

IMPROVING PUBLIC SERVICE DELIVERY IN TANZANIA THROUGH KAIZEN: A REVIEW OF EMPIRICAL EVIDENCE

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ABSTRACT

This paper sets out to establish whether KAIZEN practices can contribute to the enhancement of service quality and productivity in the public sector in Tanzania. Currently, KAIZEN is still at its newest stage being applied in a few hospitals and very few Small Scale Manufacturing Enterprises (SSMEs). Using a narrative literature review approach, the study reviews 11 research-based articles to extract evidence on the applicability of KAIZEN in public service organisations. The study reveals that although KAIZEN originated in the manufacturing environment, its principles and practices translate well into other work situations including health services, public authorities, banks, education et cetera. The paper concludes that KAIZEN is applicable to the public service and it can drastically improve operational efficiency, service quality and reduce costs in that sector. The paper recommends that the government should adopt KAIZEN and incorporate it into all its public sector reform programmes as a strategic tool towards improvement of public service organisations' overall effectiveness and performance.

Key words: Kaizen, Public Service Organisations, Quality, Productivity.

INTRODUCTION

Since Tanzania's independence in 1961, public service management reforms with a focus on enhancing quality, efficient and effective public service delivery has been an on-going process. Among the few notable reforms focusing on improving public service delivery include the Civil Service Reform Programme (CSRP) and the Public Service Reform Programme (PSRP) launched in 1991 and 2000 respectively. Also, the Local Government Reform Programme (LGRP) launched in 2000 was among the major reforms in the Public Sector Reform Programme which included the Public Financial Management Reform Programme and the Legal Sector Reform Programme. Various sector reform Programmes were undertaken in line with the Local Government reforms to complement the LGRP by focusing on specific sectors such as the Health Sector Reform and the Primary Education Development Programme. It is clearly spelled out in the Tanzania Government Poverty Reduction Strategy (TGPRS) document that the main objective of these reforms was to improve service delivery to the public (United Republic of Tanzania (URT), 2010).

Despite the tremendous efforts and resources that have been allocated to these reforms, service delivery in the public service sector leaves much to be desired in terms of quality and productivity. Unpleasant work environment, mismanagement of resources, frustrating service delivery, delay of services, poor documentation and record keeping are among the challenges still profound in service delivery (Lufunyo, 2013). Hence, a need to adopt a management model to overcome these challenges and improve public sector performance becomes a strategic necessity. One of the quality and productivity improvement tools that is applied in many organisations worldwide particularly in the manufacturing sector nowadays is KAIZEN. KAIZEN, a Japanese business management concept that calls for continuous improvement, is internationally acknowledged as a solid strategic instrument which allows the enhancement of productivity, quality, efficiency and safety and has fuelled the recovery of many organisations particularly in the manufacturing sector (Titu, Oprean & Grecu, 2010). Concisely, if adopted, KAIZEN could be a viable strategic option for reform in improving public service delivery in Tanzania.

KAIZEN philosophy and its techniques have mainly been applied in manufacturing companies for decades, particularly in Japan where the concept originated (Bhuiyan & Baghel, 2005). Following its success in manufacturing organisations, it has been postulated that KAIZEN principles and practices might be transferred to non-manufacturing contexts such as restaurants, hotels, education, administrative companies, hospitals and health-care firms, among others (Spear, 2005; Collins & Muthusamy, 2007; Sua ´rez-Barraza & Lingham, 2008). But due to the fact that the service sector is fundamentally different in nature from the manufacturing sector, there is a pre-conceived notion that KAIZEN is suited only for manufacturing (Vargo & Lusch, 2004; (Seddon, & O'Donovan, 2010; Pettersen, 2009).

A key argument against the application of KAIZEN in the service sector is that service organisations have a unique set of processes and metrics and therefore are not compelled to emulate the manufacturing management model. However, there are various studies that provide empirical evidence of the usefulness of applying KAIZEN to service sector organisations contending that service characteristics are not an excuse for avoiding manufacturing methodologies as a means of efficiency gains (Kollberg, Dahlgaard & Brehmer, 2006; Collins, et al, 2007; Suarez, Smith & Mi Dahlgaard-Park, 2009). Some studies argue that any organisation can gain substantial benefits including improved quality, reduction in costs and increase responsiveness from at least some new practices. For example, Kollberg et al (2006) argues that lean-KAIZEN thinking is applicable in health care settings and that the flow model is a suitable tool for following up these initiatives. In a study conducted by Collins et al (2007) it was observed that many organizations were trying to apply KAIZEN principles in their respective business/industry environments. The study concluded that KAIZEN could be a powerful intervention technique, even in industries unaccustomed to advanced production techniques such as the healthcare industry. In their study, Suarez *et al* (2009) investigated the application of Lean-KAIZEN in improving service in local councils in Spain. The results of the empirical evidence showed that three techniques related to KAIZEN had a direct effect on the processes and management systems

in local councils. The three techniques were: 5S, Gemba KAIZEN workshops and process mapping. These techniques improved the processes and quality of public services provided by the councils.

