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# FACTORS INFLUENCING PROJECT PERFORMANCE OF PUBLIC PRIVATE PARTNERSHIPS PROJECTS IN THE MINISTRY OF ENERGY AND PETROLEUM IN KENYA

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**Abstract:** The resource constraints in the public sector have contributed to new avenues of enabling the private sector to participate in infrastructure projects. PPPs are some of the new avenues applied in the public energy sector to compliment the traditional approach.

**Objective:** The problem the study seeks to address is in the performance measurement of public private partnerships (PPP) projects in the energy sector. The general objective of the study is to analyze the factors influencing the performance of PPPs in the Ministry of energy and petroleum.

**Significance:** The results of the study are useful to project managers and incorporate appropriate risk mitigation strategies to enhance the quality and implementation of projects. Decision makers in government agencies will tap on the recommendations to enhance effectiveness of PPP projects.

Findings: The study found that the government should absorb all the political risks and the private sector should absorb operational risk on the completion of the project to enhance the performance of PPP projects. The study also found that there is an effect the technical capacity and credibility of the transaction advisor on project performance and most importantly on the financing attractiveness of the project by the private sector. The study found that high quality feasibility studies determine the commercial viability of a PPP project hence enhancing project performance. Lastly, the study found that the procurement regulations in place currently reduce the speed in the delivery of infrastructure projects consequently poor project performance and project delays. The study recommends government should adequately put into consideration and absorb the political risks at all stages of a PPP project implementation cycle further more resources should be put into capacity building in the area of PPP.

**Keywords**: Risk allocation, transaction advisory service, project performance, public private partnership

#### 1. Background of the Study

The government of Kenya established a PPP unit under the national treasury which plays a central role in the successful implementation PPP projects. The mandate of the unit is to ensure that the PPP policy of the country is clearly articulated to all the stakeholders (www.pppunit.go.ke). The unit verifies the objectives as well as the implementation mechanisms of projects. Moreover, the unit is responsible for enhancing awareness on the

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contractual obligations to state agencies, contractors, as well as financial partners. The unit has established a clearly articulated institutional framework for approval of PPP projects. The four key institutions in the framework are the PPP node, PPP unit, PPP committee and the cabinet. Each of these institutions has their own unique role in the project initiation phase. In Nigeria the infrastructure concession regulatory commission (ICRC) is responsible for the policy framework of PPP projects. The commission has a wide mandate of creating an enabling environment to allow the participation of private sector in infrastructural development. Moreover, the commission is responsible of reviewing policies and guidelines in the area and support government agencies in project preparation and initiation. The commission ensures compliance with the established regulations and policies of different PPP projects. The commission has successful enhanced the efficiencies in the use of private sector funds in public related projects. Another key success of the commission is the expansion of the economy and stimulation of job creation (www.icrc.gov.ng).

# 2. Concept of PPPs

PPPs play a critical role in enabling the private sector to inject their resources in the development of public related projects. This model has shown significant success in different continents with countries like Singapore, United Kingdom and Malaysia as good case studies. Moreover, the model is considered to an avenue to achieving value for money in the utilization of public sector resources (Parker, & Skitmore, 2005).

Infrastructure development incorporates different stages with the key facet involving the development of structures in the energy, transport, telecommunication and other industries. In developing as well as developed nations the construction sector plays a central role in this process. At the 55<sup>th</sup> general assembly of the United Nations held in September 2000 the Millennium development goals declaration was made in the quest of ensuring that everyone in the world lived in humane conditions. It is pertinent to note that this declaration triggered multiple resolutions aimed at enhancing the quality of life across the world. Kenya was one of the participating nations and infrastructure development is at the core of the achievement of the declaration (Sachs, 2012).

