

# **DETERMINANTS OF PRIVATE SECTOR PARTICIPATION IN THE IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS PROJECTS IN KENYA: A SURVEY OF PUBLIC-PRIVATE PARTNERSHIPS BASED IN MOMBASA COUNTY**

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**International Academic Journal of Information Sciences and Project Management (IAJISPM) | ISSN 2519-7711**

**Received:** 10<sup>th</sup> July 2018

**Accepted:** 18<sup>th</sup> July 2018

Full Length Research

**Available Online at:**

[http://www.iajournals.org/articles/iajispm\\_v3\\_i2\\_137\\_157.pdf](http://www.iajournals.org/articles/iajispm_v3_i2_137_157.pdf)

**Citation:** Ng'ang'a, N. W. & Kisimbii, J. B. (2018). Determinants of private sector participation in the implementation of public private partnerships projects in Kenya: A survey of public-private partnerships based in Mombasa County. *International Academic Journal of Information Sciences and Project Management*, 3(2), 137-157

## **ABSTRACT**

Many countries are facing unprecedented fiscal problems and are unable to devote the resources necessary to properly expand and maintain infrastructure. It is against this backdrop, most governments and local governments are turning to the private sector for assistance with the design, financing, construction, maintenance and operation of critical infrastructure facilities. However, these partnerships may frequently fail to achieve their intended goals due to the difference in the goals and approaches of the different partners. The purpose of this study was to find out the determinants of private sector participation in public private partnerships in Kenya focusing at public-private partnerships based in Mombasa County. The study was guided by the following objectives: to determine the influence of project cost, technological requirements, ease of doing business, project period and government policies as a moderating factor on private sector participation in public private partnerships in Mombasa County, Kenya. The study was grounded on the agency theory, the resource dependence theory and social exchange theory. A descriptive research design of quantitative method of data was adopted in this study. The target population of the study composed of various stakeholders in the PPPs including government representatives from the concerned ministries, PPP unit officials, project managers of the private partners and county government officials adding up to 252. Stratified sampling was used to ensure representation from the different stakeholders constituting the strata. Through simple random sampling, 152

respondents were picked from the strata using the ratio of 0.603 computed by dividing 152 with 252. Questionnaires were used for this study because there is low cost involved even when the universe is large and is widely spread geographically and are free from the bias of the interviewer. After the questionnaires are returned, the raw data collected was cleaned, edited, coded and tabulated in line with the study objectives. The quantitative data collected using the closed ended items of the questionnaire was assigned ordinal values and analyzed using statistics of frequency tables, percentages, mode and median. The organized data was then used in testing objectives of the study. Data was analyzed using Statistical Package for Social Sciences (SPSS Version 25.0). The qualitative data from the open-ended questions were analyzed using conceptual content analysis. Inferential data analysis was done using Pearson correlation coefficient and regression analysis (multiple regression analysis). After data analysis presentation was made using tables. The study found that private sector participation in public-private partnerships in Kenya are greatly affected by the huge capital outlay, risk and risk management as well as timeliness in government funds and that delay in systems, length of project cycle greatly influences private sector participation in public-private partnerships in Kenya. The study concluded that funding had the greatest influence on private sector participation in PPPs followed by government policies then technological requirements then project period while had the ease of doing business then least effect on the private sector participation in PPPs.

The study recommends that Government should ensure that Contracting Authorities are adequately funded to undertake relevant studies for effective implementation of PPPs, that government should promote the transparency in the different phases of Public-Private-Partnership projects through a legislative action and combat corruption and that government should also foster the private participation in Public-Private-Partnership projects, develop a strong and

independent monitoring unit for the maintenance of the project, ensure the proper allocation of the risk by including risk-management experts, include private partners from the beginning of the project and provide economic incentives.

**Key Words:** *project funding, technological requirements, ease of doing business, project period, government policies, private sector participation, public private partnerships projects*

## **INTRODUCTION**

Public Private Partnerships (PPPs) are collaborations between public entities (governmental agencies) and private sector companies. PPPs are defined as contractual agreements between a public agency or public-sector authority and a private-sector entity that allow for greater private participation in the delivery of public services, or in developing an environment that improves the quality of life for the general public (Witters, Marom & Steinert, 2012). The private sector, in such partnerships, implements projects or provides services that would traditionally be provided by public entities. These partnerships provide an alternative method of procurement for large public infrastructure projects especially for governments that are short of funding. Further, these partnerships are important for addressing complex social issues such as poverty, crime, and economic development which cannot be managed by a single entity and therefore require collaborations across multiple organizations (Austria, 2013).

