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ROLE OF LOGICAL FRAMEWORK ON MONITORING AND EVALUATION OF PUBLIC PRIVATE PARTNERSHIPS PROJECTS IN NAIROBI COUNTY, KENYA

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ABSTRACT

The general objective of the study was to examine the role of logical framework approach on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. The study was based on the System Approach Model, Structural Functional Approach, Project Scheduling Theory. The study adopted a descriptive research design. The study's population was the Public Private Partnerships Infrastructure Projects in Kenya classified into: Transport/Roads; Energy& Petroleum; Environment, Water& Natural Resources; Industrialization & manufacturing; Education, Science & Technology; Housing & Urban Development; Commerce & Tourism; Health, Agriculture, Livestock & Fisheries. The study used census to collect primary data. Data was collected using questionnaires and analysed using the Statistical Package for Social Sciences Software (SPSS), version 26. Data was presented using summary statistic tables and figures. The study adopted correlation and regression analysis to test the relationship between the independent and dependent variables. The study established that all the independent variables (Project Purpose (PP), Verifiable Indicators (VI), Means of Verification (MoV), and Assumptions (A)) had a strong positive and statistically significant ($p < .05$) relationship with the dependent variable (Monitoring and Evaluation (M&E)). The study deduced that a positive deviation in each of the variables would result in subsequent change in the dependent variable (Monitoring and Evaluation (M&E)) and therefore recommended that, Project Purpose, Verifiable Indicators, Means of Verification, and Assumptions be considered in logical framework approach as they were found to positively influence monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya.

Key Words: *Project Purpose, Verifiable Indicators, Means of Verification, Assumptions, Monitoring and Evaluation*

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INTRODUCTION

Monitoring means tracking the key elements of program performance on a regular basis (inputs, activities, results). In contrast, evaluation is the episodic assessment of the change in targeted results that can be attributed to the program or project intervention, or the analysis of inputs and activities to determine their contribution to results. In project, monitoring and evaluation the Logical Framework Approach is an essential approach used in monitoring and evaluation of different projects. Therefore, log frame approach is a long-established activity design methodology used by a range of multilateral and bilateral projects (Aust Aid 2005). In addition, the log frame approach is based on systematic analysis of the development situation particularly key development problems and of the options for addressing those problems. More so, the Logical Framework Approach is an analytical presentational and management tool (Onwo, 2019).

Kenya's Vision 2030 blueprint seeks to make the country an industrialized middle-income economy by the year 2030. Pursuant to the Blueprint, the Government of Kenya has planned to spend an estimated sum of USD 60 Billion to put up infrastructure whilst relying heavily on PPP arrangements to achieve that goal (Wibowo & Alfen, 2017). The Government has therefore been working on providing the right environment for implementation of PPPs by creating the legal and regulatory framework through the enactment of laws and regulations that promote and encourage PPPs. It is in this regard that Parliament enacted the Public Private Partnerships Act No. 15 of 2013 ("the Act") to provide for the participation of the private sector in the financing, construction, development, operation and maintenance of infrastructure projects of the government through concessions or other contractual arrangements (Republic of Kenya, 2013).

According to the National Treasury, (Kenya PPPU, 2015), the provision of public infrastructure (including power, roads, rail, sea and airports) and services (including water, health and sanitation) is a key mandate of governments the world over. These public goods are a fundamental prerequisite for economic growth and development. A significant share of the investment is expected from the private sector. PPPs present the most suitable option of meeting these targets, not only in attracting private capital in creation of infrastructure but also in enhancing the standards of delivery of services through greater efficiency.

The World Bank (2014) developed a five-level platform on PPP projects performance namely; advocacy, capacity building, sector fundamentals, enabling environment and project development finance. Studies undertaken in 45 countries revealed that critical factors constraining growth as well as helping build a robust PPP environment are governance and regulatory failure, inadequate sector structures, long term finance and corruption. According to World Bank (2013), on average 45%, of PPP Projects that fail to achieve their objectives suffer from most of the conditions. The OECD (2010) developed PPP Governance principles (best practices) that comprised of political leadership, regulatory frameworks, institutional capacities, project management (including finance, affordability and risk) and stakeholder involvement.