A project can help reduce the cycle time required to perform a certain cycle. As an element of project time performance the project cycle time can be used to determine the total duration taken to deliver all project deliverables. Stakeholder satisfaction of project deliverable is another indicator of project performance. Any infrastructure project has multiple stakeholders. The public who will be the end user demand the project must meet their needs. On the other hand, the regulatory authorities demand compliance and conformance to standards. The infrastructure project implementers must strike a balance of compliance and cost control. It is pertinent to note that the requirement performance of a project is an inherent success factor (Kerzner, 2011).

Moreover, studies on identification of the best techniques and dimensions of a successful project that really imply effective project performance have suggested a broad view. According to Atkinson, (1999) some of the key dimensions that show project success include but not limited to; stakeholder's satisfaction and quality of the deliverables. It is pertinent to note that quality is sometimes a subjective aspect which is determined by the perception of the clients or users of the deliverables of the project being implemented. The experience of project performance in Africa indicates there are challenges studies showing the up to 50 percent of projects underperform. It is pertinent to note that the analysis of critical success factors in implementation of projects play a central role in enhancing performance of future projects.

#### 3. Energy sector in Kenya

The energy sector in Kenya has significantly changed since independence. It now comprises of the Ministry of Energy and Petroleum, Energy Regulatory Commission, Kenya Power, Rural Electrification Authority, Geothermal Development Company, Kenya Energy Generating Company, Kenya pipeline, National oil, Energy Tribunal, Kenya Nuclear Electricity Board and many other private entities. The sector was liberalized through the Energy Sector Policy Papers of 1996. Moreover the Kenya Electric Power Act 1997 reforms contributed to the liberalization of the sector. The liberalization attracted private investors. There are four subsectors in the energy sector namely: biomass, fossil fuels, electricity and other renewable energy. However, the focus of this study was on the electric sub-sector. The Ministry of Energy and Petroleum is tasked with ensuring provision of affordable, clean, reliable, sustainable, and secure energy to facilitate economic development. The participation of private sector in power generation has been in existence for over a decade. There are more than six private independent power producers with signed Power Purchase Agreements (PPA) with the national sole power distributor Kenya power. The government has outlined an ambitious plan for the country to generate more than double the current capacity and attain a target of 5000MW by 2017. Moreover, there are plans to reduce the cost of electricity by 40% to stimulate growth of the manufacturing sector (Standard Group, 2014). The government has developed policies that encourage private investments in the sector through the Feed-In-Tariff Policy as well as the PPP Act.

#### 4. Statement of the Problem

A well-structured PPP project arrangement can provide reliable, affordable and clean energy for public consumption. Moreover the project can be planned to achieve high effectiveness and efficiency than traditional public only driven projects. The PPP approach is capable of tapping a wide range of resources and competencies from both the private and public sector. This enhances the prudent use of resources and optimization of value for money.

Some PPP projects in the energy sector started before the current regulatory frame work. The Public Private Partnerships Bill, 2012, the guidelines on Public-Private Partnerships and other energy sector regulations lengthen the approval process for a project. Johan, (2011) points out that a complex regulatory environment requires careful consideration to avert disputes in future, which has an effect on the overall performance of projects. The financing model selected for a PPP project depends on multiple elements (Mascaro, 2012). In the energy sector in Kenya few studies have been conducted to on the financing models applied for PPP projects.

Implementation of infrastructure projects in Kenya has been faced financing challenges affecting their overall performance. The projected available funds within that period are USD 25 billion implying a deficit of USD 35 Billion. In the 2012/2013 financial year only USD 3.2 was utilized in infrastructure projects. Few studies have been carried out in the critical project success factors in a PPP environment in the Kenyan context. The proposed study seeks to examine the factors influencing implementation of PPP projects in the energy sector (Mascaro, 2012).

#### 5. Objectives

The purpose of this study is to investigate the factors influencing project implementation of PPP projects in the Ministry of Energy in Kenya. Moreover, the study investigated the relationship and extent of influence of these factors to project implementation. This was achieved through the following specific objectives;

i. To analyze the effect of risk allocation to project performance of PPP projects in the Ministry of energy and petroleum.