Public Private Partnerships describes a relationship in which public and private resources are blended to achieve a set of goals judged to be mutually beneficial to both the private entity and the public. A partnership between a public entity and private company is a strategy used to attain certain public sector needs and goals. Such partnerships have tremendous potential and as such are mandated by donors and funders, expected by local communities and assumed by policy makers to be the best way of working on social problems (Koschmann, Kuhn & Pfarrer, 2012). Hodge and Greve (2013) describe these partnerships as a globally popular strategy for governments to deliver public infrastructure. These partnerships are usually long-term engagements which governments and public entities participate in order to meet their citizen's needs. They are used as an alternative source of funding for the government (Koimett, 2013).

In United States, Emerging works suggest that partnerships have indeed led to substantial gains (Buse & Tanaka 2011) and contributed to addressing these pressing global problems. Yet evidence on whether solutions, succeeding where both states and markets have failed, is far from clear. The cumulative positive impact of partnerships is neither established nor properly tested

(Biermann et al. 2007b). Given their diverse nature and ranging focuses, more needs to be done to systematically study the impact of these unique collaborative institutions.

In developing nations, involvement of the private sector is, in part, linked to the wider belief that public-sector bureaucracies are inefficient and unresponsive and that market mechanisms will promote efficiency and ensure cost effective, good quality services. Another perspective on this debate is linked to the notion that the public sector must reorient its dual role of financing and provision of services because of its increasing inability on both fronts. Under partnerships, public and private sectors can play innovative roles in financing and providing health care service (Koimett, 2013).

In Kenya, Public Private Partnerships (PPPs) are increasingly gaining acceptance as a model of financing projects, improving efficiency, productivity and reducing unemployment. Peoples' enthusiasm about PPPs arise from their assumed benefits: PPPs are said to improve quality of services and project sustainability, reduce costs and risks and the time required to implement a project. It is also assumed that the private sector delivers projects more often-on time and on budget in comparison to the public sector (EPEC, 2009). PPP's ability to spread the costs of large investments over the lifetime of the asset is seen as an attractive advantage for the public sector since it eases public debt (Meidute & Paliulis, 2011). PPPs are therefore assumed to offer better value for money.

The government is keen to build on this success, by extending successful approaches to delivering good value for money, and by developing new ones. To this end, the Government of Kenya recently passed the PPP Act, 2013 which forms the legal framework of PPPs and has instituted a body known as the PPP secretariat responsible for the management of PPP Programs. These developments have provided a transparent, clear, fair and competitive process for PPPs, covering project identification, selection, prioritization, preparation, appraisal, procurement, approvals and procurement of project advisors. It has also given a clear institutional framework for the development and approval of PPP projects (Achieng, 2013).

## **STATEMENT OF PROBLEM**

Many countries are facing unprecedented fiscal problems and are unable to devote the resources necessary to properly expand and maintain infrastructure. It is against this backdrop, most governments and local governments are turning to the private sector for assistance with the design, financing, construction, maintenance and operation of critical infrastructure facilities (Engel, Fischer & Galetovic, 2010). Yet despite their popularity, these partnerships prove to be complicated and problematic. They are often perceived to produce limited results; involve members with contrasting goals and approaches; are prone to gridlock and fragmentation; frequently do not achieve their intended goals and sometimes appear to exacerbate the problems they are trying to solve (PPP unit, 2017). Kenya is keen on PPPs for a variety of reasons such as: increased demand for quality and affordable services from citizens; expansion of the economy

and stimulation of job creation; to utilize the efficiency of the private sector in running public services; to drive the creation of the local long term funding market; to reduce the government's sovereign borrowings and associated risks; provide a new source of investment capital for required infrastructure projects and to reduce the funding gap for infrastructure projects of \$ 37 billion (Koimett, 2013). However, these partnerships may frequently fail to achieve their intended goals due to the difference in the goals and approaches of the different partners. The government retains ownership and regulatory control of projects that are undertaken through such partnerships and defines the extent of the private sector's participation in the partnership (Austria, 2013). Public private partnerships have significant limitations if so many important aspects such as economic, social, political, legal and administrative which need to be studied carefully before the approval of the contract. These aspects include projects not being feasible for different reasons such as political, legal, commercial viability; the private sector may not take interest in a project due to possible high risks or due to lack of technical, financial capacity to implement the project. A PPP project is more costly unless additional costs (for instance due to higher transaction and financing costs) can be off-set through efficiency gains (UNESCAP, 2011). PPPs in Kenya are also facing the challenge in that PPPs in the country are still an evolving concept that must be adapted to the specific characteristics of specific sectors. Also, while the public sector sees potential for raising additional capital from the private sector to meet budgetary shortfalls, the private sector is skeptical about the government's commitment and will not to make counter-productive, inappropriate, or ill-advised policies that distort the market. Additionally, the recently enacted PPPs Act requires the government to coordinate these projects, yet government ability to do this is also questionable (PPP unit, 2017).