In Tanzania, the application of KAIZEN approach is still at its newest stage. It is applied in a few hospitals and very few Small Scale Manufacturing Enterprises (SSMEs). Being a newly introduced concept in Tanzania, little is known about its applicability outside the “traditional” domain of manufacturing, particularly in the public service sector. Currently, there exist no empirical research studies of the application of KAIZEN to the service sector in Tanzania. Accordingly, research is needed to better understand the impact that KAIZEN has on service delivery. This paper sets out to establish how the KAIZEN approach can contribute to the enhancement of service quality and productivity in the public sector in Tanzania. The paper presents a conceptual analysis of how KAIZEN principles and practices commonly used in manufacturing can serve as a viable solution to improve service delivery in the public service sector in Tanzania. Thus, the aim of this study is two-fold: first, the study explores the applicability of KAIZEN in a service context. Secondly, the study set out to conceptualise how KAIZEN principles and practices might impact service quality and productivity. The output of this study is to develop a firm framework that will provide a roadmap for improving productivity and service quality in the public sector in Tanzania through KAIZEN practices. The framework will offer guidance to managers, leaders and employees in public service organizations on how to implement KAIZEN.

UNDERSTANDING KAIZEN, ITS PRINCIPLES, TOOLS AND TECHNIQUES: A THEORETICAL LITERATURE REVIEW

Meaning of KAIZEN

In its original form, KAIZEN is a Japanese word which means improvement or change for the better (Barnes, 1996). It focuses on continuous improvement across all functions, systems and processes within a business. From management perspective, KAIZEN means the creation of a system, which enables continuous and sustainable improvement for an organization.

According to Imai (1986), KAIZEN is a continuous improvement process involving everyone, managers and workers alike. All workers, irrespective of their level, are encouraged to individually identify ways to improve productivity and quality, without investing in new equipment or sophisticated technologies. In practice, KAIZEN is a bottom-up, participatory, people-oriented and problem solving approach encompassing low-cost methods and techniques that can be easily implemented. The objectives of KAIZEN include eliminating waste, just-in-time delivery, standardized work and paced moving lines. It can therefore, support any management activities including cost reduction, time management, safety management, product design, productivity improvements or new product development (Modi & Thakkar, 2014; Titu, Oprean & Grecu, 2010). This multiplicity of methods and contexts means that KAIZEN is highly versatile both as a concept and a technique. KAIZEN is often confused with Lean concept, but Lean is defined as the goal to

reach “no waste” while KAIZEN is defined as the method used to achieve it (Melton, 2005). Thus, in this paper both terms can be used interchangeably as they are closely related.

KAIZEN Principles

KAIZEN is rooted in key principles and supported by simple processes and tools that are designed to help people improve productivity and consistently deliver the value that customers seek in the products and services they buy. These principles provide a platform to articulate the relevance of KAIZEN in both the manufacturing and the service settings.

KAIZEN is not a once a day, a once a month or a once a year activity. Its implementation requires an ongoing effort to improve all aspects of the business in the light of their efficiency, effectiveness and flexibility. Improvements are based on many, small changes rather than the radical changes that might arise from Research and Development (Imai, 1986). KAIZEN recognizes that there is always room for improvement. So operations must be improved continuously.

Furthermore, KAIZEN philosophy emphasises respect for people as a critical factor to the success of KAIZEN and survival of business (Imai, 1986; Liker, 2004). People must include all key stakeholders such as employees, associates, customers, suppliers, investors, and communities. Among the most basic signs of respect for people include valuing their safety and health, transparency and information sharing, fair treatment of people, recognition of people’s concerns or opinions, valuing development and the potential of people through training, mutual trust and recognizing their special skills (Liker, 2004).

Teamwork is an aspect that is paramount to fulfilling the functions of KAIZEN (Yokozawa, Steenhuis & Bruijin, 2010). The KAIZEN operating system allows employee participation and the delegation of responsibility. The KAIZEN organizational structure is characterized by open lines of communication, transparency, consultative-decision making, and sharing of responsibility by employees at all levels.

Improvements through KAIZEN have a process focus. KAIZEN fosters process- oriented thinking since processes must be improved before better results are obtained (Imai, 1986; Hammer, Champy & Tathan, 1993). Failure to achieve planned results indicates a failure in the process. Management must identify and correct such process- based errors. KAIZEN strategies have failed in many companies simply because they ignored process (Imai, 1986). According to Juran in his “80/20 rule,” it is stated that 80% of the problems are in the process and the remaining 20% are due to the people who operate the process (Sallis, 2002).

KAIZEN focuses on eliminating waste from the processes. Womack and Daniel (2003) refer to KAIZEN as Lean thinking and a way to reduce waste. They define waste as any activity that creates or adds no value to the process as defined by the ultimate customer. Examples of wastes include defects/damages, idle time of employees/equipment, mistakes/interruptions, extra steps, material supply in excess, overproduction, unnecessary movements, waiting, unnecessary processes, delays etc.

Various studies reveal that elimination of waste in every area of the value stream reduces costs, improves quality and transforms the bottom line (Womack et al, 2003; Alsyounf, 2007; Yeow, & Sen, 2006; Parrie, 2007).

Standardization is KAIZEN's main feature, where policies, rules, directives and procedures are used as guidelines for employees to do their jobs successfully. Standards must be maintained to assure quality (Wittenberg, 1994; Al-Tahat & Eteir, 2010). Standards should be brought to every operation and it is management's responsibility to see that every operation is performed according to standards. KAIZEN focuses on small improvements of work standards coming from ongoing efforts. "There can be no improvement if there are no standards" (Imai, 1986, p. 74). To support the higher standards, a mechanism to enforce compliance to these standards must be established.

Everyone is encouraged to come up with small improvement ideas and suggestions on a regular basis. In companies such as Toyota and Canon, a total of 60 to 70 suggestions per employee per year are written down and implemented (Poornima, 2011). Suggestions are not limited to a specific area such as production or marketing. KAIZEN is based on making changes anywhere that improvement can be made.