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- ii. To analyze the effect of transaction advisory service on project performance of PPP projects in the Ministry of energy and petroleum.
- iii. To analyze the effect of feasibility studies on project implementation of PPP projects in the Ministry of energy and petroleum.
- iv. To investigate the influence of the policy framework on project implementation of PPP projects in the Ministry of energy and petroleum.

### 6. Research gaps

In the past decade the focus on alternative sources of funding public projects has significantly increased. In the Kenyan context the development agenda has been significantly pegged on the participation of the private sector in its growth. The development agenda of vision 2030 is to transform the country into a middle income country by 2030. The expectation is that the government should spend at least USD 60 billion in infrastructure development within eight years. With the current budget allocations this remains a challenge (Mascaro, 2012).

It is pertinent note that studies in the area of risk allocation have proposed divergent types of risk to be allocated to the private and public entity (Li, 2005). According to Ng and Loosemore, (2007) the aspect of optimal risk allocation has not been adequately researched. Prior studies have revealed that government agencies in many African countries are facing difficulties in the implementation of their development agenda as a result of the financial constraints (OECD, 2008). Transaction advisory services play a critical role in the success of PPP projects. The PPP act outlines the roles played by the transaction advisor. However, According to OECD (2008) there is a research gap in the influence of the transaction advisor to project implementation in the African scenario.

Over the years the performance of the government in provision of social services has been poor. These challenges have been attributed to the low economic growth, rapid population growth as well as a widening gap between the infrastructure investment needs and the available resources. The process of project identification and feasibility study are key in resolving the project challenges. In their study Buchan, & Rozenes, (2011) identify feasibility studies as one of the key performance influencers in a project. The aspect of PPP is new in Kenya and there are unique challenges that have not been adequately research in the different sectors. The regulatory frame work in a country has significance influence to the implementation of projects in the affected sectors. In the Kenyan context the PPP act provides a guideline to the cycle of a PPP project. In an earlier study by Iyer, & Sagheer, (2011) unique regulatory situations affect the BOT PPP approach. According to Bloomfield, (2006) there is need for further studies on performance of these new strategies like PPP.

#### 7. Research Methodology

The target population incorporates employees working within the PPP projects both from the Ministry of Energy and Petroleum and the private entities. A sample size of thirty respondent are adopted in the study. A purposive sampling and simple random sampling techniques have been adopted for the study. Questionnaires were used as the data collection tools with a likert scale adopted as the standard structure. The data collected from the respondents was tabulated and a statistical software used for analysis. This data is further summarized and interpreted to constitute the key findings of the study. For ease of interpretations the findings are presented in multiple forms which include tables, charts and figures.

# 8. Research Findings And Discussion

# Effect Of Risk Allocation On Project Implementation Of PPP Projects

Risk allocation effect on project implementation of PPP projects was identified as the first objective of the study. The study sought to investigate the different elements of risk allocation and their effects to project implementation.

# **Government Absorption Of All Political Risks**

Findings from the study show that majority of the respondents (68.8%) supported that the government should absorb all political risks in a PPP project. On the other hand, a minority of (6%) disagreed with the statement as shown in the graph below. This conquers with Ibrahim & Dainty (2006) findings on their article on PPP projects in Nigeria.

# The government should absorb all political risks to enhance performance of PPP projects

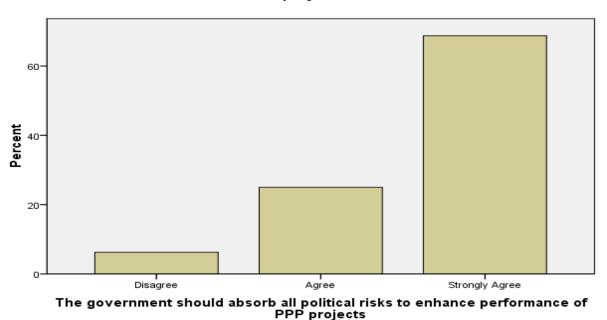


Figure 1 Government Absorption of Political Risks

#### **Private Sector Absorption Of Operational Risks.**

The study also sought to find out who should absorb the operational risk on completion of the project. From the findings, majority of the respondents (59.4%) pointed out that the private sector party should absorb the operational risk on the completion of the project. As shown in the graph below only a minority percentage (9.4%) disagreed with the private sector absorbing the operation risk on completion of the project. The study findings concur with other studies that the private sector entity should absorb the operational risks of the project for the public to derive maximum value for money from the project (Wang & Dai, 2009).