Local studies that have been carried in PPPs include; King'oo (2015) who did a study determinant of public private partnership in solid waste management: the case of Mombasa County, Kenya, Mbugua (2015) established the factors influencing the implementation of public private partnership in agricultural projects in Kenya: a case of Amiran and youth enterprise development fund projects in Muranga County, Kamande (2014) did a study on factors influencing partnerships between non-governmental organizations and selected private sector organizations: a case of organizations in Nairobi County, Oballa (2014) examined the implementation of public private partnerships in Kenya's public sector. However, none of these studies focused on determinants of private sector participation in the implementation of public private partnerships projects in Kenya. It is in this light that the researcher sought to fill the research gap by examining the determinants of private sector participation in the implementation of public private partnerships projects in Kenya focusing at public-private partnerships based in Mombasa County.

## **SPECIFIC OBJECTIVES**

1. To determine the influence of project funding on private sector participation in the implementation of public private partnerships projects in Mombasa County, Kenya.

2. To assess the influence of technological requirements on private sector participation in public-private partnerships in Kenya.
3. To find out the influence of ease of doing business on private sector participation in the implementation of public private partnerships projects in Mombasa County, Kenya.
4. To determine the influence of project period on private sector participation in the implementation of public private partnerships projects in Mombasa County, Kenya.
5. To establish the influence of government policies as a moderating factor on private sector participation in the implementation of public private partnerships projects in Mombasa County, Kenya.

## **THEORETICAL FRAMEWORK**

### **The Agency Theory**

The agency theory is a management approach whereby an individual or entity (the agent) acts on behalf of another entity (the principal) in advancing the principal's goals and agenda (Laffont and Mattiford, 2002). The agent therefore advances both the principals' interests and his own interests in the organization. A balance of these interests should be merged in order to arrive at the corporate objectives of the organization through the agent because he/she is in charge of the vast resources of the organization. Laffont and Mattiford (2002) contend that this agency theory is so crucial in management since the actions chosen by the agent affects several other parties.

The agent's role in strategic formulation and the overall strategic management process cannot therefore be underestimated. The agency theory holds the view that there should be proper synergy between the management and its stakeholders in order to work towards a common goal (Otungu et al. 2011). The Agency theory has however been criticised by various authors. Laffont and Mattiford (2002) criticise the theory because it only describes the relationship between a principal and its agent and allows for deception and misappropriation of funds by the agents. This constitutes a perfect example of the moral hazard problems that are an endemic feature of principal-agent complexities. He substantiates this saying these were some of the moral obligations that were violated at Enron Company in the US which led to the loss of billions by the owners. The agents were busy working for their own interests leaving other stakeholders as outsiders. This theory is relevant to the study in establishing how ease of doing business affects private sector participation. The agency theory holds the view that there should be proper synergy between the management and its stakeholders in order to work towards a common goal

### **The Resource Dependence Theory**

The resource dependence theory suggests that no firm or entity can secure the resources and capabilities required to survive without interacting with firms and individuals beyond their boundaries (Pfeffer & Salancik, 1978). The RDT provides an insight on inter-organizational relationships and how their formation help reduce uncertainty (Hillman, Withers & Collins,

2009). Hillman et al (2009), however add that such relationships only absorb some of the uncertainties faced by organizations in the business environment.

The RDT suggests that the resources possessed by an entity are the primary determinants of its success (Tokudo, 2005). According to Barney (1991), the concept of resources includes all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness (Barney, 1991). Tokudo argues that a firm may have similar resources to another but perform differently due to the difference in capabilities between the firms. He defines capabilities as the capacity of a firm to convert the resources owned to finished products. The theory is relevant to the study in elaborating technological requirement and how they influence private sector participation in the implementation of public private partnerships projects the concept of resources includes all assets, capabilities, organizational processes, firm attributes, information, knowledge, controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness.

### **Social Exchange Theory**

The social exchange theory is built on the premise that any type of business transaction is prone to have exchange and interactions (Blakenburg & Johanson, 1992). This may be termed as an interrelated connection of exchange relationships aimed at gaining a certain goal (Prekert & Hallen, 2006). This relates to the system theory whereby each organization is affected by both internal and external factors. Whereby the success of the particular organization is determined by how well it handles its operations.

Social exchange theory posits that human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. The theory has roots in economics, psychology and sociology. Social exchange theory features many of the main assumptions found in rational choice theory and structuralism. It is also used quite frequently in the business world to imply a two-sided, mutually contingent and rewarding process involving transactions or simply exchange (Godwyn & Gittel 2011). This theory relates to project period and cost and relationship formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. The theory has roots in economics, psychology and sociology.