"Gemba walk" is another principle of KAIZEN. It is the principle that requires going to real place to find the facts in order to make correct decisions. The logic behind Gemba is that the real place is where value is created. Gemba attitude demonstrates management commitment to solving the problem. It also provides workers the opportunity to provide their input on the problem. Knowing their voices have been heard, and taken seriously, accomplishes a number of things (1) workers will be more supportive of the solution, (2) workers will be more likely to report problems in the future, (3) it opens communication between management and workers, (4) the eventual solution will be better, because it is based on the experience of those who are doing the work (Womack, 2011).

KAIZEN Implementation: Tools and Techniques

KAIZEN is supported by many tools and techniques. Some of the KAIZEN approaches that have received much attention and have been successful in improving quality and productivity especially in manufacturing include 5S activities, waste elimination, quality control circles, Poka-Yoke, error proofing, visual management and work standardisation (Womack & Jones, 2003; Cooper, Keif, & Macro, 2007). Waste elimination and work standardisation have been briefly discussed in the previous sections. The following subsections therefore discuss the aspects of 5S activities, visual management and Poka-Yoke.

5S Activities: The first and fundamental step to begin a successful KAIZEN initiative is implementing 5S activities (Hirata, 2001; Cooper, Keif, & Macro, 2007). 5S is a methodology of managing a workplace and workflow with the intention of improving efficiency, eliminating waste, and increasing process consistency. It derives its name from the use of five Japanese words beginning with the letter S as the cornerstones of this philosophy. These words are: "Seiri" meaning sort,

"Seiton" meaning set in Order, "Seiso" which implies shining or cleanliness, "Seiketsu" which means standardize, and "Shitsuke" which implies sustaining. For the sake of consistency these words, all starting with the letter S have been translated in Swahili as "Sasambua", "Seti", "Safisha" "Sanifisha" and "Shikilia" respectively (TKU¹, 2013).

Being the first step in implementing 5S method, "sort" refers to the practice of identifying and removing all unnecessary items from the workplace and keeping only essential items. This leads to better use of space, better workflow, fewer hazards and shorter search time by eliminating clutter and creating more space (Bullington, 2003; Parrie, 2007; Howell, 2009; TKU, 2013).

Once sorting has taken place, efficient storage methods termed as "set in order" must be enacted so that items are easy to locate and use, as well as put away (Hough, 2008). This mainly focuses on the need for an orderly workplace. The logic behind this stage is that everything that is needed to do a job should be placed where it can be easily accessed (Howell, 2009). Tools, equipment, and materials must be systematically arranged for the easiest and most efficient access. There must be a place for everything, and everything must be in its place. Items are classified and arranged in good order for easy use or easy to find. The workplace is made self-instructive by creating boundaries and labels. Setting things in order makes easier to locate items and know when items are missing or misplaced. Mistakes and confusion are minimized, time for orientation and training is reduced and safety is improved.

"Shine" indicates the need to keep the workplace tidy, neat and in perfect condition. It involves cleaning up, inspecting everything and fixing all small imperfections. Cleaning in Japanese companies is a daily activity. At the end of each shift, the work area is cleaned up and everything is restored to its place (Parrie, 2007; Hough, 2008). This phase not only provides a clean work environment for working but also makes abnormalities and malfunctions easily noticed and fixed (Hough, 2008). Clean equipment perform more efficiently and their lives are extended.

In order to maintain sorting, setting in order and shining a mechanism termed "standardisation" that allows for control and consistency must be established. The goal is to create best practices, share knowledge with others, promote easy adherence to standards and detect deviations. It is accomplished through creation, visualisation, documentation and communication of rules, procedures, schedules and guidelines. This helps to simplify work, ensure consistency, accountability and stability. It thus, enhances discipline and minimises chances of making mistakes (Bullington, 2003, Cooper et al., 2007; Hough, 2008; Howell, 2009; Van Patten, 2006).

Sustain refers to a mechanism of ensuring 5S practices become an organizational culture. The goal is to keep all members motivated and committed to continue practicing 5S. The tools commonly used to

¹ TKU refers to Tanzania KAIZEN Unit based in the Ministry of Industry and Trade responsible for coordination of KAIZEN Project in Tanzania

sustain 5S include slogans, posters, photo exhibits, storyboards, newsletters, pocket manuals, 5S competition, rewards and recognition (Bullington, 2003, Cooper et al., 2007; Hough, 2008; Howell, 2009; Van Patten, 2006). 5S practice provide a standard working environment and enables the employee to see the process flow and can be seen as a good starting point to implement KAIZEN initiatives (Caterall, 2008). All this suggests that a typical 5S implementation would result in significant quality improvement, cost reduction, safety improvement and enhancement of customer satisfaction.

Visual management: Visual Management refers to a management system that attempts to improve organisational performance through use of visual stimuli to highlight, report, clarify, and integrate mission, vision, values and culture into an organization's operating systems and performance requirements (Greif, 1991; Liff, & Posey, 2004). This approach utilises either one or more of information giving, signalling or limiting visual devices to communicate with “doers”, so that places become self-explanatory, self-ordering, self-regulating and self-improving. Some other terms used to mean visual management are visual workplace (Greif, 1991; Galsworth, 2005), visual control (Liker, 2004; Mann, 2005; Shingo, 1989) and visual tools (Parry & Turner, 2006).

Visual management methods aim to increase the efficiency and effectiveness of a process by making the steps in that process more visible. The theory behind visual control is that if something is clearly visible or in plain sight, it is easy to remember and keep at the forefront of the mind. Another aspect of visual control is that everyone is given the same visual cues and so are likely to have the same vantage point. There are many different techniques that are used to apply visual control in the workplace. Some simple examples of common visual controls are color-coded filing systems, labels, timers, and signs reminding employees of standard practices (Galsworth, 2005; Liker, 2004; Mann, 2005).