In the past decade, infrastructure contributed 0.5 percentage points to Kenya's annual per capita GDP growth. Raising the country's infrastructure endowment to that of Africa's middle-income countries could increase that contribution by 3 percentage points. A successful public private partnership in air transport has made Kenya's airline a top carrier in the region and its international airport a key gateway to Africa. Institutional reforms in the power sector have reduced the burden of subsidies on the public by approximately 1 percent of GDP (World Bank, 2015).

The CEPA (2015) report indicates that Kenya Government has made tremendous efforts in setting up the PPP environment through a number of legal, regulatory and institutional frameworks guiding PPP investment. The Country PPP

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implementation status report indicates that the Government has made tremendous efforts in building the capacity of the project management teams, hiring sector advisors to support PPP program, capital markets action plan developed and agreed with the counterparts. A successful PPP program requires robust mechanisms for managing the individual PPP Projects at their formation stage as PPPs are not an end in itself: PPPs should only be employed to support effective and good projects, not as a means of financial or political speculation hence the call for this study.

The PPP Act, 2012 also establishes institutions to; regulate, monitor and supervise the implementation of project agreements on infrastructure. One of the key features of the Act is the creation of the Public Private Partnership Unit (PPPU) which is a Special Purpose Unit within the National Treasury of the Government of Kenya (Koimett, 2013). The PPPU is responsible for the systematic coordination of all the PPP projects review and approval process, which is geared towards promoting the flow of bankable, viable and sustainable projects that further the Kenya's National Policy on PPPs. It serves as a Centre of PPP expertise in Kenya (PPPU, 2017).

In a bid to attract foreign investors and in cases where the domestic workforce lacks expertise, Kenya's PPP policy provides for the compensation of such foreign investors if the project is terminated due to political instability or other unavoidable circumstances (Nderitu, 2015). The Kenyan government has also put in place performance monitoring mechanisms to evaluate PPP projects. Moreover, there is risk mitigation through letters of comfort/support, guarantees and subsidies. Private entities can also enter into direct agreement with lenders to finance PPP projects.

Expectedly, Kenya stands to gain a lot by using PPP arrangements to undertake various projects. One of the main advantages is that PPPs reduce the burden on taxpayers having to pay for a project, especially where the private sector finances the whole project (Nguri, 2015). The government and the private sector will be able to share and allocate risks amongst themselves. By using PPPs, corruption and wastage can be significantly reduced since both partners are held accountable for the project. PPP arrangements also help to create job opportunities for the local people who are often hired to work on such projects (Nderitu, 2015). Furthermore, PPPs will also supplement the government's ability to meet the demands for increasing and improving infrastructure.

Kenya has a track record in infrastructure projects that have been built using concession. These include the Port of Mombasa Grain Terminal that was built in 1998; the Malindi Water Utility which was built in 1999 on a 5-year management contract; the Jomo Kenyatta International Airport Cargo Terminal (JKIA Cargo) which was built in 1998; the Kenya-Uganda Railway Concession in 2006, among others (Nguri, 2015). Some of the ongoing and completed PPP projects which the government intends to undertake or has already undertaken include the establishment of a Kenya Flying School; the construction of a Second Terminal at the Jomo Kenyatta International Airport; the establishment of a 980 Megawatt Coal Plant; a two-phase Geothermal Development Project to generate a total of 1,200 megawatts; establishment of a four-tier National Data Centre, among many other projects (Leley, 2013). Kenya's infrastructure needs such as roads, airports, schools, hospitals, housing and energy is enormous and growing. Yet severely limited budgets, deficits and souring debt levels continue to prevent the government at all levels from delivering the kinds of structural change that has always been needed. Merely grasping the concepts of PPP does not do justice to our great responsibility of having an ownership in Kenya's future.

Statement of the Problem

The public private partnerships program in Kenya is five years old under the Public Private Partnerships Act, 2013, and in that time, significant background work has been undertaken by the Government around completing the legal framework, building up

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a pipeline of credible PPP projects, capacity building contracting authorities, developing supporting instruments and engagement tools, resourcing the work of contracting authorities through various forms of advisory services (sector, technical, transactional), and communicating the PPP ideology to various actors at various segments of society, both local and international. Consequent to that intense background work, a number of transactions have progressed to full feasibility study, others into procurement stage, and a few have gone past the procurement stage, but are yet to break ground.