## **RESEARCH METHODOLOGY**

### **Research Design**

A research design is a conceptual framework within which a research would be conducted. The research design was based on the quantitative paradigm. A descriptive research design of quantitative method of data was adopted in this study. The key role of descriptive research is describing the state of affairs as it exists at present through quantitatively synthesizing the empirical evidence of a specific field of research.

## **Target Population**

The target population of the study composed of various stakeholders in the PPPs including government representatives from the concerned ministries, PPP unit officials, project managers of the private partners and county government officials adding up to 252. These target respondents were chosen because of their role in the performance of public private partnership projects. Government representatives consisted of; contractors, NEMA representatives and civil engineers.

## **Sampling Procedure**

Stratified random sampling was used in the study. A sample is a portion of population, while sampling refers to the selection of subject of cases from population of interest. According to Krejcie and Morgan (1970). Stratified sampling was used to ensure representation from the different stakeholders constituting the strata. Through simple random sampling, 152 respondents were picked from the strata using the ratio of 0.603 computed by dividing 152 with 252.

## **Methods of Data Collection**

Data collection is gathering of information relevant to the research study. The main data collection instrument for the study was a structured questionnaire consisting of closed ended questions to collect primary data from respondents and likert scales relating to the field of inquiry. Questionnaires were used for this study because there is low cost involved even when the universe is large and is widely spread geographically and are free from the bias of the interviewer. In addition, respondents have adequate time to give well thought out answers and large samples can be made use of resulting in more dependable and reliable results. Secondary data on the other hand was collected from published books, internal reports and relevant documents.

## **Pilot-testing of the Research Instrument**

Initial testing of the instrument was done with respondents from the target population in to ensure that they understood the questions. The pilot testing was done with 15 respondents who constitutes 10% of the sample size which is within the range of 10% to 20% of the sample size as recommended by Orodho, (2009). The fifteen respondents were not included in the final survey. The study of the completed pilot questionnaires gave an indication of the reliability of the instrument through the responses received.

## **Validity of the Research Instrument**

Construct and content validity was determined through review of the questionnaire by colleagues who are experts and practitioners in peacebuilding work to ensure adequate coverage of specific objectives of the study. Construct validity is appropriate for the study as it sought to obtain new knowledge.

## **Reliability of the Research Instrument**

Split-half method was used to test the reliability of questionnaire to ensure that the results obtained through its use are consistent from one respondent to the other. The questionnaire is split into two equivalent halves; odd and even questions for all the 5-Likert scale questions, and then a correlation coefficient for the two halves was computed and adjusted to reflect the entire questionnaire using the Spearman-Brown prophecy formula;  $rsb = 2rhh/(1+rhh)$ ; where  $rhh$  is the correlation coefficient between the two halves and  $rsb$  is the adjusted correlation also known as Spearman-Brown reliability. Coefficient of 0.7 is a commonly accepted rule of thumb that indicates acceptable reliability (Zikmund, Babin, Carr & Griffin, 2012). This was done by comparing the results of one half of a test with the results from the other half. If the two halves of the test provide similar results this would suggest that the test has reliability.

## **Data Collection Procedures**

Data was collected from the identified respondents using questionnaires that were distributed by the research assistants. The research assistants helped the respondents in answering questions in the questionnaire in the order in which they are listed and record the replies in the spaces meant for the same. To avoid interviewer bias when administering and translating the questions to the respondents, the research assistants were first inducted on the data collection instrument and the questions, ensuring common understanding. The research assistants made appointments with the respondents on the time they were available to answer the questions. The purpose of the survey was explained to each of the respondents and their consent obtained before data collection.

## **Data Analysis Techniques**

After the questionnaires are returned, the raw data collected was cleaned, edited, coded and tabulated in line with the study objectives. The quantitative data collected using the closed ended items of the questionnaire was assigned ordinal values and analyzed using statistics of frequency tables, percentages, mode and median. The organized data was then used in testing objectives of the study. Data was analyzed using Statistical Package for Social Sciences (SPSS Version 25.0). Descriptive statistics were used because they enable the researcher to meaningfully describe distribution of scores or measurements using few indices (Rumsey, 2012). The qualitative data from the open-ended questions were analyzed using conceptual content analysis. Based on Zina and OLeary (2010) recommendation on the analysis of qualitative data, collected data was organized, sorted out, coded and thematically analyzed, searching for meaning, interpreting and drawing of conclusions on the basis of concepts. Inferential data analysis was done using Pearson correlation coefficient and regression analysis (multiple regression analysis). Tanton (2015) indicated that in many statistical methods in particular parametric measures one presumes (at least approximate) normal distribution of the variables. Therefore, for the purposes of using parametric statistics such as Pearson correlation and regression analysis, normal distribution of

variables is needed and hence the variables are internally standardized. Regression was done. The regression formula is presented below;

$$Y_s = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + \varepsilon \dots \dots \dots \text{Model I}$$

$$Y_s = \beta_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + \varepsilon \dots \dots \dots \text{Model II}$$

Where:  $Y_s$  = private sector participation in PPPs;  $\beta_0$  = Constant  $\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  = Regression Coefficients;  $X_1$  = Project funding;  $X_2$  = Technological requirements;  $X_3$  = Ease of doing business;  $X_4$  = Project period;  $X_5$  = Government policies;  $\varepsilon$  is the error term.