Poka-Yoke: The term “Poka-Yoke” stands for mistake-proofing; referring to any mechanism which serves to prevent the human or machine errors or mistakes from occurring. Poka-Yoke concept was coined by Shigeo Shingo, an industrial Engineer at Toyota Motor Corporation during the 1960s (Sudharsan & Bhaskar, 2013; Shahin, & Ghasemaghahi, 2010). According to Shingo (as cited by Sudharsan et al, 2013), the basic principle behind Poka-Yoke is to create processes that yield zero defects. The Poka-Yoke philosophy aims to increase productivity by simplifying processes, making them more efficient, reducing the number of errors that need to be corrected, and increasing the overall efficiency of the system. It can be used wherever errors can occur and can be applied to any type of processes and helps workers to be “right first time”, enhancing the quality of the product and the overall output of the process.

From service delivery perspective, service quality has become a key strategic variable in organizational efforts to satisfy and retain customers. However, some aspects of service, for example relating to employee actions and customer attitudes, are outside the control of managers. As a result, service failure is inevitable, sometimes mistakes will happen or things will go wrong, and so service recovery action is needed to deal with the mistake or problem and to restore customer satisfaction.

(Lewis & Clacher, 2001). Poka-Yoke is a way to help people do things right the first time. The goal of Poka-Yoke is re-designing/engineering the process so that mistakes can be prevented or immediately detected and corrected.

METHODOLOGY

This paper presents a review of literature and attempts to establish how the KAIZEN approach can contribute to the enhancement of service quality and productivity in the public sector in Tanzania. Thus, secondary data collection was the most appropriate method for conducting this study. Online desk research involved accessing the different sources for relevant reading materials using appropriate keywords such as ‘KAIZEN’, ‘5S activities’, ‘public service organisations’, ‘quality improvement’, ‘productivity improvement’ and ‘service delivery’. From this, further articles using the references sections of the previously retrieved articles were identified. As a final selection criterion the researcher checked whether the articles explicitly discuss the implementation of KAIZEN in service organisations.

Based on the above criteria, 11 articles were selected for inclusion in the literature review. The earliest article in the reviewed sample has been published in 2006 while the latest one is from 2013. Review of the literature sought to extract evidence of the applicability of KAIZEN in service organisations. Drawing on organisations that have successfully implemented KAIZEN, the study further sought to identify the key success factors for successful implementation of KAIZEN in public service organisations.

The findings were analysed qualitatively using a descriptive approach in which the application of KAIZEN approach in service sector was explored and used to develop a framework for KAIZEN implementation in the public service organisations.

KAIZEN APPLICATION IN SERVICE INDUSTRIES: A REVIEW OF EMPIRICAL EVIDENCE FROM SELECTED PUBLIC SERVICE ORGANISATIONS

In many publications there are cases and research studies, which indicate that various non-manufacturing sectors particularly the service sectors in some countries have embraced, improved, and earned lots of benefits from KAIZEN practices. The objective of this section is to review relevant empirical findings from the studies of KAIZEN application in service industries. The essential question addressed is whether KAIZEN principles and practices are appropriate to be transferred and applied to the service sector. Additionally, the study seeks to explore the key success factors for KAIZEN implementation in the public service industries.

In Italy, Damrath (2012) investigated whether and if, to which extent, Lean is applicable to service industries. The researcher found that health care, education, banking and finance, airlines and public sector were the main categories in which Lean principles had been implemented. For example, in Europe and central US banks have altered their service delivery regarding core capabilities through the

use of IT systems with the support of Lean principles (Bátiz-Lazo & Wood, 2001 cited by Damrath, 2012).

In education sector Lean principles can be applied to the teaching or to administrative processes at schools or universities (Damrath, 2012). For improving the management of services in general, the translation of Lean principles into university education environment was presented by analysing each principle to the main customers at a Dutch university. A quantitative analysis led to the conclusion that Lean services are applicable in almost all kinds of institutions for higher education, but predominantly in the administrative operations.

Damrath (2012) also noted that all inefficiencies from the manufacturing perspective (errors, delays, waiting, and bureaucratic processes) could also be found in the service setting and could be addressed with the application of Lean thinking. The conclusion was made that the application of Lean thinking had positive impacts on productivity, cost savings, customer waiting times, handling emergency situations, and material storage. The study also found that although applying Lean in a service environment is slightly different from a manufacturing environment, the principles of engaging all staff in identification and elimination of waste, doing everything in a quality manner, standardizing processes and simplification are still valid and the tools, which have been used for decades in manufacturing particularly 5S practices, are useful and applicable to the service environment (Damrath, 2012).

Suarez, Smith and Mi Dahlgaard-Park (2009) presented a case study focusing on the transfer of “lean” thinking or KAIZEN concept from the private to the public sector in Spain. The aim was to shed light on how lean thinking is applied in order to improve services provided to the public by local councils. The results of the empirical evidence show that three techniques related to lean-KAIZEN have a direct effect on the processes and management systems in local councils. The three techniques are: 5S, Gemba KAIZEN workshops and process mapping. The techniques improved the processes and quality of public services provided by the councils. Their findings make a contribution to the deeper understanding of the usefulness of applying lean-KAIZEN in the public service establishments in order to improve the processes and services provided to the public.

