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AGILE PROJECT MANAGEMENT PRACTICES AND SUCCESSFUL IMPLEMENTATION OF PUBLIC SECTOR PROJECTS AT KENYA MEDICAL SUPPLIES AUTHORITY (KEMSA)

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ABSTRACT

The general objective of this study was to establish the agile project management practices that influence implementation of public sector projects at KEMSA, Kenya. The specific objectives included: to determine the influence of agile team leadership and agile risk management. The study was guided by contingency theory, and Frank Knight's Risk Bearing Theory. The descriptive research design was adopted in this study. In this research study, the target population of 410 individuals included the subordinate and management level employees tasked and attached to the sampled projects, hospital management teams for level 4 and level 5 hospitals and representatives from other government health agencies and non-government organizations who are involved in the public sector projects in one way or the other. The result findings of the study were presented using frequency tables. Quantitative data was analysed using descriptive and inferential statistics with the aid of Statistical Package for Social Sciences. Bar charts and frequency tables were used to present findings. A multiple linear regression model was used to test the relationship of the combined variables. The study determined that there is a strong positive correlation between all of the independent variables and the dependent variable. The multiple regression model reflected a strong relationship with the data pertaining to the variables indicating that it is a good predicting model. Additionally, the study found a statistically significant relationship between all the independent variables and the dependent variable. KEMSA should carry out sensitisation initiatives on the ranking system that has been developed among selected criteria to aid in work prioritisation such as workshops, seminars and symposiums particularly for staff who are involved in policy making. The organisation should institutionalise more corporate governance controls which can minimise the corruption malaise that has hampered the accomplishment of the project performance objectives. KEMSA should conduct more research on the use of the stakeholder analysis report so as to determine the most effective way of adapting it. The organisation should engage in funds mobilisation initiatives in order to expand its funding pool to boost its financial resources

Key Words: agile project management practices, agile team leadership, agile risk management

INTRODUCTION

A project refers to a large set of activities that are performed by a specific team in a predetermined logical or technological sequence; additionally, a project must be completed within a specific period of time and cost (Agyei, 2015). According to Kerzner (2017), at the end of a successful project, all the objectives are achieved, when a project fails it is terminated hence the company suffers financial loss. Mahianyu and Njeru (2016) refer to project implementation as the execution of a project, this is the phase of a project where all the plans and visions are actualized and become a reality, additionally, it is at this stage that finances are allocated to enable effective implementation of a project.

A state corporation is a government-funded organization where the central government has a majority or full control of all projects. Most state corporations including the Kenya Medical Supplies Authority were set up to advance government initiatives and achieve predetermined goals within a specified period of time. As a result, state corporations undertake government funded or public sector projects towards achieving such goals (Ng'ang'a, 2018). The public sector refers to the process through which goods and services that are for the consumption of the general public are produced (Popa, 2017). It can also be referred to as the component of the economic system that is under the control of the national, provincial, or local government authority and is responsible for the production and delivery of public goods and services (Azevedo, Oliveira, Marquez, & Ferreira, 2019).

According to Robinson (2015), traditional public sector administration was always affected by hierarchy and rigidity, however, the emergence of new public sector administration in the 1980s brought a drastic change in approach driven by globalisation and pluralism of the provision of services that exposed governments to increasingly complex policy and global issues far removed from the previous national and linear approach. Indeed, Meyer and Leixnering (2015) affirmed that public sector organisations have increasingly become decentralised and autonomized, and started embracing the management ideals of the private and not-for-profit sectors so as to cope with an increasingly complex and dynamic operational environment. This has essentially blurred the boundaries between the sectors and seen the emergence of hybrid organisations that feature some components of public services as well as private sector services. Daglio, Gerson and Kitchen (2015) added that technological advances have rendered traditional approaches to public sector administration ineffective and opened up opportunities for the integration of innovative solutions; however, the exploitation of these opportunities has necessitated the building of governments' capacities through both financial means and non-financial.

In a study on national public projects implementation systems, Gasik (2016) posited that public projects (these are projects implemented using funds extracted from the budget a public administration) require the establishment of reliable and understandable methodology explaining the manner in which public sector organisations can ensure the provision of the support for the successful delivery of their projects. Pulmanis (2014) opined that the provision of this support can be ensured through the incorporation of project management tools and techniques that will lead to the enhancement of the efficiency of the delivery of the projects. These tools and techniques include risk analysis, situation analysis methods, work breakdown structure, project sensitivity analysis, graphic evaluation and review techniques, critical path method, programme evaluation and review technique, cost efficiency analysis and cost-benefit analysis.

Tereso, Ribiero, Fernandes and Loureiro (2018) posited that project management practices can be defined as the procedures followed by an organization in the execution of a project right from initiation to implementation. Fernandez and Khalil (2013) explained that the application of agile project management practices represents another dimension through which public sector organisations can overcome the challenges of inefficiency in an increasingly dynamic world. Agile project management (APM) practices refer to techniques that are geared towards delivering tangible outcomes, improving feedback and adapting to changes in the environment. Liubchenko (2016) established that APM practices are characterised by iterative development, an increased focus on interaction, communication, and the minimisation of resource-intensive intermediate objects. These practices include scrum and lean development which can adapted from an engineering and manufacturing

background, respectively into project management by considering the unique nature of projects.