## **RESEARCH FINDINGS**

### **Inferential Statistics**

The researcher conducted both the Pearson correlation analysis and the regression analysis. The regression analysis was used to establish the relations between the independent and dependent variables while correlation was conducted to assess the degrees of association between the variables.

### **Pearson Moment Correlation Results**

This was conducted to assess the degrees of association between the variables. A Pearson moment correlation is a number between -1 and +1 that measures the degree of association between two variables. A positive value for the correlation implies a positive association while a negative value for the correlation implies a negative or inverse association. Table 1 shows the results for the Pearson moment correlation.

The analysis of correlation results between the private sector participation in PPPs and funding shows a positive coefficient 0.795, with p-value of 0.001. It indicates that the result is significant at  $\alpha = 5\%$  and that if the funding increases it will have a positive influence on the private sector participation in PPPs. The correlation results between technological requirements and private sector participation in PPPs also indicates the same type of result where the correlation coefficient is 0.821 and a p-value of 0.020 which significant at  $\alpha = 5\%$ .

The results also show that there is a positive association between ease of doing business and private sector participation in PPPs where the correlation coefficient is 0.898, with a p-value of 0.000. Further, the result shows that there is a positive association between project period and private sector participation in PPPs where the correlation coefficient is 0.645, with a p-value of 0.000. Finally, the result shows that there is a positive association between government policies and private sector participation in PPPs where the correlation coefficient is 0.733, with a p-value of 0.000.

**Table 1: Correlation Coefficients**

		Private Sector Participation	Funding	Technological requirements	Ease of doing business	Project period	Government policies
Private sector participation in PPPs	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	104					
Funding	Pearson Correlation	.795**	1				
	Sig. (2-tailed)	.001					
	N	104	104				
Technological requirements	Pearson Correlation	.821**	.375**	1			
	Sig. (2-tailed)	.020	.011				
	N	104	104	104			
Ease of doing business	Pearson Correlation	.898**	.759**	.587**	1		
	Sig. (2-tailed)	.000	.000	.000			
	N	104	104	104	104		
Project period	Pearson Correlation	.645**	.839**	.365**	.644**	1	
	Sig. (2-tailed)	.000	.010	.000	.000		
	N	104	104	104	104	104	
Government policies	Pearson Correlation	.733**	.451**	.340**	.632**	.752**	1
	Sig. (2-tailed)	.034	.021	.003	.000	.000	
	N	104	104	104	104	104	104

**Regression Analysis**

In this study, a multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 25.0) to code, enter and compute the measurements of the multiple regressions. The model summary was presented in the Table 2.

**Table 2: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.836	0.699	0.687	0.893

The study used coefficient of determination to evaluate the model fit. The adjusted R<sup>2</sup>, also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. The model had an average adjusted coefficient of determination (R<sup>2</sup>) of 0.687 and which implied that 68.7% of the variations in private sector participation in PPPs are explained by changes in funding, technological

requirements, ease of doing business and project period leaving 31.3% unexplained. This prompts for further research.

The study further tested the significance of the model by use of ANOVA technique. The findings are tabulated in Table 3.

**Table 3: Analysis of Variance (ANOVA)**

Model	Sum of Squares	Df	Mean Square	F	Sign.
Regression	188.749	4	47.187	57.413	.000
1 Residual	81.367	99	0.822		
Total	270.116	103			

From the ANOVA statics, the study established the regression model had a significance level of 0.00% which is an indication that the data was ideal for making a conclusion on the variables as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value ( $57.413 > 2.4636$ ) an indication that funding, technological requirements, ease of doing business and project period all have a significant influence on private sector participation in PPPs. The significance value was less than 0.05 indicating that the model was significant.

In addition, the study used the coefficient table to determine the study model. The findings are presented in the Table 4.