In their research based on a single case study, Suarez and Ramis (2010) investigated how Lean-KAIZEN was transferred to and implemented in the human resource service process of a Mexican public service organisation. In Carrillo-Castro’s study (as cited in Suarez *et al*, 2010), it was reported that Mexican public service organisations were initially challenged with inefficiency, bureaucracy and excessive regulations in their processes and procedures of providing public services to citizens. In response to demands for better public services from the society, public service organisations felt a need to put forward new management mechanisms in order to achieve better quality standards in public services delivered to citizens. Accordingly, some organisations at the federal level—including the Human Resources Office began to explore how to transfer one of the manufacturing sector practices known as Lean-KAIZEN, that had already been successfully tried out in several international

organisations (Liker, 2004). The Mexican public service organisation implemented Lean-KAIZEN in the human resource service processes.

In studying how Lean-KAIZEN could be implemented in a service process within the context of a public organisation, Suárez-Barraza *et al* (2010) used four methods to gather data: direct observation; participative observation, documentary analysis; and semi-structured interviews. The study found that the implementation of Lean-KAIZEN approach helped the human resource office of the Mexican public service organisations to reduce the cycle time of its human resource selection and hiring process, maintaining its performance, stabilising the service process and decreasing complaints from internal customers. Referring to this, Suárez-Barraza *et al* (2010) conclude that the transfer and implementation of Lean-KAIZEN in the service process of a public environment is possible. However, the researchers argue that for this transfer and implementation to be achieved with potential benefits for the service area, some enablers have to be in place during the implementation process. These include but not limited to commitment to and wish for improvement; use of simple Lean-KAIZEN methodologies, techniques, and practices that stimulate the participation and involvement of staff; active leadership; proper training; teamwork; effective communication; Gemba; and process orientation.

Walley, Stephens and Bucci (2006) provide evidence of the evaluation of Lean in the public sector as a means to embed a continuous improvement culture. The evidence was taken from four sources: a literature review, a cross-case study analysis, a survey report and a pilot evaluation. The case studies, pilot studies and the survey focused on Scottish public sector organisations and were undertaken by Warwick Business School between June 2005 and March 2006. The study was carried out to evaluate the Lean approach to business management and its use in the Scottish public sector.

The research found that the Scottish public sector organisations applied Lean differently from manufacturing to suit their different needs. Scottish public sector organisations engaged with the principles of Lean at an operational rather than strategic level. Although they used a narrower range of tools, the organisations earned a wide range of outcomes including (1) improvement of customer waiting times to first appointment in the health sector from an average of 23 to 12 days, (2) improvement of service performance in failure demand from 82% to 15% in four weeks, (3) improvement of processing times by two thirds in one local government department (4) achieving more work in less staff time (5) bringing services up to a standard, (6) improvement of customer flow time for patients of 48% and (7) reduction in staffing and costs of 105 person reduction in manpower and £31m budget saving in 10 months.

Sarkar (2007) states that the implementation of lean is no longer confined to the manufacturing sector and has moved on to service organizations, too. The author asserts that lean can not only provide the cost advantage but it can also improve organizational efficiency and with it, customer convenience. Banking, Aviation (particularly with the burst of low-cost airlines), Healthcare, Information

Technology, Media and Telecommunications can all relate to Lean and reap the benefits of Lean (Sarkar, 2007).

Building on previous studies of the managerial application and development of the 5S concept, Gapp, Fisher and Kobayashi (2008) conducted a study to identify and present key concepts of 5S from a Japanese management perspective. The authors argue that regardless of the organization size or type, 5S can be used for improvement activities within environments such as homes, schools, communities and workplaces. This suggests that a management system built around 5S practices is not only an enabler of achieving operational excellence but also helps to bring flexibility in the way operations are managed. What service organisations require is to develop efficient operations and user-friendly processes in delivering services to their customers.

In Malaysia, Piros (2013) conducted a study to identify the effectiveness of 5S practices towards organizational performance in Federal and State agencies, particularly in Sarawak. State and local governments in Sarawak are engaged in activities that include education, building and maintenance of roads, provision of water, sewers, and health care. Empirical analysis of the study demonstrated the following key findings: (1) the implementation of 5S practices in every government agency in Malaysia, particularly in Sarawak, has been part of the government policy and most of the government agencies have been successfully certified by Malaysia Productivity Council (MPC) and (2) 5S practices played an effective role in influencing the organisational performance in both State and Federal offices in Sarawak on the aspects of quality, productivity, safety, cost, workplace environment and waste reduction in a systematic way.

Ford (2007) conducted a study to examine if the principles of Six Sigma, Lean and KAIZEN would apply to the day to day operations within the Ocala Police Department. A survey was administered to both sworn and non-sworn supervisors of the Department. The surveys involved questions about processes within their respective areas of responsibility. They were asked to identify processes which were cumbersome and labour intensive and weaknesses in the area of customer service. The survey also involved questions regarding processes held up due to waiting on other areas, waste, and redundancy. Finally, they were asked if a management tool that helped them analyse these processes on a continuous basis would be beneficial to their success and to a higher level of customer service. The study revealed that the methodologies of Lean, KAIZEN, and Six Sigma could benefit the Ocala Police Department and improve its customer service.

In Tanzania, trained staff on KAIZEN in the accounts section carried out KAIZEN process aiming at improving revenue collection from service users for provision of better hospital management and services at Mbeya Referral Hospital (Samky, Kiwelu, Ishijima & Dibogo, 2012). Initially, the Management of Mbeya Referral Hospital was facing various problems such as delay of payments e.g. leaves and medical refunds. After 6 months of KAIZEN implementation, the number of ineffective management of National Health Insurance Fund forms was reduced by 50%. Moreover, due to the

review of revenue collecting process, “forgery receipt” was reduced from 20 incidents to 5 incidents (75% reduction).