Statement of the problem

The public sector in Kenya employed 865,233 as of 2019 which represented a growth of 2.6% from 2018; and the general public services accounted for 10.6% of the 3,256.1 Billion KES national Government expenditure in 2019 (Kenya National Bureau of Statistics (KNBS), 2020). This demonstrates that the public sector handles many high value projects that require the best possible project management practices in order for them to be implemented effectively. Thus, in order to make this possible, the Government of Kenya (GoK) came up with the County Allocation of Revenue Bill in 2019 which sought to apportion at least 5% of all development budgets, both at national and county levels, for M&E (GoK, 2019).

According to Ong'era (2019), many public sector projects are not completed on time due to difficulties experienced in prioritising work schedules and tasks as a result of poor leadership training, lack of effective linkages between departments, and inherent bureaucracies. Additionally, Hope (2012) underscored the need for flexible decision making in many public sector organisations since they were hampered by rigid structures that were not amenable to change and weak strategic capacities to implement the needed flexibility.

A study by Oyieyo (2020) on construction risks, managerial skills and completion of public sector projects in Kenya found that the completion of many projects was adversely affected by a number of construction risks including delayed resolution of conflicts which were a primary cause of time overrun risks; the inability of contractors to complete particular aspects of the project and changes in design during implementation occasioned increments in the cost overrun risks; and the failure of employees and experts to complete specifically assigned tasks led to higher labour related risks. Nzioka (2015) in a study on risk management practices and implementation challenges at Kenya Electricity Generating Company (KenGen) affirmed that the company's risk mitigation strategies to deal with hydrology risks, geothermal steam supply risks, competition risks, political risks, security risks and single buyer model risks were hampered by a culture of high risk appetite, lack of cooperation from employees, limited knowledge of risk management, and futile information flow on risk management within the organisation.

Musau and Kirui (2018) affirmed that the implementation of government projects in Machakos County has been adversely affected by poor strategic planning due to the lack of adequate competencies in the implementation of the strategic plans. Indeed, the study determined that most of the resources were concentrated on the projects funded by the national Government leaving the County projects underserved. Omolo (2015) ascertained that public sector projects in Kenya experienced difficulties in implementing active planning for stakeholders due to breakdowns in stakeholder communication channels due to inadequate training in communications on the part of the project staff.

According to Baithili, Mburugu and Njeru (2019), given the public nature of government projects, the political environment in Kenya can have adverse implications on the implementation of the projects by resulting in cost overruns a fact that compels project managers to come up with early mitigation measures such as the establishment of public consensus through consultative stakeholder engagement of intended community beneficiaries. Munyao (2019) added that public infrastructure projects in Kenya can be affected by opposition from stakeholders that can delay or result in the complete failure of the

projects. This opposition is typically caused by the lack of access to critical information and mismatch between different stakeholders' expectations.

This study aims to address the unanswered questions as to why many public sector projects are not as successful or have not achieved the intended results. This study seeks to analysing and understanding how agile project management practices influence the implementation of public sector projects at the Kenya Medical Supplies Authority

Research Objectives

i. To determine the influence of agile team leadership as a project management practice on the successful implementation of public sector projects at the Kenya Medical Supplies Authority.
ii. To determine the influence of agile risk management as a project management practice on the successful implementation of public sector projects at the Kenya Medical Supplies Authority

LITERATURE REVIEW

Theoretical Review

Contingency Theory

Contingency theory of leadership, which was first introduced by Woodward (1958), can be described as an organizational theory of management that extensively focuses on leadership as well as emphasizing on how organization managers can grow and develop into industry leading globalists (Abba, Yahaya & Suleiman, 2018). According to Robbins, Judge and Campbell (2010), the contingency theory of leadership contemplates that the methods of management and tactics used to provide leadership by a person in a position of authority depend on their experience and what their current environment requires from them.

Metin, and Coşkun (2016) posited that, essentially, the contingency theory concludes that the traits and the methods of leadership that are exercised in one sector of an organization may not fit in the same way in another sector or another organization. This is heavily influenced by the ever-changing factors such as advancement of technology, dynamic change of market, environmental vitality as well as change of the organization size. For a manager to succeed and achieve organisational objectives, they need to adopt a system of leadership that streamlines with the project at hand.

A number of scholars have established the conceptuality of the contingency theory of leadership in the modern world business sector. For instance, Simmons (2014) conducted a study on failing of Apple as a global leader, and established that Apple was one of the best technological companies across the globe and at one time they appointed John Scully as their CEO who previously used to be the CEO of PepsiCo which under his leadership was ranked as the world leader in the beverage production and supply sector. However, after Scully appointment as the Apple CEO, the company fell dramatically until at one point in time its existence in the market was at a threat (Simmons, 2014). This is to say, Scully applied the same strategies of leadership as used in PepsiCo without bearing in mind that the Apple was a different company that lay in a different sector and situated elsewhere different from PepsiCo and thus required different leadership strategies.