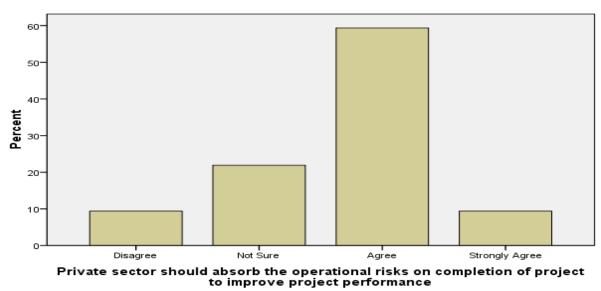


Figure 2 Private Sector Absorption of Operational Risks

# **Transaction Advisory Service Effect On Project Implementation**

#### The Technical Capacity Of The Transaction Advisor

Findings from the study show that majority of the respondents (62%) affirmed that the technical capacity of the Transaction advisor had a positive effect to the implementation of the project. On the other hand, only a minority percentage (6.2%) disagreed with that statement. It is pertinent to note that (42%) of the respondent that transaction advisory influenced project implementation to a very large extent. The study results concurs with the PPP Act of the republic of Kenya which enumerates that a transaction advisor should posses appropriate skills and experience to ensure a successful financial close of the project (Republic of Kenya, 2013).



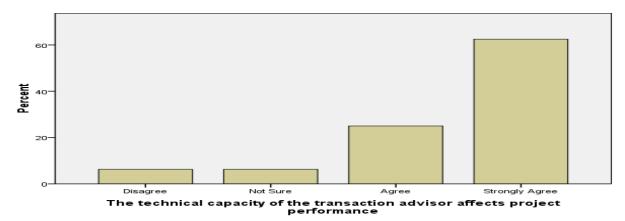
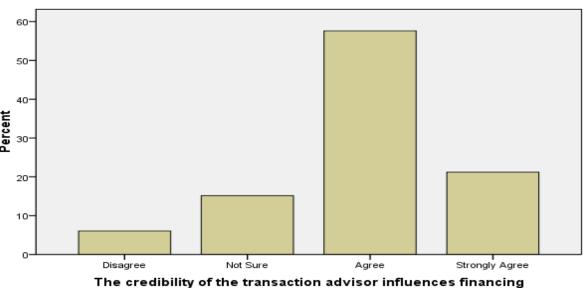


Figure 3 Technical Capacity of Transaction Advisor

The study sought to find the relationship between credibility of the transaction advisor to the project implementation. Findings from the study show that majority of the respondents (57.6%) . As shown in the graph below only a minority percentage (6.0%) disagreed. The role of the transaction advisor has been identified as single out very critical in determination of the attractiveness of a project to the private sector. Their credibility from the point of private investors influences the financial close of a PPP project. (Robinson, 2010).

#### The credibility of the transaction advisor influences financing attractiveness



attractiveness

Figure 4 Credibility of the Transaction Advisor

# **Effect Of Feasibility Studies On Project Implementation**

#### **Quality Of Feasibility Study And Commercial Viability**

The respondents were asked the effects of quality feasibility studies in deducing commercially viable PPP projects. Findings from the study show that majority of the respondents (57%) strongly agreed that quality feasibility studies determine the commercial viability of a PPP project. As shown in the graph below only a minority percentage (6%) disagreed with this statement. The implementation of PPP projects is driven by the desire by government to efficiently and effectively provide public services. The process of identifying the most pressing needs and a thorough cost benefit analysis puts into perspective the need for quality feasibility studies (Antar, 2011).