**Table 4: Regression Coefficients**

	Un standardized Coefficients B	Standardized Coefficients Beta	t	Sig
(Constant)	0.977		8.723	.000
Funding	0.812	0.795	2.066	.042
Technological requirements	0.727	0.643	2.980	.005
Ease of doing business	0.567	0.533	2.372	.022
Project period	0.721	0.632	4.051	.000

The regression equation obtained from this outcome was:

$$Y = 0.977 + 0.812X_1 + 0.727 X_2 + 0.567 X_3 + 0.721X_4$$

As per the study results, it was revealed that if all independent variables were held constant at zero, then the private sector participation in PPPs will be 0.977. From the findings the study revealed that if funding increases by one unit, then private sector participation in PPPs would increase by 0.812. This variable was significant since  $p=0.042$  is less than 0.05.

The study further revealed that if technological requirements changes it would lead to 0.727 change in private sector participation in PPPs. The variable was significant since  $p\text{-value}=0.005<0.05$ . Moreover, the study showed that if all other variables are held constant, variation in ease of doing business variates private sector participation in PPPs by 0.567. This variable was significant since  $p=0.022$  was less than 0.05. Finally, the study revealed that variation in project period would change the Private sector participation in PPPs by 0.721. This variable was significant since  $p\text{-value}=0.000$  was less than 0.05.

Generally, funding had the greatest influence on private sector participation in PPPs followed by technological requirements then project period while had the ease of doing business then least effect on the private sector participation in PPPs. All the variables were significant since  $p\text{-values}$  were less than 0.05.

### **Regression Analysis with Moderating Variable**

A moderated multiple regression analysis was conducted to test moderating effect of on relationship between funding, technological requirements, ease of doing business and project period and Private sector participation in PPPs. The difference in the R square (R<sup>2</sup><sub>1</sub> - R<sup>2</sup><sub>2</sub>) represents the moderating influence of compliance with legal framework. This hypothesis was tested using two regression models. In the first model, funding, technological requirements, ease of doing business were regressed against project period and Private sector participation in PPPs and in the second model, a moderating variable (government policies) was introduced in the regression model). The model summary is presented in the Table 5.

**Table 5: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	0.855	0.730	0.717	0.977

The study used coefficient of determination to evaluate the model fit. The adjusted R<sup>2</sup>, also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. The model had an average adjusted coefficient of determination (R<sup>2</sup>) of 0.717 and which implied that 71.7% of the variations in Private sector participation in PPPs are explained by changes in Funding, Technological requirements, Ease of doing business and Project period and government policies. A 0.3 R<sup>2</sup> change in adjusted R implies that government policies have a positive moderating effect on relationship between funding, technological requirements, ease of doing business and project period and Private sector participation in PPPs.

The study further tested the significance of the model by use of ANOVA technique. The findings are tabulated in Table 6.

**Table 6: Analysis of Variance (ANOVA)**

<b>Model</b>	<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sign.</b>
Regression	263.712	5	52.742	53.113	.000
1 Residual	97.316	98	0.993		
Total	361.028	103			

From the ANOVA statics, the study established the regression model had a significance level of 0.00% which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The calculated value was greater than the critical value (53.113>2.3072) an indication that funding, technological requirements, ease of doing business, project period and government policies all have a significant influence on private sector participation in PPPs. The significance value was less than 0.05 indicating that the model was significant.

In addition, the study used the coefficient table to determine the study model. The findings are presented in the Table 7.

**Table 7: Regression Coefficients**

	<b>Un standardized Coefficients B</b>	<b>Standardized Coefficients Beta</b>	<b>Standardized t</b>	<b>Sig</b>
(Constant)	1.068		5.184	.000
Funding	0.813	0.917	2.162	.033
Technological requirements	0.734	0.786	3.382	.001
Ease of doing business	0.596	0.688	2.136	.035
Project period	0.747	0.832	4.368	.000
Government policies	0.776	0.859	7.462	.000

The regression equation obtained from this outcome was: -

$$Y = 1.068 + 0.813 X_1 + 0.734 X_2 + 0.596 X_3 + 0.747 X_4 + 0.776 X_5$$

As per the study results, it was revealed that if all independent variables were held constant at zero, then the private sector participation in PPPs will be 1.068. From the findings the study revealed that if funding increases by one unit, then private sector participation in PPPs would increase by 0.813. This variable was significant since p=0.033 is less than 0.05.

The study further revealed that if technological requirements changes it would lead to 0.734 change in private sector participation in PPPs. The variable was significant since p-value=0.001<0.05. Moreover, the study showed that if all other variables are held constant, variation in ease of doing business variates private sector participation in PPPs by 0.596. This

variable was significant since  $p=0.035$  was less than 0.05. The study further found that project period would change the private sector participation in PPPs by 0.747. This variable was significant since  $p\text{-value}=0.000$  was less than 0.05.