The theory is consistent with independent variable one (agile team leadership) given that they both focus on leadership, particularly the methods applied by leaders to accomplish their mandates in organisations. Additionally, it can also be surmised that since the primary objective of leadership is to ensure appropriate implementation of objectives, the theory is also consistent with the dependent variable, implementation of public sector projects

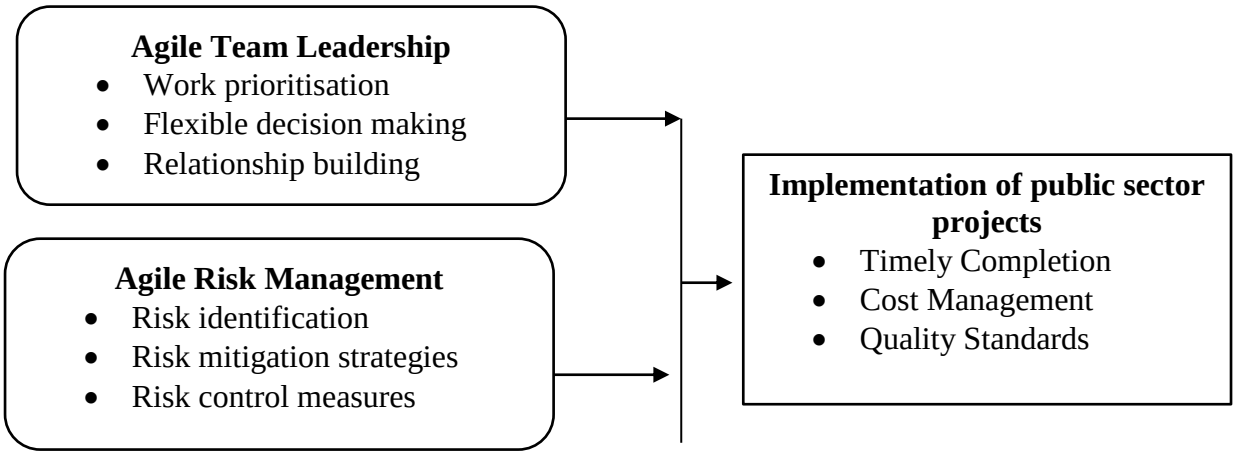
Frank Knight's Risk Bearing Theory

According to Alem and Townsend (2014), the Risk Bearing Theory by Frank Knight consists of one of the most effective theories on the risk management. The theory configures the need for organizational managers to take risks while on the other hand considering the way in which they can manage the risks to prevent loss to a corporation (Rejda & McNamara, 2013). Frank Knight first introduced the dimension of risk-taking as a central characteristic of entrepreneurship. Knight adopts the theory of early economists such as Richard Cantillon and Say, by insisting that the dimension of risk-taking must be a feature of project implementation.

This theory takes into consideration the uncertainty of factors of production and holds the main function of the project manager as acting in anticipation of future events. According to Emmett (2020) Knight states that risk taking aspects enhances the possibility of realizing of bigger opportunities and grabbing such opportunities before the competition increases. When carrying out a project, many risks are encountered by the project while others are encountered by the project manager in attempt of ensuring the productivity of the projects. These risks therefore call for the management techniques to reduce the severity of such risks and in turn convert them to project opportunities (Johnson, 2013).

The theory is aligned with independent variable two (agile risk management) since it deals with the conceptualisation of risk as well as the mitigation of the same. Indeed, its acknowledgement of uncertainty of factors of production ties in with the risk management variable since this the main reason why organisations need to take cognizance of risk in the policies. Further, given that the theory offers risk management as a potential source of project opportunities, it can be seen that it is also aligned with the dependent variable of implementation of public sector projects.

Conceptual Framework



Agile Team Leadership

Sabanci and Özdemir (2015) affirmed that team leadership involves the comprehension and clarification of challenges; the process of conceptualising and articulating decisions; the management of activities and requirements of team members; and the development of a conducive environment for the harnessing of team members' skills and knowledge. Spiegler, Heinecke and Wagner (2021) defined agile team leadership as process through which a project manager is able to utilize agile techniques such as Scrum to empower self-organised teams through the provision of direction, structure and support in a participatory manner so as to ensure shared decision making.

The first indicator of agile team leadership is work prioritisation. According to Spicker (2009), prioritisation relates to the application of judgement by an individual, group or organisation between competing claims. Nieto-Rodriguez (2016) explained that work prioritisation involves the determination of the most critical elements of a task, job or activity and carrying out each in turn in order of importance so as to ensure the attainment of the objectives of the organisation. Al-Ta'ani and Razali (2016) determined that work prioritisation in APM involves the determination of the appropriate requirements that need to be developed in the face of multiple stakeholder interests so as to ensure the implementation of the most valuable attributes to customers.

The second indicator of agile team leadership is flexible decision making. Flexible decision making refers to the process that involves an individual having the presence of mind to interpret available information on a particular issue in the face of multiple alternatives and deciding on how to proceed in the shortest possible time (Jones, Ludi, Beautement, Broenner, & Bachofen, 2013). As far as APM is concerned, a leader shows flexible decision making by delegating part of the decision-making authority to the project implementation teams so as to manage uncertainties brought about by the operational environment (Nouttila, 2019).

The third indicator of agile team leadership is relationship building. Colistra, Schmalz and Glover (2017) defined relationship building as the process where an individual seeks to establish connections with and among other individuals who possess disparate characteristics so as to engender greater synergies in the attainment of common goals. Madsen and Matook (2010) explained that in agile projects, leaders ensure relationship building by creating close interpersonal relationships among customers, developers and the whole implementation team so as to lead to improved collaborations and interactions that will result in anticipated performance outcomes.

Agile Risk Management

There is a lack of consensus on the definition of risk. Risk refers to a threat that has been consciously determined pertaining to a future occurrence (Desmond, 2015); an assessment of the possibility of an adverse occurrence to an employee owing to a hazard (Šotić & Rajić, 2015); or identifying what could go wrong, the likelihood of it going wrong, or the consequences should it go wrong (Wall, 2011). Risk management relates to the process through which activities are coordinated so as to ensure the direction and control of risk by an organisation or the mechanism through an organisation can develop an understanding of the risks that they are exposed to, assess and respond accordingly so as to heighten the chances of success and simultaneously lessening the chances of failure (Hopkin, 2018). Agile risk management entails the customisation of agile practices in the face of specific project situations as well as the broader organisational risk management environment and identifying and attending to the projects continually (Moran, 2014).