On the other hand, Total Quality Management (TQM) approach through Continuous Quality Improvement (CQI) and 5S concept were applied at Kigoma Regional hospital. The findings revealed an increasing improvement on health services delivery by reduction of cross-infection through proper decontamination and minimized workload among staffs, minimized waiting time to Outpatient Department (OPD) patients due to improved patient flow system (Shija, 2012).

Additionally, in a study conducted by Mmbando (2012) it was reported that 5S –CQI –TQM was first implemented at Kilema hospital in October 2011 and the immediate quality improvement outcome and impact was observed six months later at 4 areas practicing 5S: Maternity ward, Pharmacy, Operating Theatre and Laboratory (Mmbando, 2012). Internal evaluation was done by hospital Quality Improvement Team (QIT), and an external evaluation was conducted by staff from the Ministry of Health and PharmAccess. The following observations were made: (1) Hospital environment was found to be very clean compared to the era before the practice of 5S, (2) waiting time at registration and OPD was reduced from 20 minutes to 5 minutes, (3) reduction of patient complaints from 80% to 20%, (4) staff enjoyed working at well-organized areas, (5) easy to see, to take and return of most items at the areas practicing 5S, (6) people were attracted to come to the hospital for support, study tour, and research and (7) staff was highly motivated to work compared to the time before implementation of 5S.

Key Success Factors for KAIZEN Implementation in Service Industries

Several researchers such as Damrath (2012), Suárez-Barraza *et al* (2010), and Chakrabarty and Tan (2007) identify the key factors for successful implementation of KAIZEN in service industries. They indicate that KAIZEN implementation success factors are not merely due to technical practices but also due to the integration of non-technical aspects such as human-related practices.

In his study on increasing competitiveness of service companies Damrath (2012) identified key factors for success (KFS) for implementing Lean management in service organizations. According to Damrath (2012), the key factors contributing to the success of KAIZEN implementation in the public service sector include government commitment and support, top management commitment and involvement, visionary leadership, customer focus, good coordination and establishment of cultural changes embracing employee empowerment and involvement throughout the entire KAIZEN implementation process. This is consistent with the argument made by Suárez-Barraza *et al* (2010) that successful transfer and implementation require commitment to and wish for improvement, participation and involvement of staff, active leadership, proper training, teamwork, effective communication, Gemba and process orientation.

Chakrabarty *et al* (2007) identify several critical success factors necessary for KAIZEN initiatives to be successful. These include top management commitment, education and training, cultural change

and organizational understanding of work processes. The authors argue that these factors are equally applicable to services as they are to manufacturing. This is because top management endorsements help to influence and restructure business organizations and is an effective factor to influence cultural change in attitudes of individual employees toward quality. Education and training help people understand the fundamentals, tools, and techniques of KAIZEN. Training is part of the communication process to make sure that manager and employees apply and implement the KAIZEN techniques effectively. KAIZEN is considered a breakthrough management strategy and it involves the adjustment of a firm's values and culture. In some cases, substantial change to an organization's structure and infrastructure needs to take place (Coronado & Antony 2002 as cited by Chakrabarty *et al*, 2007). Also needed are a clear communication plan and channels to motivate individuals to overcome resistance and to educate senior managers, employees, and customers on the benefits of KAIZEN (Kwak & Anbari 2006 cited by Chakrabarty *et al*, 2007).

FINDINGS AND DISCUSSION

This study was conducted on a theoretical basis analysing the literature regarding the applicability of KAIZEN principles and tools in the public service organisations. The study sought to explore the applicability of KAIZEN in a service context and to examine how the KAIZEN approach can contribute to the enhancement of the service quality and productivity in the public sector.

Applicability of KAIZEN in Service Industries

To explore the applicability of KAIZEN in service industries, the study attempted to identify public service organisations in which KAIZEN has been successfully implemented, the tools commonly employed and the benefits thereof. From the literature, the extracted areas of the public services where KAIZEN has been applied as summarised in appendix I are discussed in this section.

A close analysis of the findings of this study reveals that although KAIZEN originated in the manufacturing environment, its principles and practices translate well to the service environment. The findings portrayed in appendix I indicate that various public service organisations have achieved tangible benefits by implementing KAIZEN tools such as 5S, waste elimination, visual management, KAIZEN Blitz and Value Stream Mapping. The literature indicates that the majority of KAIZEN implementations have been within Healthcare, Central and Local Government Authorities. Damrath (2012) suggests that even though KAIZEN has its origin in the manufacturing industry its principles or application are not product or industry specific. Damrath (2012) found that the majority of the scholars endorse that the principles of Lean need to be adapted and tailored to the specific characteristics of the production of services. This supports the argument made by Womack, Jones and Roos (1990) in their book "*The machine that changed the world*" that Lean thinking can be applied anywhere in the world and to any kind of business. This implies that the application of KAIZEN approaches in the services industry is an appealing possibility.

The findings reveal that improvement in any system as a result of KAIZEN is multi-dimensional. The study has found that KAIZEN is applicable to the public service context to improve operational efficiency and service quality, to reduce costs and minimize waiting time by reducing waste and adding value, to maximize efficient use of assets, to improve customer service and to empower employees to solve problems in their own workplaces.

In essence, KAIZEN approach can be implemented wherever improvement is required, be it work, social life, or home and public service organisations are not the exception. Thus, by putting effort to develop KAIZEN thinking, public service providers can acquire the ability to identify waste and learn the different methods of reducing waste through a step by step approach until they are eliminated.