Finally, the study revealed that variation in government policies would change the private sector participation in PPPs by 0.776. This variable was significant since  $p\text{-value}=0.000$  was less than 0.05. Generally, funding had the greatest influence on private sector participation in PPPs followed by government policies then technological requirements then project period while had the ease of doing business then least effect on the private sector participation in PPPs. All the variables were significant since  $p\text{-values}$  were less than 0.05.

## **DISCUSSIONS OF THE FINDINGS**

### **Project Funding**

The study found that project funding influence private sector participation in public-private partnerships in Kenya greatly. Moreover, it was clear that huge capital outlay, risk and risk management and timeliness in government funds greatly influence the private sector participation in public-private partnerships in Kenya. These findings are in line with Sharma (2012), when government has budget constraints reflected in large deficits and heavy debt burden, they are more likely to adopt PPP type arrangement to accelerate public infrastructure financing in their countries. Bank debt financing remains below pre-crisis levels as the banking sector redefines its risk appetite and makes structural adjustments in anticipation of statutory requirements such as Basel III and national-level regulations.

Further the study revealed that distribution of costs moderately influences the private sector participation in public-private partnerships in Kenya. This concurs with Reside and Mendoza (2010) who argues that private sector participation in the implementation of public private partnerships projects is influenced by amount of fund allocated to finance infrastructure contributes largest in exacerbating the gap in the market for infrastructure finance.

### **Technological Requirements**

The study found that technological requirements influences private sector participation in public-private partnerships in Kenya greatly. The study revealed that multi-project capacity, ease of use and applicability influence the private sector participation in public-private partnerships in Kenya in a great extent. This is in line with Katzenbach and Smith (2015) who argues that Private sector participation in the implementation of public private partnerships projects regard using new technologies because they are very exciting for a project particularly if the technology enables the customer to do things that are otherwise not possible. However, the project manager and the consumer need to be aware of the risks that come with using technology that has not stood the test of time.

The study revealed that perceived usefulness influences private sector participation in public-private partnerships in Kenya greatly. Nevertheless, the study found that compatibility or integration with other systems moderately influence private sector participation in public-private partnerships in Kenya while advancement influence the private sector participation in public-private partnerships in Kenya in a little extent. These findings concur with Engel, Fischer and Galetovic (2010) who noted that private sector participation in the implementation of public private partnerships projects have been able to successfully integrate technology and strategy implementation have created significant business returns. The importance of ICT in supporting strategy thus cannot be underestimated. Especially with the shortening of the PLC, ICT will play an increasing role in defining the strategic basis of competitive advantage. Firms that have been able to harness the use of technology will be the firms that will emerge as survivors in the next shakeout. Technology strategy, or strategic technology, whichever interpretation that may appeal to the firm, will be the imperative for tomorrow's market place.

### **Ease of Doing Business**

The study revealed that ease of doing business moderately influence private sector participation in public-private partnerships in Kenya. The further found that nature and extent of bureaucracy, operational complexity and labor mobility greatly influence private sector participation in public-private partnerships in Kenya. These findings correlate with Delmon (2017) who stated that competent authorities and ministries in the procurement process, such as assessment of feasibility and value for money for potential PPP and in formulating the basic plan for PPP, formulation of the request for proposal enhances financing of infrastructure projects. Implication for policy is government forming formidable legal and regulatory framework for PPP and for practice concessionaire with good consortium and adequate financial capability should be engaged for future PPP projects.

Moreover, the study specified that allocation of resources influence private sector participation in public-private partnerships in Kenya in a little extent. This is in line with Zhang (2009) who noted that to safeguard project economic feasibility, private sector participation in the implementation of public private partnerships projects require the government ponder some forms of government guarantees, joint investment funding, or supplemental periodic service payments to permit the private sector cover the project fundings and earn judicious profits and investment returns. At the same time, the government should take due consideration of private sector's profitability requirements in order to have stable arrangements in PPP projects.

### **Project Period**

The study found that project period greatly influences private sector participation in public-private partnerships in Kenya. The study revealed that systems delay, length of project cycle influence private sector participation in public-private partnerships in Kenya in a great extent. The study also found that frequency of partners' interactions influences private sector

participation in public-private partnerships in Kenya in a moderate extent. These findings are consistent with UNECE (2008) report the most countries private sector participation in the implementation of public private partnerships projects are applying the “no service, no pay” principle that ensures the private partner is incentivized for timely delivery and operation of project assets. Better overall governance by private sector entities enables the private partner to have better control of cost overruns contrary to traditional public procurements which are often characterized by significant construction delays and cost overruns.