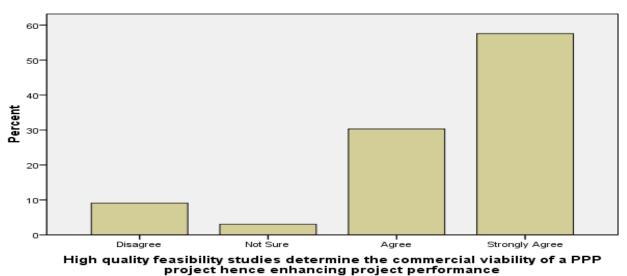


Figure 5 Quality of Feasibility Studies

#### **Credible Feasibility Study**

Findings from the study show that majority of the respondents (51.5%) strongly agreed with the statement that credible feasibility studies enhance optimal resource utilization enhances project productivity. This supports the findings of Aymerich and Turró, (2010) on effects of feasibility studies on resource utilization. As shown in the graph 6 next only a minority percentage (12%) disagreed with the statement.



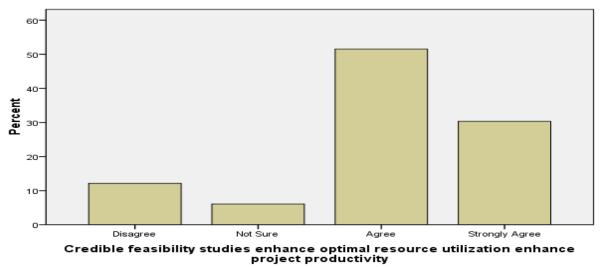


Figure 6 Credibility of Feasibility Studies

#### **Effect Of Policy Framework On Project Implementation**

# **Policies Supporting Successful Implementation Of PPP Projects**

The study sought out answers on the existence of adequate policies and regulations to support successful implementation of PPP projects. Findings from the study show that majority of the respondents (51%). As shown in the graph 7 below only (6%) disagreed with the existence of adequate policies and regulations to support PPP project. The PPP act mandates the Ministry as well as PPP unit to come up with regulations to enhance implementation of PPP projects (Republic of Kenya, 2013).

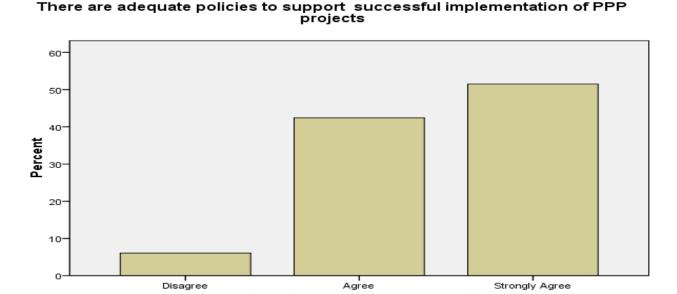


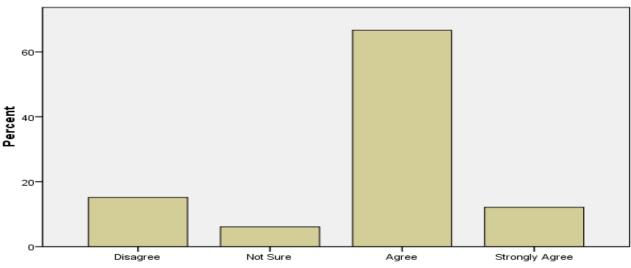
Figure 7 Policies Supporting PPP Projects

#### **Procurement Regulations**

From the study majority of the respondents (66.7%) strongly agreed that the existing procurement regulations in the ministry decrease the speed of delivery of infrastructure projects. As shown in the graph 8 below only a small percentage (15.2%) disagreed with the impediment of delivery time by existing procurement regulations. The study finding concur with the analysis of Ateljevic, and Budak, (2010) on the corruption and lengthy procurement regulations to project delivery.

