. (2013). Lean management systems : Creating a culture of continuous quality improvement. *Journal of clinical pathology*, *66*(2), 10.1136/jclinpath-2013-201553.

Crowell, C. (1998). *The road to organizational success*.

Deming, W. E. (1982). *Quality, productivity, and competitive position. massachusetts institute of technology*, Cambridge, MA: Center for Advanced Engineering Study.

Dobler D.W., & Burt D.N., (2006). *Purchasing and materials management – text and cases*, 4th edition, Tata McGraw-Hill Publishing Company Ltd,

Donsophon, K., Jhundra-indra, P., & Raksong, S. (2016). Managerial professionalism strategy and firm success: Empirical investigation of hotel businesses in Thailand. *AU-GSB e-Journal, 8*(2), 141.

DuBrin, A. (2012). *Essentials of Management* (9th ed.). Mason, South-Western.

Felea, M., & Albastroiu, N.I. (2013). Defining the concept of supply chain management and its relevance to romanian academics and practitioners. *Amfiteatru Economic, 15*, 74-88.

Fleck, D., (2009). Archetypes of organizational success and failure. *Brazilian Administration Review, Curitiba*, 6(2), 78-100. https://doi.org/10.1590/S1807-76922009000200002

Gama, K. T. & Cavenaghi, V., (2009). Measuring performance and lean production: a review of literature and a proposal for a performance measurement system. *Proceedings of the Production and Operation Management Society* (POMS) 20th Annual Conference.

Ghosh, S. N. (1991). *Cement and concrete science & technology*, 419

Goffin, K. & Price, D. (1996). Service Documentation and the biomedical engineer: results of a survey. *Biomedical Instrumentation and Technology, 30*(3), 223-230.

Goldhar, J. D. & M. Jelinek. (1983). Plan for economies of scope. *Harvard Business Review 2*(6), 141-148.

Graf, A. & Maas, P. (2008). Customer value from a customer perspective: A comprehensive review. *Journal für Betriebswirtschaft, 58*(1), 1-20. 10.1007/s11301-008-0032-8.

Griffin, J., (2002). *Customer loyalty: how to earn it, how to keep it,* New and Revised Edition, Weekly publisher.

Harmon, R. & Peterson, L. D. (1990). *Reinventing the factory: productivity breakthroughts in manufacturing today.* Paperback.

Jamaludin, K. R. & Haron, H. N. (2005). *Nurturing lean manufacturing concepts in the industrial*

engineering. Subject at the Undergraduate Level.

Jivan, M. & Zarandi, M. (2012). Factors effective on knowledge management in service-oriented organizations (senior managers opinion using analytical hierarchy process (AHP). *International Journal of Business and Management, 7*(5), 10.5539/ijbm.v7n5p150.

Jones, T. O. & Sasser, W. E. J. (1995). Why satisfied customers defect. *Harvard Business Review, 73,* 88-99.

Juran, J. (1989). *Juran on leadership for quality*, The Free Press.

Karatepe, O. M. & Ekiz, E. H.(2004). The effects of organizational responses to complaints on satisfaction and loyalty: a study of hotel guests in Northern Cyprus. Managing service quality: *An International Journal, 14*(6), 476-486

Kaynak, H. (2003). The relationship between total quality management practices and their effects on firm performance. *Journal of operations management*, *21*(4), 405-435

Kocakulah, M. C., Brown, J., & Thomson, J. W. (2008). Lean Manufacturing principles and their application in plastics manufacturing Industry. *Journal of Cost Management, 22* (3),

Kock, N. F. & Tomelin, C.A., (1993). PMQP: *Total quality management in practice*, Business Development Centre-SENAC/PR, Curitiba,

Kock, N.F & McQueen, R.J. (1996). Product flow, breadth and complexity of business processes: an empirical study of fifteen business processes in three organizations. *Business Process Re-engineering and Management Journal*, *2*(2), 8-22.

Kompaso, M. S & Sridevi, M.. (2010). Employee engagement: the key to improving performance. *International Journal of Business and Management, 5*(12), 10.5539/ijbm.v5n12p89.

Kotler P. & Keller K, (2009). *Marketing Management*.13th ed. Pearson Prentice Hall.

Kotler, P. & Keller, K. & Brady, M. & Goodman, M. & Hansen, T. (2010). *Marketing management*: European Edition. Pearson Prentice Hall.

Kumar V. & Shah, D. (2004). Building and sustaining profitable customer loyalty for the 21st century. *Journal of Retailing, 80*, 317-330.

Lambert, D.M., Cooper, M.C. & Pagh, J.D. (1998). Supply chain management implementation issues and research opportunities. *The International Journal of Logistics Management, 11* (1), 1-17.

Lee, V., Ooi, K., Tan, B.I., & Chong, A.Y. (2010). A structural analysis of the relationship between TQM practices and product innovation. *Asian Journal of Technology Innovation, 18*, 73 - 96.

Levin, D. Z., Cross, R. L. & Abrams, L. C. (2002). The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. Best Papers *Proceedings of the Academy of Management*, 3-9.

Liu-Thompkins, Y., Williams, E. V. & Tam, L., (2010). *Not all repeat purchases are the same: attitudinal loyalty and habit*. College of Business and Public Administration. Old Dominion University Norfolk

Locke, E.A., & Latham, G.P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57,* 705–717

Mentzer, J.T., DeWitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D. & Zacharia, Z.G., 2001. Defining Supply Chain Management. *Journal of Business Logistics, 22*(2), 1-25.