Key Success Factors for KAIZEN Implementation in Public Service Organisations

The results from this study show a set of key success factors for KAIZEN implementation in the public service sector, which are government commitment and support, top management commitment and involvement, visionary leadership, customer focus, good coordination and establishment of cultural change programmes embracing employee empowerment and involvement throughout the entire KAIZEN implementation process. The findings indicate that for a successful implementation of KAIZEN in Tanzania's public service organisations it is crucial to incorporate KAIZEN concepts into the public service sector reform programmes, human development and training and strengthening of motivation systems.

Conceptual Framework for KAIZEN implementation in Public Service Organisation

Although some successful examples of KAIZEN implementation in service industries have been identified, a general framework to serve as a conceptual guideline for initiating and implementing KAIZEN in public service organisations is needed. Based on the findings from the theoretical and empirical review in this study, the conceptual framework depicted in Figure 1.0 is developed to guide the implementation of KAIZEN in the public service organisations. The framework is developed in consideration of the KAIZEN principles, tools and key success factors that have been identified to contribute to tangible benefits to most of the service organisations.

The framework provides steps and guidelines for making KAIZEN practices work in the public service organisations. The framework is structured in three phases each requiring different strategies and tools which should be used to achieve the desired goals.

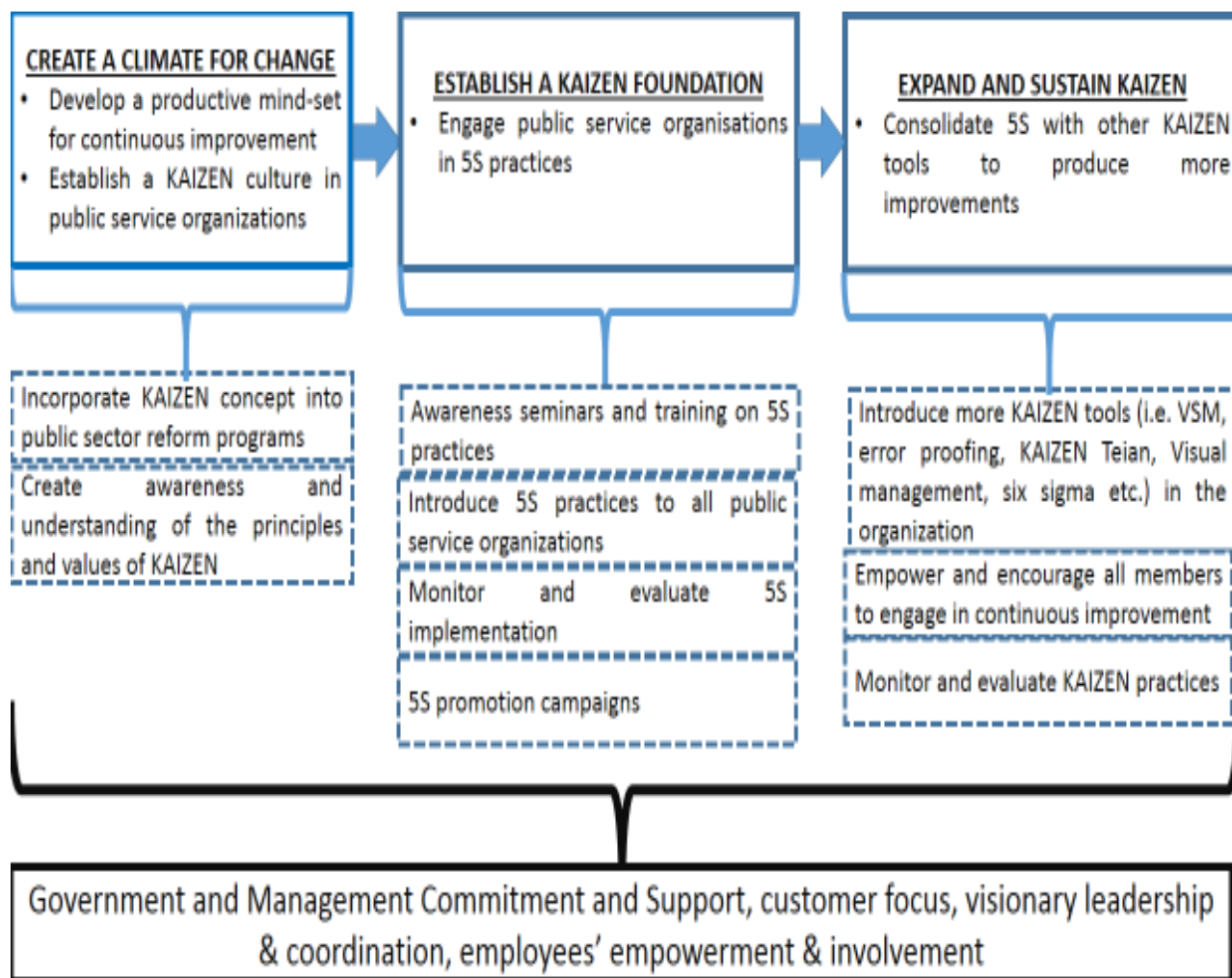


Figure 1.0: Framework for KAIZEN implementation in Public Service Organisation

Source: (Developed by Author, 2015)

Phase 1: Create a climate for change

There are many challenges confronting the implementation and adoption of KAIZEN with the most salient being change management (Wiljeana, Jennifer, Eileen, & Toni, 2011). Creating a climate for change is a critical step in helping people see and feel why a change needs to occur. In this case developing a productive mind-set for continuous improvement and establishment of KAIZEN culture in public service organizations are crucial. These can be achieved through incorporating KAIZEN concepts into public sector reform programmes and instituting awareness creation programmes to foster an applied understanding of the principles and values of KAIZEN. In essence, this phase pertains to change of attitudes and enhancement of commitment to KAIZEN practices.