There is an urgent need for a logical framework designed to respond to a basic problem: The Government has very few PPP specialists, and the number of PPP project-related activities are enormous, expansive, and very demanding, resulting in very thin deployment, ineffective oversight, and lots of loose strands and ends on critical project activities. The Government is extremely busy, but locking in clear deliverables is increasingly driving concern in the sector, with the result that the Government is in a danger of being viewed as either ineffective, inefficient or both to deal with PPP projects in the country. There is need therefore to rise beyond the process and bureaucratic engagements (which serve a critical and important function of a compliance and transparency nature), and transform into a system that delivers the kind of results that the wider PPP stakeholder group (Government, investors, the public) understands: projects in construction, projects in operation.

This study aimed at creating substantial systemic shift in the way the Government conducts its business, therefore: it is intended to provide a logical framework mechanism by which the Government can more creatively deploy its resources around these projects, noting that the Government is greatly constrained over its project teams. The study would allow for greater accountability, better structured time allocation to projects, and greater ability of the project team to navigate the numerous demands on its time and resources. It would minimize conflict, reduce project time loss, and reduce management costs by creating better project visibility across the project lifecycle and the crucial part of private capital that PPP's should play in funding vital infrastructure projects across the world given that large projects procured by public authorities often faced long delays , quality issues and cost overruns.

Objectives of the Study

The general objective of the study was to examine the role of logical framework approach on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. The specific objectives of this study were;

- To establish the role of project purpose on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya.
- To determine the role of verifiable indicators on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya.
- To establish the role of means of verification on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya
- To find out the role of assumptions on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya.

LITERATURE REVIEW

Theoretical Review

Project Scheduling Theory

The first theory on the project lifecycle is the project scheduling theory as proposed by Herroelen, (2005) and involves the scheduling of project activities subject to precedence and/or resource constraints. Goldratt, (2012) argues that project scheduling procedures do not matter because in each case the impact on the lead time of the projects is very small. Herroelen, (2005) however identifies and illuminate popular misconceptions about project scheduling in a resource-constrained environment. He argues that the above type of reasoning invites the reader to become trapped in the crucial misconception that

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looking for the best procedure for resolving resource conflicts does not pay off in practice and has a negligible impact on planned project duration. In relation to this study, project planning activities with regard to completion of public projects is important for the PPPs infrastructural development projects in Kenya. This is because PPPs as any other public projects may face schedule delays. Callahan, Quackenbush, and Rowings, (2016) define delay in construction claims as the time during which some part of the construction project has been extended or not executed owing to an unexpected event. This may result in rescheduling the project which may lead to delays on the project completion date.

Program Evaluation Theory

The second theory in project life cycle is the program evaluation theory as fronted by Rossi, (2004) who describes program theory as consisting of the organizational plan which deals with how to garner, configure, and deploy resources, and how to organize program activities so that the intended service system is developed and maintained. The theory is further defined as process through which program components are presumed to affect outcomes and the conditions under which these processes are believed to operate (Rossi, 2004).

Program theory guides an evaluation by identifying key program elements and articulating how these elements are expected to relate to each other. This will help save program designers and evaluator's time and resources. Theory based evaluations therefore enable the evaluator to tell why and how the programme is working, (Weiss, 2014). This is important for the PPPs projects because monitoring and evaluation are distinct but complementary. Monitoring tracks and documents resources used throughout the implementation of the project, while Evaluation assesses the effectiveness in achieving its goals and in determining the relevance and completion of an ongoing project.