There are adequate policies to support successful implementation of PPP projects

# The procurement regulations decrease the speed in delivery of infrastructure projects hence poor project performance



The procurement regulations decrease the speed in delivery of infrastructure projects hence poor project performance

Figure 8 Procurement Regulations

# 9. Correlation Analysis

Table 1: Correlation Analysis

R	R square	Adjusted Square	R Std. Error Estimate	of	the
.618	.381	.286	.736218		
_				726210	726210

Inferential analysis was used to establish the relationship between the dependent variable and the independent variables. A correlational analysis of the study variables is presented in the table 2. From the correlational matrix a statistically significant weak positive association is established between credibility of the feasibility study and timely implementation of PPP projects in the energy sector (r=0.321). Further there is a statistically significant weak negative relationship between adequacy of existing policies and project performance in PPP projects in the energy sector (r=-0.387). There is a weak negative relationship between the transaction advisor engagement of stakeholders and project performance (r=-0.056).

Table 2: Correlation Matrix

	Project Within Cost	Feasibility studies	Policy framework	Transaction advisory services	Risk allocation
Project Within Cost	1				
Feasibility studies	.321	1			
Policy framework	387*	206	1		
Transaction advisory	.056	.862**	673**	1	
services					
Risk allocation.	286	128	.026	261	1

<sup>\*</sup>Correlation is significant at the 0.05 level (2-tailed).

### 10. Regression Analysis

Results for the regression analysis are presented in table 4.6 below that 26.2 of time performance variations in success of PPP projects in the ministry of Energy and Petroleum in Kenya is explained by variations in feasibility studies, policy framework, transaction advisory services and procurement processes.

*Table 3: Model Summary* 

Model		R	R square	Adjusted Square	R Std. Error of the Estimate
			·	•	
	1	.618	.381	.286	.736218

**a. Predictors:** (Constant) feasibility studies, policy framework, transaction advisory services and risk allocation.

Table 4 shows a F statistic of 4.613 and P<0.05 implying that the regression model is significant and that the points are moderately close to the line of best fit in the scatter diagram. These elements makes the model suitable to elaborate the variance of project performance of PPP projects in Energy sector as per the variables adopted in the study.

Table 4: ANOVA<sup>a</sup>

Model		Sum Squares	of df	Mean square	F	Sig.
1	Regression	10.106	4	2.597	4.613	.003 <sup>b</sup>
	Residual	20.008	32	.563		
	Total	30.114	36			

**a.** Dependent Variable: Project Performance

**b.** Predictors: (Constant), feasibility studies, policy framework, transaction advisory services and risk allocation

<sup>\*\*</sup> Correlation is significant at the 0.01 level (2-tailed).

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As indicated in table 5, there is a negative relationship between policy framework and project performance of PPP projects. The relationship is not significant ( $\beta$ =-0.114, t=-0.417, p>0.05). This indicates the policy and regulatory environment negatively affects the success of PPP projects to a proportion of 0.114.

The study used four independent variables to establish the relationship between the dependent and independent variables. Project performance was the dependent variable while the independent variables were feasibility studies, policy framework, transaction advisory services and risk allocation.

The analytical model of the study was as follows

### UIF = $\alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \varepsilon$

Where: UIF = Proportion of projects successfully implemented within time and cost

 $X_1$ = Feasibility studies

Table 5: Coefficients

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	В	Std. Error	Beta	<del>_</del>	
(Constant)	10.958	.2659		4.271	.000
Feasibility studies	.826	.426	.584	1.663	.002
Policy framework	434	-158	347	-2.839	.021
Transaction advisory services	1.563	.628	.583	1.429	.067
Risk allocation.	163	.358	119	-2.628	.548

X<sub>2</sub>= Policy framework

 $X_3$ = Transaction advisory services

 $X_4$ = Risk allocation.