The first indicator of agile risk management is risk identification. According to Anca, Cezar and Adrian (2015), risk identification can be defined as the process through which an organisation can establish which risks are likely to influence a given project and formally recording their attributes. El-Sayegh, Manjikian, Ibrahim, Abouelyousr and Jabbour (2021) found that this process typically leads to the identification of five categories of risk, namely, management risks, technical risks, stakeholder risks, material and technology risks, and regulatory and economic risks.

The second indicator of agile risk management is risk mitigation strategies. Risk mitigation strategies are the formalised actions undertaken by an organisation in order to minimise the possible occurrence of or the adverse impact of risk on a project. This involves a complete assessment of possible threats, vulnerabilities, or damages that can hamper the implementation of a project (Menoni, Molinari, Parker, Ballio & Tapsell, 2012). Risk mitigation strategies seek to determine solutions that can counter the occurrence of risks including risk elimination, risk reduction, risk transfer, and risk retention (Rybnicek, Plakolm, & Baumgartner, 2020).

The third indicator of agile risk management is risk control measures. Roelen, van Aalst, Karanikas, Kaspers, Piric and de Boer (2018) posited that risk control measures are the officially identified physical controls (those that aim to prevent the occurrence of a threat), functional controls (those that seek to restrain an action from occurring), symbolic controls (those that seek the interpretation of an action so as to determine its efficacy), and incorporeal controls (those that rely on the knowledge of the user in order to accomplish their purpose) that are instituted by an organisation.

Implementation of Public Sector Projects

According to Igwe and Ude (2018), project implementation refers to the process through which a project team executes the activities that have been prescribed in the project work plan so as to ensure the realisation of the intended project objectives, to facilitate the enhancement of the livelihood of the intended project beneficiaries, and to act as a point of reference as a success story for others wishing to implement similar projects in future. Mukti (2017) affirmed that the implementation of public sector projects involves the adoption of a bi-partisan approach to implementation whereby governmental authorities collaborate with private sector partners especially in the implementation of infrastructure development projects so as to ensure adequate financing and provision of the necessary expertise.

The first indicator of the implementation of public sector projects is timely completion. Timely project completion pertains to the successful delivery of a project by an organisation to the client within an acceptable duration (Ramiah, Kuppusamy & Gharleghi, 2018). Time project completion is typically handicapped by a number of factors including the complexity and fragmentation of the project processes, the involvement of many stakeholders with competing interests, in efficient time management by the project team, and alterations in the orders during the course of implementation (Khahro, Ali, Khahro, Moriyani & Vighio, 2020).

The second indicator of the implementation of public sector projects is cost management. Aničić and Aničić (2019) posited that project cost management involves the application of skills and techniques to ensure the implementation of projects within the stipulated budget. It includes four main processes, namely, cost management planning, cost estimation, budget setting, and cost control. Jainendrakumar (2015) argued that the process of cost determination by management requires the application of variance analysis, calculated indices or management judgement.

The third indicator of the implementation of public sector projects is quality standards. Quality standards are established benchmarks for the performance of products, processes and systems so as to ensure the completion of projects to the satisfaction of the client (Zgodavova, 2013). Quality standards may also be referred to as collections of specifications that establish guidelines for the performance of products, services or processes (Mitra, 2016).

Empirical Review

Agile Team Leadership

A study by Rojas and Figueroa (2018) on selecting and prioritizing projects established that project managers need to develop a ranking among selected criteria so as to encompass all different stakeholder requirements which will make it possible for effective work prioritisation to be accomplished. This is essential as a component of project portfolio management within APM and demands the involvement of the project manager through the application of hard and soft management skills to get everyone on board. Wandera (2021) studied the effect of project management practices on the implementation of public sector projects in state corporations in Kenya and found that in order for public sector projects to be implemented effectively they require top management support in terms of agreement with the prioritised work so that the decisions taken by the project team leader receive the necessary backup during the various cycles of implementation.

Muniu, Gakuu and Rambo (2017) conducted a study on the correlation between community participation in decision making and sustainability of community projects in Kenya and determined that when members of the beneficiary community, who are the consumers of these projects, are empowered through participatory decision making, the sustainability of the project is assured. Indeed, participatory leadership is critical towards the institutionalization of flexibility into the decision making process since community members are better able to make informed decisions at any stage during the implementation of the project. Wang'ombe, Kivoi, Laibuni, Musili and Ngugi (2019) studied transformative leadership in the public sector in Kenya and posited that in order for a leader to ensure flexibility in decision making, he or she needed to conduct a training needs assessment in order to determine the skills gap, then upskill the employees accordingly. The training will raise the performance level of the employees and make them able to make decisions more flexibly without waiting for input from their superiors.

Haxby and Lekhi (2017) examined capacity building in Kenya's ICT market using cross-border Scrum teams and affirmed that many ICT organisations have the technical skills to implement their projects but lack the managerial skills to handle the issues pertaining to the people, in other words, relationship management. Thus, these organisations need to enhance the management structure by incorporating individuals with the relationship management competences to create an enabling environment for harmonious relationships between the agile project implementation team, customers and other departmental staff. Nuottila, Aaltonen and Kujala (2016) investigated the challenges of adopting agile methods in public organisations and found that the conventional agile team setup does not provide for close collaborations with external stakeholders such as vendors owing to their overly technical approach. Thus, in order for public organisations to adopt APM practices they need to enhance their capacity to handle interpersonal relationships by bringing in a human relationship consultant.