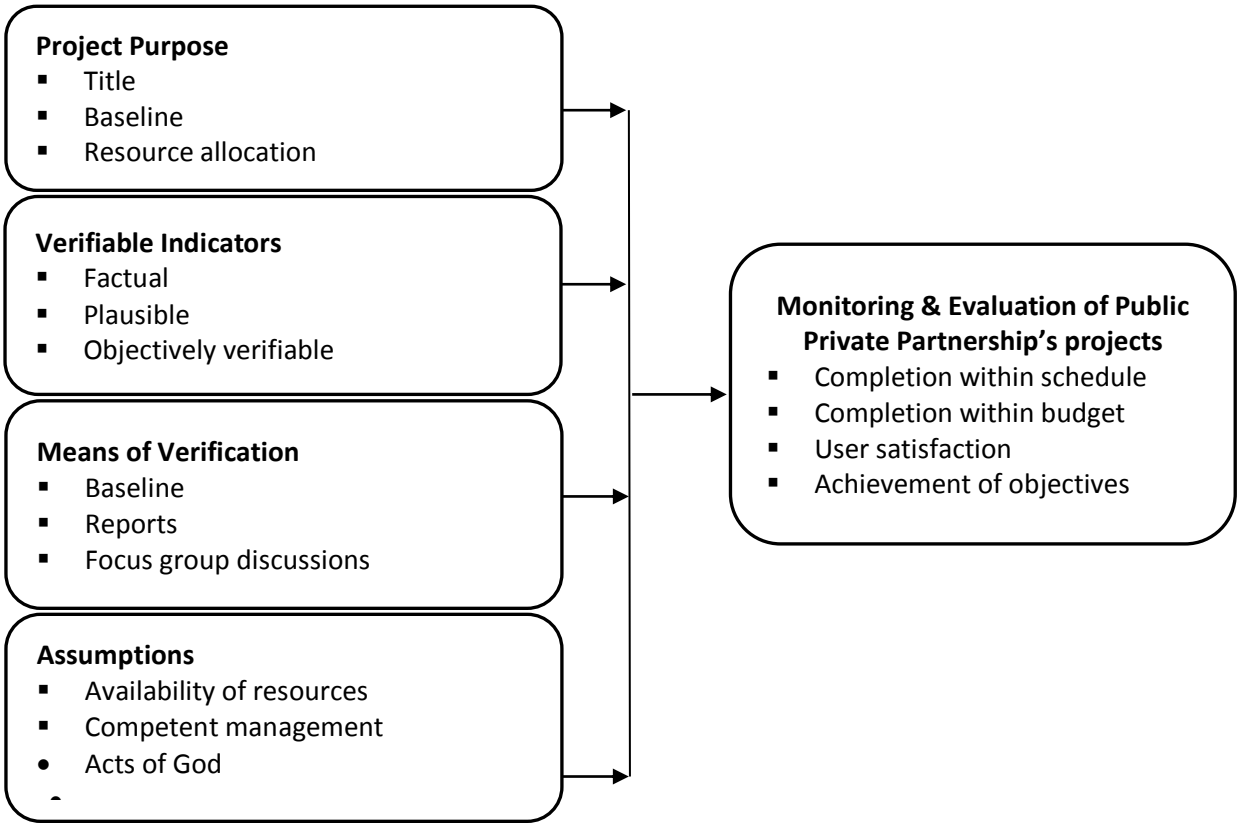

Figure 1: Conceptual Framework

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Empirical Review

This section presented a review of literature on the role of logical framework on monitoring and evaluation of public partnerships projects in Nairobi County, Kenya. The study focused on the role of project purpose, verifiable indicators, means of verification and assumptions. Myrick (2013) focused on Logical Frameworks (log frames) and pragmatic approaches to Monitoring and Evaluation (M&E) frequently facilitate the need to modify processes that can be used in instances where there are limited resources, limited financial capital and limited human capital to determine whether programs and projects have had an impact. This study concludes by emphasizing that no matter what approach is used in monitoring and evaluation, establishing targets is necessary in order to conduct meaningful Monitoring and Evaluation for impact.

Colemann (2015) focused on the logical framework approach to monitoring and evaluation of agricultural and rural development projects. The study provided a brief and accessible statement of the basic structure of the Logical Framework Approach. The log frame has proved to be effective as a project design and evaluation tool in many cases, many pitfalls have dented its use as a project management tool The log frame is considered inflexible, complex and difficult to integrate with other project management tools due to the lack of clear process leading to its development, its confusing nature evident in the difference between goal and purpose and a lack of stakeholders' involvement which often compromise its validity. Significant differences have therefore emerged concerning the adoption of the log frame in managing IDPs, which has led to its removal by some development agencies like USAID and CIDA (2015).

Akroyd (2009) study focused on the logical framework approach to project planning, socio-economic analysis and to monitoring and evaluation services: a smallholder rice project. The assumptions and risks contained in the project's logical framework matrix are equated to those considered in sensitivity and risk analysis. Distinctions between project efficiency, effectiveness and impact are examined, as is the role of the project manager in the achievement of the project outputs, objective and sector goals. A socio-economic issue and the provision of monitoring and evaluation services are examined. Nowadays an environmental impact assessment report and socio-economic baseline studies would be required prior to project appraisal. Increased consideration would also be given to socio-economic factors in relation to the likely achievement of crop production targets.