 $\beta$ = Slope of the regression was used to measure the amount of the change in Y associated with a unit change in PPP projects in energy sector. Obtaining Coefficients From table 5 the model is:

#### UIF = 10.958 + .584X1 - .3472X2 + 583X3 - 119X4

#### 11. Analysis and Discussion

The study sought to find out the effects of risk allocation, transaction advisory services, feasibility studies and policy framework to the project implementation of PPP projects in the ministry of Energy and Petroleum.

The first objective of the study was to find out the effect of risk allocation to project performance. The findings of the study indicate that respondents were of the opinion that the government should absorb all the political risks to enhance the implementation of PPP projects. Majority of the respondents (66.8%) affirmed that the government should absorb all political risks. On the other hand, the private sector party should absorb the operational risk on the completion of the project as indicated by majority of the respondents (59.4%). From the correlation analysis there was a negative correlation between risk allocation and delivery of project within cost.

On the second objective of the effect of transaction advisory service on project implementation the study indicate that respondents were of the opinion that the technical capacity of the transaction advisor is pertinent to the project implementation. A majority of the respondents (62%) concurred with that the technical capacity of the transaction advisor significantly affects the implementation of a PPP project. Further, 57.6% percent of the respondents affirmed that the credibility of the transaction advisor influences financing attractiveness. From the correlation analysis there was a positive significant correlation between transaction advisory service allocation and delivery of project within cost.

On the objective of effect of feasibility studies the study indicate that respondents were of the opinion that high quality feasibility studies determine the commercial viability of a PPP project hence enhancing project performance. A majority of the respondents (57%) were of the opinion that quality feasibility studies have a strong effect on project performance. Another 51 % of the respondents indicated that optimal resource utilization is achieved if credible feasibility studies are carried out. From the correlation analysis there was a significant positive correlation between feasibility studies and delivery of project within cost.

On the forth objective the study indicate that respondents were of the opinion that there are adequate policies to support successful implementation of PPP projects in the energy sector. Majority of the respondents (51%) indicated that there are adequate policies to support PPP projects. However, majority of the respondents were of the opinion that the procurement regulations in place currently reduce the speed in the delivery of infrastructure projects resulting to poor project implementation. From the correlation analysis there was a negative correlation between policy framework and delivery of project within cost.

# 12. Summary of the findings

Centered on the outcomes the study concludes that well-structured PPP project arrangement can provide sustainable, affordable and clean energy for public consumption. The prudent use of available resources and the incorporation of the private sector requires a good balance on risk allocation, feasibility studies, transaction advisory services as well as relevant policies. The first objective of the study was to find out the effect of risk allocation to project performance. From the correlation analysis there was a negative correlation between risk allocation and delivery of project within cost. On the second objective, from the correlation analysis there was a positive significant correlation between transaction advisory service allocation and delivery of project within cost. Thirdly, the correlation analysis there was a significant positive correlation between feasibility studies and delivery of project within cost. On the forth objective, majority of the respondents were of the opinion that the procurement regulations in place currently reduce the speed in the delivery of infrastructure projects resulting to poor project implementation. Further, the correlation analysis there was a negative correlation between policy framework and delivery of project within cost.

# 13. Conclusion

The study sought to determine the effects of different variables to the implementation of PPP projects in the ministry of energy and petroleum. A mix of quantitative and qualitative research design was adopted for the study.

#### Effects of Risk Allocation.

The first objective of the study was to find out the effects of risk allocation on the project implementation of PPP projects. The study found out that the more the procuring entity absorb the political risks the lower the cost and time taken to complete the project. Further there was an inverse correlation between the private absorption rate operational risk and the completion time as well as cost of the project. Further there was a high

correlation between risk allocation and project cost. This finding concurs with other studies captured in the literature review. According to OECD, (2008) the risk allocation matrix government absorbs the political risk whereas the private sector takes up the operational risks.