Agile Risk Management

In a study on the relationship between risk management processes and success of public sector projects in Kenya, Anyango (2019) determined that most public sector projects rely on the known and trusted traditional project management practices of risk identification such as the project charter as well the strengths, weaknesses, opportunities and threats (SWOT) analysis for aiding in identifying potential risks. However, the projects failed to adequately utilise risk breakdown structure (RBS) as a checklist tool for listing potential risks. A different study by Ngundo (2014) on factors affecting risk management in public projects in Kenya established that whilst lack of planning for risk and inappropriate budget allocation for risk have hampered the risk identification process for some of the projects, the projects have undertaken risk allocation to mitigate against the occurrence of project loss. Indeed, the study recommended that public sector projects hire a project risk manager to improve their risk management.

Sikweya and Njue (2021) while studying agile risk management as a solution to the failure of Kenyan public projects affirmed that many public sector companies had been handicapped by rigid procedures including a fixed time frame with specific milestones that were established by the customer, the inability of the traditional project management to facilitate their schedule or funding profiles. Thus, they had to tailor APM procedures to try and resolve these issues by focusing on early delivery of functional systems, replacing normal sequential procedures with subsystems, components and integrated systems so as to mitigate against the risks of cost overruns occasioned by unplanned delays. Aduma and Kimutai (2018) investigated the relationship between project risk management strategies and project performance at the National Hospital Insurance Fund (NHIF) and determined that the scope and efficiency of many NHIF projects had been handicapped by high risk exposures. The study recommended that project managers endeavour to gain a proper understanding of risk and invest in risk management training in order to mitigate against the high risk exposure through sound risk management procedures.

A study by Gitamo (2018) on project management practices in provision of reproductive health services in selected health facilities in Nairobi County affirmed that in order to control the risk exposure of reproductive health products, many of these organisations undertook continuous monitoring throughout the implementation phases of the project cycle and ensured that deliberations of the lessons learned from previous implementations were considered during performance evaluations. Wario (2018) studied the factors influencing implementation of health projects in Garbatula Sub-County, Isiolo County, Kenya and determined that many of the projects had not been able to achieve their performance objectives owing to endemic corruption due to inadequate internal controls. Thus, the study recommended the institutionalisation of appropriate governance measures to control the risk exposure and enhance performance.

RESEARCH METHODOLOGY

The descriptive survey design was used since the researcher did not have any direct control over the independent variables laid out in this research. The target population was 410 individuals working in three public sector projects who included the project implementers attached to the sampled projects, hospital management teams for level 4 and level 5 hospitals and representatives from other government health agencies and non-government organizations who are involved in the public sector projects in one way or the other

In this study, the sample size for every project was determined using random stratified sampling. A questionnaire was administered for data collection. SPSS 23 was used to analyse the quantitative data because it generated descriptive statistics such as mode, mean, percentages and inferential statistics such as correlation and linear regression. The linear regression expression below was used to draw inferences on the data collected. In this research study the correlation was utilised to test relationships between the dependent and the independent variables.

RESEARCH FINDINGS

Morton, Bandara, Robinson and Carr (2012) posited that a response rate is the percentage of completed interviews when measured against the total number of contacted individuals. The study administered questionnaires to 202 individuals are received 178 back, representing a response rate of 88.1% which is consistent with Gordon (2002).

Descriptive Statistics

Agile Team Leadership and Implementation of Public Sector Projects

The results pertaining to the descriptive statistics of agile team leadership are shown in Table 1. According to the results, 60.5% of the respondents either agreed or strongly agreed that the team leader has developed a ranking among selected criteria so as to encompass all different stakeholder requirements which has made it possible for effective work prioritisation to be accomplished. The statement also had a mean score of 2.7672 indicating a moderately positive level of affirmation. This was consistent with Rojas and Figueroa (2018). Additionally, 71.5% of the respondents either agreed or strongly agreed with the statement that the top management of the organisation has provided support in terms of agreement with the prioritised work such that the decisions taken by the project team leader receive the necessary backup during the various cycles of implementation. This statement has a mean score of 3.8966 indicating that most of the respondents agreed with it which corroborated the findings of Wandera (2021).

The results also showed that 87.9% of the respondents either agreed or strongly agreed that participatory leadership is critical towards the institutionalization of flexibility into the decision-making process since stakeholders are better able to make informed decisions at any stage during the implementation of the project. This statement had a mean score of 4.1724 indicating a high level of agreement by the respondents and tallying with the findings of Muniu *et al.* (2017). Further, 69% of the respondents either agreed or strongly agreed that the project leader has provided training for employees which has raised their performance level and made them able to make decisions more flexibly without waiting for input from their superiors. This statement had a mean score of 3.5862 indicating the most of the respondents agreed with it, which tallied with the findings of Wang'ombe *et al.* (2019).

The results also showed that 75% of the respondents with agreed or strongly agreed with the assertion that the organisation has enhanced the management structure by incorporating individuals with the relationship management competences to create an enabling environment for harmonious relationships between the project implementation team, customers and other departmental staff. This statement had a mean of 4.0776 indicating that the majority of respondents were in agreement with it and corroborating the findings of Haxby and Lekhi (2017). Lastly, the results showed that 68.5% of the respondents either agreed or strongly agreed that in order for the organisation to adopt Agile Project Management practices it needs to enhance its capacity to handle interpersonal relationships by bringing in a human

relationship consultant. This statement had a mean score of 3.4397 indicating that most of the respondents were in agreement with it and echoing the findings of Noutilla *et al*. (2016).