Wiggins and Shields (2012) study focused on clarifying the 'logical framework' as a tool for planning and managing development projects. The 'logical framework' is a tool for project preparation which has been adopted by many agencies funding development programs in the third world, yet its diffusion has been barely noticed in the academic literature. This study argues that, although one of the framework's strengths is its simplicity, that is deceptive, and that the potential of the tool requires attention to some ambiguities. These are examined, some suggestions are made, and a modified framework is proposed. Finally, some criticisms of the framework are reviewed.

Cracknell (2012) study focused on evaluating the effectiveness of the logical framework system in practice The Logical Framework system for project appraisal is now an integral part of the work of the ODA. It is important that it becomes an instinctive pattern of thinking, so continuous training is necessary to ensure that the technique is successful. Further, the study established that an experience has amply justified the emphasis placed by the Logical Framework system on the need for a clear statement of objectives and criteria of success, as well as risks and assumptions.

Dillon (2018) state that Logical Framework Approach (LFA) is a highly effective strategic planning and project management methodology with wide application. It is particularly valuable for

water management and sanitation projects, especially because water — the resource base — has diverse and competing uses. It comprises an integrated package of tools for analyzing and solving planning problems and for designing and managing their solutions (the approach). The product of this analytical approach is the log frame (the matrix), which summarizes what the project intends to do and how, what the key assumptions are, and how outputs and outcomes will be monitored and evaluated.

Russo and Rindone (2011) study on the Internal Planning Process (IPP) and Logical Framework Approach (LFA) are analyzed with a view to proposing a coherent vision between the two processes. Elements representing processes and mutual interactions are defined. The Internal Planning Process is represented in explicit form by means of production functions (from resources to products and services), demand-supply interaction models (from products and services to direct effects) and impact functions (from direct to indirect effects). The Logical Framework Approach is explicitly represented by means of exogenous activities (from inputs to outputs) usually considered in the current literature. We introduce endogenous activities (from outputs to outcomes and from outcomes to goals), that are normally activated as processes evolve but are generally not considered. Coherent IPP and LFA vision for evacuation of a school is illustrated.

METHODOLOGY

This study used a descriptive research design. This design refers to a set of methods and procedures that describe variables. It involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data (Creswell, 2014). The study's population was the Public Private Partnerships Infrastructure Projects in Kenya. The Public Private Partnerships Infrastructure Projects were classified into: Transport/Roads; Energy& Petroleum; Environment, Water& Natural Resources; Industrialization& manufacturing; Education, Science & Technology; Housing & Urban Development; Commerce & Tourism; Health, Agriculture, Livestock & Fisheries. There were seventy-six PPP infrastructure projects in Kenya (National Treasury, 2017). A population of 76 projects was used which represented whole population of the PPPs projects as at 2019. This study used of both primary and secondary data collection methods. Secondary data was obtained from the monitoring and evaluation reports of the PPPs projects. Semi structured questionnaires was used to collect data primary data from the respondents. Data was analyzed by use of both inferential and descriptive statistics with the help of statistical software known as Statistical Package for Social Sciences (SPSS version 26). The regression equation was;

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

Whereby; Y = M & E of PPPs
X_1 = Project Purpose
X_2 = Verifiable Indicators
X_3 = Means of Verification
X_4 = Assumptions
ε = Error Term
β_0 = Constant Term
β_1, β_2, β_3, $\beta_{4=}$ Beta Co-efficient

FINDINGS

Descriptive Statistics for Project Purpose

The study generated a descriptive statistics table and the results were presented in Table 1. From the table, a majority of the respondents said to a high extent (mean of 3.70) that the projects had a clear description of the changed, a majority said to a high extent (mean of 3.69) that the benefits that would be accrued to the target group were clearly indicated, a majority of the respondents said to a high extent (mean of 3.70) that the titles of projects were clearly framed and indicated in all projects undertaken, a majority also said to a high extent (mean of 3.80) that all projects had adequate resources allocated for them from inception to completion, and a majority of the respondents said to a high extent (mean of 3.39) that all projects had baselines clearly indicated so as to enable

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monitoring and evaluation. Further, a majority of the respondents said to a high extent (mean of 3.71) that they tried to be very comprehensive in their planning.