# **Effect Of Transaction Advisory**

The second objective was to find out the effect of the transaction advisory service on project implementation. The study found that there is a significant effect the technical capacity and credibility of the transaction advisor on project performance and most importantly on the financing attractiveness of the project by the private sector. Hence, timely delivery of the project. Further, the study found that the technical capacity of the transaction advisor would ultimately affect the project cost drawing from the correlational analysis. This finding concurs with past studies on the effects of transaction advisory services. For instance according to Bukchin, & Rozenes, (2011) the feasibility stage of a PPP project the technical capacity is a pertinent determinant of the project scope and cost.

#### **Effect Of Feasibility Studies**

The third objective sought to find the effect of feasibility study on the PPP project implementation. The study found that the quality of feasibility studies influenced the commercial viability of a PPP project hence positively affecting the project cost and time. Was also noted that poor quality feasibility studies were some of the challenges highlighted resulting to project delays. Optimal resource utilization is also a critical subset of commercial viability and the study affirmed credible feasibility studies can enhance resource utilization minimizing on project cost. The study confirmed the assertion of Schaufelberger, (2009) commercial viability of a project is a subset of extensive analysis of project metrics and modelling of the possible outcomes.

# **Effect Of Policy Framework**

The forth study objective was to effect of the regulatory framework on the implementation of PPP projects. The study found that there are adequate policies to support successful implementation of PPP projects in the energy sector. However, the inflexibility of the policies negatively affected the delivery of projects in terms of time and costs. Further, the study found that the procurement regulations in place currently reduce the speed in the delivery of infrastructure projects consequently poor project performance and project delays. Moreover, the complexity of the procurement regulations resulted to increased project costs. This finding is in agreement with the findings of Johan, (2011) on the effect of procurement regulations to PPP projects in South Africa.

The study found out that the operational risk management strategies adopted during the project implementation were some of the success factors of projects. Further there were other way that risk allocation affected project costs and time such as the capacity of procuring entity representative and transaction advisor.

#### 14. Recommendations

Based on the outcomes of the study, the recommendations below were made:

The procuring entity should adequately put into consideration and absorb the political risks at all stages of a PPP project implementation cycle. Further the procuring entity should adopt a proactive approach to mitigating operational risk in the event they determine the project designs this will enhance stakeholder's confidence in the project success. The private investor should carry out comprehensive risk analysis of the operational risks and implement operational risk management strategies for project sustainability and timely delivery.

More investments should be made in building the personnel technical capacity of transaction advisors since this has a significant effect on project cost and period of implementation. Multiple elements of transaction advisory: financial advisory, legal advisory, technical advisory, Environmental impact assessment as well as social – economic impact assessment must be emphasized. Technical capacity on PPP can be enhanced through training, seminars and workshops on different elements of PPP technical advisory. Procuring entities should perform elaborate due diligence on the credibility of transaction advisory service provider. Further the government should maintain a common repository for feedback and performance reports of different service providers of transaction advisory.

The ministry of energy in conjunction with the contracting entities should enhance their ability to maintain accurate secondary data. This will enhance the quality of feasibility studies. Project feasibility putting into consideration affordability, bankability, value for money as well as commercial viability should be carried out with international standards, PPP act 2013 as well as the regulations. Emphasis should be put on long-term sustainability and project benefits to energy users in the country.

A regulation toolkit elaborating the options that procuring entities can adopt in different project scenarios. Proactive regulations to make the procurements processes fast, efficient and transparent should be developed. The Ministry of Energy and Petroleum should develop regulations to support the PPP act for Energy related projects.

# 15. Suggestion for further Research

The study explored factors influencing project performance of Public private Partnerships projects in the Ministry Of Energy and Petroleum in Kenya. The research gaps identified in the study form a basis for further investigations. Other areas for further Research include:

- 1. The critical success factors of operational risk management in projects.
- 2. The influence of transaction advisory capacity on commercial viability of projects
- 3. Determinants of successful project feasibility studies.
- 4. The effect of transaction advisor credibility on project feasibility.

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