### **Government Policies**

It was clear that government policies influence private sector participation in public-private partnerships in Kenya in a great extent. The study established that administrative processes guiding local governments and legal and regulation framework greatly moderate private sector participation in public-private partnerships in Kenya. Further the study found that government expenditure policies and impediments in the existing legal framework moderate private sector participation in public-private partnerships in Kenya in a moderate extent. These findings correlate with Farquharson, Torres, Yescombe, and Encinas (2011) who suggest that with the use of a strong framework, governments can ensure that PPPs are successful. The foundation of a successful PPP lies in the time and effort spent in establishing the policy, legal and regulatory frameworks. Further, a clear PPP process map, including quality assurance and approval processes should be established. The government should also capitalize on the experience of those who have managed the PPP process before.

### **CONCLUSIONS**

The study concluded project funding influences private sector participation in the implementation of public private partnerships projects in Mombasa County greatly and significantly. It was clear that private sector participation in public-private partnerships in Kenya are greatly affected by the huge capital outlay, risk and risk management as well as timeliness in government funds. Moreover, it was clear that distribution of costs among the stakeholders have a moderate influence on the private sector participation in public-private partnerships in Kenya.

Further the study concluded that technological requirements influences sector participation in public-private partnerships in Kenya greatly and positively. This was attributed to the facts that multi-project capacity, ease of use and applicability and perceived usefulness have great influences on private sector participation in public-private partnerships in Kenya. However, the study established that compatibility or integration with other systems have a moderate influence on private sector participation in public-private partnerships in Kenya.

The study also concluded that ease of doing business greatly and significantly influences private sector participation in the implementation of public private partnerships projects in Mombasa County, Kenya. This was as a result of great effect on private sector participation in public-

private partnerships in Kenya by nature and extent of bureaucracy, operational complexity and labor mobility and little influence posed by allocation of resources.

The study concluded that project period influences private sector participation in the implementation of public private partnerships projects greatly. It was clear that delay in systems, length of project cycle greatly influences private sector participation in public-private partnerships in Kenya. Moreover, it was established that frequency of partners' interactions influences private sector participation in public-private partnerships in Kenya moderately.

Finally, the concluded that government policies as a moderating factor influence private sector participation in the implementation of public private partnerships projects in Mombasa County significantly. This was attributed administrative processes guiding local governments and legal and regulation framework which greatly moderate private sector participation in public-private partnerships in Kenya. Also, government expenditure policies and impediments in the existing legal framework constantly moderate private sector participation in public-private partnerships.

## **RECOMMENDATIONS**

The study recommends that the Government should ensure that Contracting Authorities are adequately funded to undertake relevant studies for effective implementation of PPPs. To be successful, PPP projects should be attractive to the private sector i.e. have a strong business case or satisfy key commercial terms. This may require a feasibility analysis to establish whether the project makes sense at all and if it has the potential to be implemented as a PPP. The PPP policy emphasizes feasibility of a project as a condition precedent in delivering a successful project and states that a good and comprehensive feasibility study has to be undertaken to assess, among other criteria; affordability of project to both Government and the general public, bankability to attract private sector to commit finances in a project, value for money, optimal risk allocation among the parties, economic and social benefits and citizens empowerment.

The government should promote the transparency in the different phases of Public-Private-Partnership projects through a legislative action and combat corruption. The transparency should include the open information of the procedures of a Public-Private-Partnership project which entails the different phases of evaluation; implementation and post-implementation of the project should be open to the public. The government should create a guarantee fund for infrastructure projects to supply with enough guarantees to mitigate some risks such as economic or political during the lifetime of the project.

The Government should also foster the private participation in Public-Private-Partnership projects, develop a strong and independent monitoring unit for the maintenance of the project, ensure the proper allocation of the risk by including risk-management experts, include private partners from the beginning of the project and provide economic incentives. The state corporations, contractors and other stakeholders in the construction industry should utilize the

study to profit the organization by critically understanding the factors that influence the performance of Public-Private-Partnerships and also devise strategies to mitigate the constraining factors and challenges of Public-Private-Partnership so as to ensure a successful Public-Private-Partnership is attained by benefiting all parties.

Financial management is a critical aspect of the PPP implementation and there is need to develop responsive financial systems that reduces allocative bottlenecks alongside ensuring accountability through regular reporting and structured authorization stages. Programs managers in charge of conceptualizing PPP in public-private partnerships projects together with project finance manager should design an integrated and responsive financial management system and structure with user friendly interface to reduce reporting and capable of giving real time information for faster decision making.

Competence of project management as well as technical and administrative staff should be continuously improved through training. The training programs should be compressed to reduce the length of learning curve so that the benefits can be achieved by staff without having to stay in the organization for long. This will ensure that staff members get competence that can be applied soonest and improve efficiency. Furthermore, it's imperative for top management to have full commitment to the project, establish structures such as job redesign to delegate responsibilities and support middle and lower level staff during project implementation. Incentives and rewards can improve staff performance.

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