Table 1: Descriptive Statistics for Project Purpose

	Mean	Std. Deviation	Variance
Our projects have a clear description of the changed situation the Project should result in if it achieves its results	3.70	.969	.938
The benefits that will be accrued to the target group are clearly indicated	3.69	.903	.815
The titles of projects are clearly framed and indicated in all projects undertaken	3.80	.960	.921
All projects have adequate resources allocated for them from inception to completion	3.39	1.101	1.213
All projects have baselines clearly indicated to enable monitoring and evaluation	3.67	1.027	1.054
We try to be very comprehensive in our planning	3.71	1.006	1.013

Descriptive Statistics for Verifiable Indicators

The study used SPSS software to generate the descriptive statistics for the variable, Verifiable Indicators. The findings were presented in Table 2. The tables showed that a majority of the respondents said to a high extent (a mean of 3.68) that the available indicators allowed for ongoing measurement with the Project Cycle, a majority said to a high extent (a mean of 3.88) that they had put in place indicators for measuring progress at every level, a majority also said to a high extent (a mean of 3.79) that the project indicators in place were independent such that they measured the aims, objectives or results to which they were linked, a majority of the respondents said to a high extent (a mean of 3.83) that the project indicators were based on factual measurements, and a majority further said to a high extent (a mean of 3.81) that the available project indicators were objectively verifiable.

Table 2: Descriptive Statistics for Verifiable Indicators

	Mean	Std. Deviation	Variance
The available indicators allow for ongoing measurement with the Project Cycle	3.68	1.041	1.085
We have put in place indicators for measuring progress at every level	3.88	.892	.796
The project indicators in place are independent such that they measure the aims, objectives or results to which they are linked	3.79	.884	.782
The project indicators are based on factual measurements	3.83	.916	.840
The available project indicators are objectively verifiable	3.81	.956	.914

Descriptive Statistics for Means of Verification

The study generated a descriptive statistics table from the data set using SPSS software. From the results presented in Table 3, a majority of the respondents said to a high extent (with a mean of 3.74) that they had means of verification for the impact indicators in place, a majority said to a high extent (with a mean of 3.63) that they have in place agreed standards for verifying quantitative data, a majority said to a high extent (a mean of 3.73) that the baseline surveys offers the means of verification, a majority said to a high extent (with a mean of 3.76) that they rely on projects reports as clear and dependable ways of verifying project success, and a majority further said to a high extent (a mean of 3.74) that through focused group discussions we are able to verify the data acquired from various sources.

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Table 3: Descriptive Statistics for Means of Verification

	Mean	Std. Deviation	Variance
We have means of verification for the impact indicators in place	3.74	.856	.733
We have in place agreed standards for verifying quantitative data	3.63	.927	.859
The baseline surveys offers the means of verification	3.73	.954	.910
We rely on projects reports as clear and dependable ways of verifying project success	3.76	.914	.836
Through focused group discussions we are able to verify the data acquired from various sources.	3.77	1.031	1.062

Descriptive Statistics for Assumptions

The study generated a descriptive statistics table for the assumptions variable and the findings were summarized in Table 4. From the table a majority of the respondents agreed (a mean of 3.93) that availability of resources was one of the assumptions, a majority agreed (a mean of 3.87) that competency of the management was an assumption, a majority of the respondents agreed (a mean of 4.00) that unforeseeable natural disasters such as earthquakes, plague and war was also an assumption, a majority of the respondents agreed (a mean of 4.00) that capacity of the designated management was an assumption, a majority agreed (a mean of 3.88) that fulfilment of the project was an assumption, a majority further agreed (a mean of 3.96) that the project will be delivered within the agreed timelines was an assumption that were captured at the project planning phase.

Table 4: Descriptive Statistics for the Independent Variable (Assumptions)

	Mean	Std. Deviation	Variance
Availability of resources	3.93	.936	.875
Competency of the management	3.87	.923	.852
Unforeseeable natural disasters such as earthquakes, plague and war	4.00	.988	.977
Capacity of the designated management	4.00	.889	.791
Fulfilment of the project	3.88	.881	.776
The project will be delivered within the agreed timelines	3.96	.903	.815

Descriptive Statistics for Monitoring and Evaluation

The study generated a descriptive statistics table for the dependent variable (Monitoring and Evaluation). From the results presented in Table 5, a majority of the respondents agreed (mean of 3.71) that the projects that were undertaken were completed within the budget, a majority agreed (mean of 3.96) that they would rate the level of client satisfaction at above 70%, a majority of the respondents agreed (mean of 3.86) that their projects were completed within the agreed schedule.