Given that all the standard deviations were so low, it is clear that all the responses were concentrated tightly around the average responses indicating a low variation in the responses. Further, the high mean scores for all the indicators of agile team leadership are a reflection that it plays a very significant role in the implementation of public sector projects.

Table 1: Descriptive Statistics of Agile Team Leadership

	Mean	Std. Deviation
The team leader has developed a ranking among selected criteria so as to encompass all different stakeholder requirements which has made it possible for effective work prioritisation to be accomplished.	2.7672	.44444
The top management of the organisation has provided support in terms of agreement with the prioritised work such that the decisions taken by the project team leader receive the necessary backup during the various cycles of implementation.	3.8966	.99021
Participatory leadership is critical towards the institutionalization of flexibility into the decision-making process since stakeholders are better able to make informed decisions at any stage during the implementation of the project.	4.1724	.62242
The project leader has provided training for employees which has raised their performance level and made them able to make decisions more flexibly without waiting for input from their superiors.	3.5862	.90476
The organisation has enhanced the management structure by incorporating individuals with the relationship management competences to create an enabling environment for harmonious relationships between the project implementation team, customers and other departmental staff.	4.0776	1.03126
In order for the organisation to adopt Agile Project Management practices it needs to enhance its capacity to handle interpersonal relationships by bringing in a human relationship consultant.	3.4397	.51565

Agile Risk Management and Implementation of Public Sector Projects

The results of the descriptive statistics of agile risk management are illustrated in Table 2. Accordingly, 86.2% of the respondents either agreed or strongly agreed with the statement that the project relies on the known and trusted traditional project management practices of risk identification such as the project charter as well the strengths, weaknesses, opportunities and threats (SWOT) analysis for aiding in identifying potential risks. This statement had a mean score of 4.1552 indicating a high level of agreement by the respondents and agreeing with the findings of Anyango (2019). Additionally, 85.3% of the respondents either agreed or strongly agreed with the statement that whilst lack of planning for risk and inappropriate budget allocation for risk have hampered the risk identification process for some of the projects, the projects have undertaken risk allocation to mitigate against the occurrence of project loss. This statement had a mean score of 4.1638 indicating that most of the respondents were in agreement and corroborating the findings of Ngundo (2014).

The results also showed that 84.5% of the respondents either agreed or strongly agreed with the statement that the organisation has been handicapped by rigid procedures including a fixed time frame with specific milestones that were established by the customer, and the inability of the traditional project management to facilitate their schedule or funding profiles. This statement had a mean score of 4.1638 indicating that the majority respondents agreed with it and tallying with Sikweya and Njue (2021). 68% of the respondents either agreed or strongly agreed that the organisation's project management team have gained a proper understanding of risk and invested in risk management training in order to mitigate against

the high risk exposure through sound risk management procedures. This statement had a mean score of 3.0259 indicating a moderately positive level of agreement by the respondents and echoing the findings of Aduma and Kimutai (2018).

Further, the results showed that 71.6% of the respondents either agreed or strongly agreed with the statement that in order to control the risk exposure of reproductive health products, the organisation has undertaken continuous monitoring throughout the implementation phases of the project cycle and ensured that deliberations of the lessons learned from previous implementations were considered during performance evaluations. This statement had a mean score of 4.1810 indicating that the majority of respondents agreed, which was consistent with Gitamo (2018). Finally, the results showed that 73.2% of the respondents either agreed or strongly agreed with the statement that the project has not been able to achieve its performance objectives owing to endemic corruption due to inadequate internal controls. This statement had a mean score of 3.8793 indicating that most of the respondents were in agreement and corroborating the findings of Wario (2018).

Since all the standard deviations were so low, it is clear that all the responses were concentrated tightly around the average responses indicating a low variation in the responses. Further, the high mean scores for all of the indicators of Agile Risk Management are a reflection that it plays a very significant role in the implementation of public sector projects.

Table 2: Descriptive Statistics of Agile Risk Management

	Mean	Std. Deviation
The project relies on the known and trusted traditional project management practices of risk identification such as the project charter as well the strengths, weaknesses, opportunities and threats (SWOT) analysis for aiding in identifying potential risks.	4.1552	.64070
Whilst lack of planning for risk and inappropriate budget allocation for risk have hampered the risk identification process for some of the projects, the projects have undertaken risk allocation to mitigate against the occurrence of project loss.	4.1638	.65864
The organisation has been handicapped by rigid procedures including a fixed time frame with specific milestones that were established by the customer, and the inability of the traditional project management to facilitate their schedule or funding profiles.	4.1638	.67171
The organisation's project management team have gained a proper understanding of risk and invested in risk management training in order to mitigate against the high-risk exposure through sound risk management procedures.	3.0259	.77416
In order to control the risk exposure of reproductive health products, the organisation has undertaken continuous monitoring throughout the implementation phases of the project cycle and ensured that deliberations of the lessons learned from previous implementations were considered during performance evaluations.	4.1810	.85057
The project has not been able to achieve its performance objectives owing to endemic corruption due to inadequate internal controls.	3.8793	.69975

Implementation of Public Sector Projects

Table 3 presents the descriptive results of the implementation of public sector projects. According to the results, all of the respondents either agreed or strongly agreed with the statement that the successful completion of the organisation's health projects is adversely affected by the lack of adequate funding as well as non-timeliness of the disbursement of the funding owing to bureaucracies within the MoH and other agencies as well as the lack of motivation on the part of the staff. This statement had a mean score of 4.5517 indicating that most of the respondents concurred with it, which was consistent with the findings of Njeri (2018). Additionally, 69.8% of the respondents either agreed or strongly agreed that community participation in the identification of projects is critical towards the successful

completion of the organisation's projects since it ensures that the projects that are considered priorities by the beneficiaries are the ones which will be implemented. This statement had a mean score of 3.7086 indicating that the majority of respondents were in agreement with it and echoing the findings of Ndegwa *et al.* (2017).