Establish a KAIZEN foundation

The 5S methodology is relatively simple and straight forward to introduce and is a great way to start KAIZEN implementation Programme. The outcome from 5S in the workplace provides employees with a quality and safe work environment, engagement in improvement and a foundation for KAIZEN

thinking and process excellence. 5S will improve safety, quality, costs, delivery time and improve customer service. Thus, awareness seminars and training on 5S practices, introducing 5S practices to all public service organizations and 5S promotion campaigns are essential in this stage.

Expand and sustain KAIZEN

This phase requires the public service organisations to consolidate 5S with other KAIZEN tools such as KAIZEN-Blitz, VSM, error proofing, KAIZEN Teian, Visual management and six sigma to produce more improvements. In this phase there needs to be a continued focus on continuous improvement using a variety of approaches.

Critical Success factors for making KAIZEN work

Evidently, several factors are required to make KAIZEN implementation in public service organizations a success. It is not sufficient to solely implement a certain set of tools. The government commitment and support, top management commitment and involvement, visionary leadership, customer focus, good coordination and establishment of cultural change programmes embracing employee empowerment and involvement throughout the entire KAIZEN implementation process are crucial. These require incorporation of KAIZEN concepts into public service sector reform programmes, human development and training and strengthening of motivation systems.

CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

Conclusion

The main objective of KAIZEN practices is to ensure that the organisation has processes that eliminate errors, minimize delays, maximize efficient use of resources, promote understanding, are easy to use, are customer friendly, are adaptable to customers' changing needs and provide the organisations with a competitive advantage. The study has found that KAIZEN is applicable to the public service context to improve operational efficiency, to improve service quality, and to reduce costs by reducing waste and adding value. Other benefits include empowering employees to solve problems in their own workplaces and better customer service. These findings lead to a conclusion that if adopted, KAIZEN principles and tools can set the stage for moving the public service organisations in Tanzania to the next level in terms of performance.

Implications

In order to increase the chances for successful KAIZEN implementation and adoption in Tanzania's public service organisations, sound strategies to transform organizational culture, aspects of organizational culture, attitude, values, mind-set, management techniques and behavioural patterns of managers, supervisors and employees are necessary. Certainly, if the public service organisations in Tanzania make effective use of KAIZEN principles and tools their performance will improve significantly.

Recommendations

Recommendations for action: The paper recommends that the government should adopt the concept of KAIZEN and incorporate it into its public sector reform Programmes as a strategic tool towards improvement of public service organisations' overall effectiveness and performance.

Recommendations for further research: This study was conducted on a theoretical basis scanning and analysing literature regarding KAIZEN theories and a few selected cases and research studies using an elaborative approach. Hence, a need for a study that will analyse the findings using quantitative approach is recommended. Additionally, a need to conduct an empirical study in the public service organizations is necessary so as to ascertain the conclusion made in this study.

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APPENDIX I

Application of KAIZEN in Service organisations, Tools used and the Impacts

Source	Public Service Organisation	KAIZEN Tool(s) Employed	Impact(s)
Damrath (2012)	Health Care, Education, banking and finance, airlines and public sector	5S practices	Positive impacts on productivity, cost savings, customer waiting times, handling emergency situations, and material storage
Sarkar (2007)	Banking, Aviation. Healthcare, Information Technology, Media and Telecommunications	Waste elimination techniques	Provided the cost advantage and improves organizational efficiency and customer convenience.
Gapp et al (2008)	Schools and General offices	5S practices	5S improved activities within environments such as homes, schools, communities and workplaces.
Suárez-Barraza et al (2010)	Mexican Public Service Organization	Lean-KAIZEN approach	Helped to improve cycle times in the human resource selection and hiring process.
Suarez, B. et al (2009)	Local councils	5S practices, Gemba-KAIZEN and process mapping	The techniques improved the processes and quality of public services provided by the councils.
Samky et al (2012)	Health Care (Mbeya Referral Hospital)	5S practices	Number of ineffective management of National Health Insurance Fund forms was reduced by 50% and forgery receipt by 75%
Shija, et al (2012)	Health Care (Kigoma Regional Hospital)	Continuous Quality Improvement (CQI) and 5S practices	Reduction of cross-infection through proper decontamination, minimized workload among staffs and minimized waiting time to Outpatient Department (OPD).
Mmbando (2012)	Health Care (Kilema Hospital)	5S –CQI –TQM	(1) Hospital environment found to be very clean compared to the era before the practice of 5S , (2) waiting time at registration and OPD reduced from 20 minutes to 5 minutes, (3) reduction of patient complaints from 80% to 20%, (4) staff enjoyed working at well-organized areas, (5) easy to see, to take and return of most items at the areas practicing 5S, (6) people attracted to come to the hospital for support, study tour, and research and (7) staff highly motivated to work compared to the time before implementation of 5s.
Piros (2013)	Central Government and Government agencies (Federal and State agencies in Sarawak)	5S practices	5S practices played an effective role in influencing the organisational performance in both State and Federal offices in Sarawak on the aspects of quality, productivity, safety, cost, workplace environment and waste reduction in a systematic way.
Ford (2007)	Law Enforcement agency (Ocala Police Department)	Six Sigma, Lean and KAIZEN	Improvement of customer service.
Walley et al (2006)	Local authorities, Central agencies and Health Care	KAIZEN Blitz (Rapid Improvement Events), Value Stream Mapping	(1) Improved customer waiting times (2) Improved service performance in failure demand (3) Improved processing times (4) Achieved more work in less staff time (5) Improved customer flow time for patients