Table 5: Descriptive Statistics for Monitoring and Evaluation

	Mean	Std. Deviation	Variance
The projects that we undertake are completed within the budget	3.71	.860	.740
I would rate the level of our client satisfaction at above 70%	3.96	.877	.769
Our projects are completed within the agreed schedule	3.86	.830	.688

Inferential Statistics

Correlation between the variables

The researcher generated a correlation matrix between the variables using the SPSS Software. The findings were presented in Table 6. The table

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showed that the independent variables (Project Purpose (PP), Verifiable Indicators (VI), Means of Verification (MoV), and Assumptions (A)) had a strong positive and statistically significant ($p < .05$) correlation between themselves and the dependent variable (Monitoring and Evaluation (M&E)). This implied that a positive deviation in each of the variables would result in subsequent change in the dependent variable (Monitoring and Evaluation (M&E)).

Table 6: Bivariate Pearson's Correlation Matrix

Correlations

		M&E	PP	VI	MoV	A
Monitoring and Evaluation (M&E)	Pearson Correlation	1	.586**	.646**	.617**	.586**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	350	350	350	350	350
Project Purpose (PP)	Pearson Correlation	.586**	1	.742**	.712**	.710**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	350	350	350	350	350
Verifiable Indicators (VI)	Pearson Correlation	.646**	.742**	1	.700**	.705**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	350	350	350	350	350
Means of Verification (MoV)	Pearson Correlation	.617**	.712**	.700**	1	.720**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	350	350	350	350	350
Assumptions (A)	Pearson Correlation	.586**	.710**	.705**	.720**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	350	350	350	350	350

**. Correlation is significant at the 0.01 level (2-tailed).

Autocorrelation between the dependent and Independent Variables

The researcher carried out an analysis to determine whether there was presence of autocorrelation in the variables using the Durbin-Watson Statistic. According to Gujarat (2009) Durbin-Watson statistic ranges in value between 0 and 4. A value near 2 indicates non-autocorrelation; a value closer to 0 indicates positive correlation while a value closer to 4 indicates negative correlation. Chen (2016) added that a negative autocorrelation exists if Durbin-Watson coefficient is below 1.5 while a positive autocorrelation exists when Durbin-Watson coefficient is above 2.5. The results presented indicated that there was no autocorrelation between the dependent and independent variables since the Durbin-Watson coefficient was 1.857 (i.e. in the range of between 1.5 and 2.5 threshold).

Table 7: Autocorrelation between the dependent and Independent Variables

Model Summary[b]

Model	Durbin-Watson
1	1.857[a]

a. Predictors: (Constant), Assumptions, Verifiable Indicators, Means of Verification, Project Purpose

b. Dependent Variable: Monitoring and Evaluation

Checking for Multicollinearity between the Dependent and Independent Variables

The researcher sought to find out if multicollinearity existed between Dependent Variable and the Independent Variables. Identification of multi-collinearity in a model is important and is tested by examining the tolerance level and the variance inflation factor (VIF) diagnostic factors (Leech, Barrett & Morgan, 2014). According to Allison (2012), the general rule of thumb is that VIFs exceeding 10 are signs of serious multicollinearity and they require correction. The findings presented showed that there was no multicollinearity between the dependent and independent variables as no variable had a VIF exceeding 10.

Table 8: Multicollinearity Check between the dependent and independent variables

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Project Purpose	.351	2.852
	Verifiable Indicators	.363	2.756
	Means of Verification	.377	2.650
	Assumptions	.375	2.665

a. Dependent Variable: Monitoring and Evaluation

Multiple Linear Regression Analysis between Variables

A regression analysis between the Independent Variables (Project Purpose, Verifiable Indicators, Means of Verification, and Assumptions) and the Dependent Variable (Monitoring and Evaluation) was carried out and the findings were presented in Tables below.