The results also showed that 87.9% of the respondents either agreed or strongly agreed that lack of financial support from the MoH had adversely affected the implementation of the organisation's projects. This statement had a mean score of 4.1897 indicating a high level of affirmation and confirming the findings of Kihuba *et al*. (2015). Further, the results showed that 68.6% of the respondents either agreed or strongly agreed with the statement that given the high poverty levels in the country, the organization has been offering cheaper services than its private counterparts, and performed better in terms of the utilization of their services which in turn has led to lower costs per service unit. This statement had a mean score of 3.6466 indicating that most of the respondents agreed with it, which was consistent with the findings of Flessa *et al*. (2011).

Additionally, 87.9% of the respondents either agreed or strongly agreed with the statement that the organization has superior service quality as evidenced by the friendliness of the staff, the cleanliness of the facilities, the level of specialized care, the accuracy of the diagnosing, and the number of individuals who have given a positive review of the services. This statement had a mean score of 4.3448 indicating that the majority of the respondents were in agreement and corroborating the findings of Mohajan (2014). Lastly, the results showed that all of the respondents either agreed or strongly agreed that the organisation's employees have been empowered through training on the essential skills for effective service delivery which has improved the quality standards of the services. This statement had a mean score of 4.0345 indicating that most of the respondents were in agreement, which tallied with the findings of Kimanzi (2014).

Given that all the standard deviations were so low, it is clear that all the responses were concentrated tightly around the average responses indicating a low variation in the responses. Further, the high mean scores for all of the indicators of Implementation of Public Sector Projects are a reflection that KEMSA has prioritised the implementation of its public sector projects.

Table 3: Descriptive Statistics of Implementation of Public Sector Projects

	Mean	Std. Deviation
The successful completion of the organisation's health projects is adversely affected by the lack of adequate funding as well as non-timeliness of the disbursement of the funding owing to bureaucracies within the MoH and other agencies as well as the lack of motivation on the part of the staff.	4.5517	.49947
Community participation in the identification of projects is critical towards the successful completion of the organisation's projects since it ensures that the projects that are considered priorities by the beneficiaries are the ones which will be implemented.	3.7086	.78569
Lack of financial support from the MoH had adversely affected the implementation of the organisation's projects.	4.1897	.63127
Given the high poverty levels in the country, the organization has been offering cheaper services than its private counterparts, and performed better in terms of the utilization of their services which in turn has led to lower costs per service unit.	3.6466	.93487
The organization has superior service quality as evidenced by the friendliness of the staff, the cleanliness of the facilities, the level of specialized care, the accuracy of the diagnosing, and the number of individuals who have given a positive review of the services.	4.3448	.68656
The organisation's employees have been empowered through training on the essential	4.0345	.75678

skills for effective service delivery which has improved the quality standards of the services.

Inferential Statistics

Inferential statistics are used in the measurement of the suitability or likelihood of hypotheses when confronted by observable evidence (van Elst, 2013). Alternatively, inferential statistics attempt to make conclusions that go beyond the observed data so as to provide responses to specific questions raised prior to the start of the study (Kern, 2014). The following sections cover the various components of inferential statistics pertaining to the study and include: Pearson Correlation; Multiple Regression Analysis; ANOVA Statistics; and Beta Coefficients.

Pearson Correlation Coefficients

Hall (2015) defined Pearson's Correlation Coefficient (*r*) as the proportion of the covariance of two variables representing a set of numerical data, and standardised to the square root of the variances. The results pertaining to the Pearson Correlation coefficients of the study are presented in Table 4. According to the results, all of the independent variables, Agile Team Leadership, Agile Risk Management, had positive correlations of r = 0.705; r = 0.793; respectively with the dependent variable, Implementation of Public Sector Projects. Accordingly, a change in Agile Team Leadership by a value of 1 leads to a corresponding change of 0.705 in the Implementation of Public Sector Projects. Additionally, a change in Agile Risk Management by a value of 1 results in a corresponding change of 0.793 in the Implementation of Public Sector Projects. The results also showed that the p-values of all of the independent variables, Agile Team Leadership, Agile Risk Management, Agile Project Planning and Agile Stakeholder Involvement were well below 0.05 indicating a statistically significant relationship between each independent variables and the dependent variable. This is consistent with Dahiru (2008) who found that given intervals of 95%, p-values of less than 0.05 indicate that observed differences between groups are unlikely to be due to chance and, as such, are statistically significant. This reflects the relevance of the p-value as an acceptable test of statistical significance.