Ohno, T. (1998). *Workplace management*. *Productivity* press.

Okita, G., Akuku, C., Musau, E. & Onyango, R. (2021). Effects of lean management practices on competitiveness of grain milling firms in Uasin Gishu County-Kenya. *Journal of Business Management and Economic Research, 5*(3), 64-94

Oloo, C. H. (2019). *Quality control practices and organizationalperformance of mobile telecommunications firms in Kenya*. A research project submitted in partial fulfilment of the requirements for the award of the degree of master of business administration at the school of business university of Nairobi

Pagell, M. (2004). Understanding the factors that enable and inhibit the integration of operations, purchasing and logistics. *Journal of Operations Management*, 22(5), 459-487. 10.1016/j.jom.2004.05.008.

Sadikoglu, E. & Olcay, H. (2014). The effects of total quality management practices on performance

Pitta, D., Weisgal, M. & Lynagh, P. (2006). Integrating exhibit marketing into integrated marketing communications. *Journal of Consumer Marketing, 23*(3), 156-166. 10.1108/07363760610663312.

Porter, M. (1986). *Competitive advantage.* The Free Press

Porter, M. E. (1985). *Competitive advantage.* The Free Press.

Porter, M.E. (1980). *Competitive strategy*. The Free Press.

Rausat, M. Barros, A. & Hoyland, A. (2014). *System reliability theory*. Model ststaistical methods and applications. John willey & sons inc.

Ravitch, S. & Riggan, M. (2012). *Reason & rigor: How conceptual frameworks guide research.*

Reenen, J., Reed, H. & Dearden, L. (2006). Training and corporate productivity: Evidence from a panel of UK industries. Oxford *Bulletin of Economic and Social Research. 68*(1), 397-421.

Reichheld, F.F. & Sasser, W. (1990). Zero defections: quality comes to services. *Harvard Business Review, 68*(5), 105-11.

Rosenzweig, E., Roth, A. & Dean, J. (2003). The influence of an integration strategy on competitive capabilities and business performance: an exploratory study of consumer products manufacturers. *Journal of Operations Management*, *21*(4), 437-456. 10.1016/S0272-6963(03)00037-8.

and the reasons of and the barriers to TQM practices in Turkey. *Advances in Decision Sciences,* 1-17. 10.1155/2014/537605.

Salaheldin, S. (2009). Critical Success Factors for TQM Implementation and their Impact on Performance of SMEs. *International Journal of Productivity and Performance Management, 58*(3), 215-237. 10.1108/17410400910938832.

Sheth, J., Sisodia, R. & Sharma, A. (2000). The antecedents and consequences of customer-centric marketing. *Journal of the Academy of Marketing Science, 28*(1), 10.1177/0092070300281006.

Shingo,S. (1989). A *Study of the Tovota Production System From an Industrial Engineering Viewpoint,* 4-8.

Silva, S.K.P.N, (2012). Applicability of value stream mapping (vsm) in the apparel industry in Sri Lanka, *International Journal of Lean Thinking, 3*(1), 3-7.

Soriano-Meier, H. & Forrester, P. (2002). A model for evaluating the degree of leanness of manufacturing firms. *Integrated Manufacturing Systems, 13*(2), 104-109. 10.1108/09576060210415437.

Strandberg, K. (1992). Elements of a dependability programme. *Paper presented to NSDCS'92, The Nordic Seminar on Dependable Computing Systems,* Trondheim, Norway.

Swanson, A. R. (2001). Human resource development and its underline theory. *Human resource development international, 43*, 299-312.

Yi, Y. (1990). A critical review of consumer satisfaction in Zeithaml, V. (Ed.),

Tenner, A. R., & DeToro, I. J. (1992). *Total quality management: three steps to continuous improvement. Reading,* Massachusetts: Addison-Wesley.

Terziovski, M. & Sohal, A. (2000). The adoption of continuous improvement and innovation strategies in Australian manufacturing firms. *Technovation*, 20, 539-550. 10.1016/S0166-4972(99)00173-X.

Toshniwal , R. (2016). *Concept of profit and profitability of commercial banks in india. 3rd international conference on rent and innovations in science, technology, management and environment*. India federation of united nations association,

Wheatley, K. (2005). The case for reconceptualizing teacher efficacy research. *Teaching and Teacher Education, 21*(2), 747-766. 10.1016/j.tate.2005.05.009.

Whitney, D. (2010). Appreciative inquiry: creating spiritual resonance in the workplace. *Journal of Management, Spirituality and Religion*, 1-21. https://doi.org/10.1080/14766080903497656

Wilson, T., Lindsey, S. & Schooler, T. (2000). A model of dual attitudes. *Psychological Review, 107*(1), 101-26. 10.1037//0033-295X.107.1.101.

Womack, J., D. Jones & Roos, D. (1990). *The machine that chanced the world*. Rawson Associates.

Womack, J.P. & Jones, D. T. (2003). *Lean thinking: banish waste and create wealth in your corporation*, Free Press.

Review of Marketing. *American Marketing Association,* 68-123.

Yinshuo, X., Geoff, S. & Latif, H. I. (2012*). Information flow perspective for capturing the impact of corporate environmental performance on the cost of debt*, 2-7.