From the Model Summary table, R^2 was .481 meaning that all independent variables (Project Purpose, Verifiable Indicators, Means of Verification, and Assumptions) contributes 48.1% to the total variability in the dependent variable (Monitoring and Evaluation).

Table 9: Model Summary Table of Independent Variables and the Dependent Variable

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.694[a]	.481	.475	.52971

a. Predictors: (Constant), Assumptions, Verifiable Indicators, Means of Verification, Project Purpose

The Anova Table 9 showed that the p-value was .000 (below the 5% threshold) and hence, the Combined Independent Variables (Project Purpose, Verifiable Indicators, Means of Verification, and Assumptions) had a statistically significant influence on the Dependent Variable (Monitoring and Evaluation).

Table 10: Anova Table of Independent Variables and the Dependent

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	89.781	4	22.445	79.993	.000[b]
	Residual	96.804	345	.281		
	Total	186.585	349			

a. Dependent Variable: Monitoring and Evaluation

b. Predictors: (Constant), Assumptions, Verifiable Indicators, Means of Verification, Project Purpose

From the Coefficient table, all the independent variables had positive coefficients meaning that any variability in any of them would result in subsequent positive variability in the dependent variable (Monitoring and Evaluation). However, only two independent variables (Verifiable Indicators and Means of Verification) were significant ($p < 0.05$ threshold) and were therefore included in the optimal model shown below;

$$Monitoring\ and\ Evaluation\ (Y) = 1.065 + .321X_2 + .220X_3$$

The variables, Project Purpose and Assumptions contributed insignificantly as they had p-values (Sig. greater than 0.05 threshold) and were therefore not included in the optimal model presented in the equation above.

Table 11: Coefficient Table of Independent Variables and the Dependent Variable

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.065	.160		6.652	.000
	Project Purpose	.078	.060	.084	1.285	.200
	Verifiable Indicators	.321	.062	.332	5.161	.000
	Means of Verification	.220	.059	.237	3.747	.000
	Assumptions	.116	.060	.122	1.922	.055

a. Dependent Variable: Monitoring and Evaluation

CONCLUSIONS AND RECOMMENDATIONS

In the first objective, the study sought to establish the role of project purpose on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. From the findings the study concluded that Project Purpose positively and significantly influenced Monitoring and Evaluation of public private partnerships projects in Nairobi County, Kenya. As such a positive deviation in Project Purpose would result in subsequent change in Monitoring and Evaluation.

In the second objective, the study sought to determine the role of verifiable indicators on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. The findings led the study to conclude that Verifiable Indicators had a strong positive and relationship with Monitoring and Evaluation of public private partnerships projects in Nairobi County, Kenya. This implies that a positive deviation in Verifiable Indicators would result in subsequent change in Monitoring and Evaluation of public private partnerships projects in Nairobi County, Kenya.

In the third objective, the study sought to establish the role of means of verification on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. The results established by the study led to the conclusion that Means of Verification had a positive and significant relation with Monitoring and Evaluation of public private partnerships projects in Nairobi County, Kenya. Therefore, a positive deviation in Means of Verification would result in subsequent positive deviation in Monitoring and Evaluation of public private partnerships projects in Nairobi County, Kenya.

In the fourth objective, the study sought to find out the role of assumptions on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. The study findings led the study to conclude that the independent variable (Assumptions) had a positive and a significant relationship with Monitoring and Evaluation of

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public private partnerships projects in Nairobi County, Kenya. The implication is that a positive variability in the independent variable (Assumptions) would result in a subsequent positive variability in Monitoring and Evaluation.

The aim of this study was to examine the role of logical framework approach on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. The study established that all the independent variables had positive coefficients both from correlation and regression analysis. This implied that any variability in any of them would result in subsequent positive variability in the dependent variable (Monitoring and Evaluation). Therefore, this study recommended that Project Purpose, Verifiable Indicators, Means of Verification, and Assumptions be considered in logical framework approach as they were found to positively influence monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya.

Recommendations for Further Studies

This study sought to examine the role of logical framework approach on monitoring and evaluation of public private partnerships projects in Nairobi County, Kenya. A similar study can be carried out in different area or geographical location. From the regression analysis, only two independent variables (Verifiable Indicators and Means of Verification) were found to be statistically significant. Therefore, a confirmatory study needs to be carried out in this area.

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