Table 4: Pearson Correlation Coefficients

		Agile Team Leadership	Agile Risk Management	Implementation of Public Sector Projects
Agile Team Leadership	Pearson Correlation	1		
	Sig. (2-tailed)			
Agile Risk Management	Pearson Correlation	-.380	1	
	Sig. (2-tailed)	.140		
Implementation of Public Sector Projects	Pearson Correlation	.705**	.793**	1
	Sig. (2-tailed)	.000	.001	

Multiple Regression Analysis

According to Mooi and Starstedt (2014), regression analysis is a technique that analyses relationships between one or more independent variables and a dependent variable by fitting a line-of-best-fit through a series of observations. This helps to provide intuitions into: whether the independent variables have a significant relationship with a dependent variable; to test the relative strength of different independent variables' effect on a dependent variable; and make predictions. The results pertaining to the Multiple Regression model of the study are shown in Table 5. According to the table, the R Square value for all the variables was 0.838 indicating that the results explained 83.8% of the variation in the Implementation of Public Sector Projects whenever there was a one percent change in the four independent variables. This was consistent with Hamilton, Ghert and Simpson (2015) who found that in order for R square values to be significant they should exceed 0.7. In other words, whenever this model is used in future research it will be able to explain any variations in the dependent variable 83.8% of the time. This also shows that there is only a 16.2% difference between all the observed values and their fitted values in the examined data set indicating a strong Goodness-of-fit of the regression model.

Table 5: Multiple Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.916[a]	.838	.832	.25849

a. Predictors: (Constant), Agile Team Leadership, Agile Risk Management, Agile Project Planning, Agile Stakeholder Involvement

ANOVA Statistics

Sawyer (2009) posited that Analysis of Variance (ANOVA) refers to a statistical technique applied in detecting differences between experimental group means when there is one dependent variable and one or more independent variables. The results of the ANOVA of the study are presented in Table 6. The results indicate that the ANOVA F-test score, calculated value F_{cal} at 5% level of significance is equivalent to 143.711, which is greater than the F critical value (F_{crit}) of 2.45 indicating that there is a significant relationship between all the independent variables and the dependent variable of Implementation of Public Sector Projects. The p-value of 0.000 is less than 0.05 indicating that there is a statistically significant relationship between each of the independent variables and the Implementation of Public Sector Projects in accordance with the findings of Kao and Green (2008). This demonstrates the goodness of fit of the model.

Table 6: ANOVA Statistics

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.411	4	9.603	143.711	.000[b]
	Residual	7.417	111	.067		
	Total	45.828	115			

a. Dependent Variable: Implementation of Public Sector Projects

b. Predictors: (Constant), Agile Team Leadership, Agile Risk Management, Agile Project Planning, Agile

Stakeholder Involvement

Beta Coefficient Analysis

Beta Coefficients as unknown constants that are estimated from the data which are associated with given predictors or independent variables (Mooi & Starstedt, 2014). These coefficients measure the magnitude of change in an independent variable and how this affects the dependent variable when the rest of the independent variables are held constant. The results of the Beta Coefficients of the study variables are shown in Table 4.18. The values of the constants and coefficients enabled the generation of the following multiple regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$$= 4.157 + 0.673X_1 + 0.491X_2 + 0.260$$

According to the equation, taking all the independent variables to be zero (Agile Team Leadership, Agile Risk Management,), Implementation of Public Sector Projects will be a constant equivalent to 4.157. A review of the findings also shows that a unit increase in Agile Team Leadership will lead to a 0.673 increase in Implementation of Public Sector Projects when all other independent variables are held constant. Additionally, a unit increase in Agile Risk Management will lead to a 0.491 increase in Implementation of Public Sector Projects when all other independent variables are held constant.

Table 7: Beta Coefficient Analysis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.157	.260		15.986	.000
	Agile Team Leadership	.673	.039	.750	17.298	.000
	Agile Risk Management	.491	.039	.501	4.898	.000

a. Dependent Variable: Implementation of Public Sector Projects

Conclusions

Participatory leadership has facilitated the institutionalisation of flexibility into the decision making process. Additionally, KEMSA has enhanced its management structure by incorporating individuals with the relationship management competences to create an enabling environment for harmonious relationships between the project implementation team, customers and other departmental staff. Further, the top management has supported the decisions taken by the project team as far as prioritisation of work is concerned. However, KEMSA needs to do more to sensitise its staff regarding the ranking that has been developed among selected criteria that has made it possible for effective work prioritisation.

The organisation's project management teams have relied mainly of known and trusted traditional project management practices of risk management rather than agile risk management. The main risk mitigation strategy that has been adopted by the organisation is risk allocation. The organisation has been hampered by rigid procedures which has made it

more vulnerable to risks pertaining to financial constraints. Owing to endemic corruption, the organisation has not been able to meet its project performance objectives. The organisation has successfully integrated the use of continuous monitoring throughout the implementation phases as a risk control strategy.

Recommendations

KEMSA should carry out sensitisation initiatives on the ranking system that has been developed among selected criteria to aid in work prioritisation such as workshops, seminars and symposiums particularly for staff who are involved in policy making. The organisation should institutionalise more corporate governance controls which can minimise the corruption malaise that has hampered the accomplishment of the project performance objectives. KEMSA should conduct more research on the use of the stakeholder analysis report so as to determine the most effective way of adapting it. The organisation should engage in funds mobilisation initiatives in order to expand its funding pool to boost its financial resources.

Areas of Further Study

Most of the studies done on the implementation of public sector projects in Kenya have focused on other contexts other than KEMSA. More research should conducted on the determinants of effective project implementation at KEMSA. The studies that have been conducted on KEMSA as a dependent variable have not been on project management practices. More research should be focused on the correlation between project management practices and the implementation of public sector projects. There have been other studies on the influence of project management practices on the implementation of public sector projects which have only dealt with one specific project management practice rather than on project management practices in general. Finally, there has been very little work done on agile project management practices in Kenya.

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