
**INFLUENCE OF FINANCIAL RISK ON MOBILIZATION OF INFRASTRUCTURAL
FINANCE THROUGH PUBLIC PRIVATE PARTNERSHIP AT THE NATIONAL
TREASURY IN KENYA.**

Solomon Thuo Ngahu, Prof. Willy Muturi, Dr. Patrick Ngumi (Phd) and Dr. Josphat Kwasira

School Of Business, Jomo Kenyatta University Of Agriculture And Technology, Kenya

ABSTRACT

The study sought to examine the influence of financial risks on mobilization of infrastructural finance through public private partnership at the National Treasury in Kenya. The study was premised on agency theory. The study employed cross sectional survey research design. The target population included all the management staff including chief executive officers, project managers, finance officers, procurement officers and transaction advisors in all government contracting authorities in Kenya. A sample of 145 respondents was drawn from the target population using Yamane's formula. The study employed questionnaire for data collection. Cronbach alpha coefficient was used to indicate the reliability of the research instrument. Collected data was analyzed using descriptive and inferential statistics with the aid of Statistical Package for Social Sciences. Findings indicated that financial risks had a significant influence on infrastructural financial mobilization through PPPs. The study recommends that the government set up a steering committee to address issues related to financial risks and finance mobilization through PPPs.

Keyword: Infection Prevention, Nosocomial Infections, Adequate IEC

INTRODUCTION

The investment in infrastructure and public service delivery has traditionally been the sole domain of governments around the world. This is partly due to the huge cost of investment and the fact that the returns on such investments take a longer time to be realized. The state of infrastructure in many developing countries tends to be poor and inadequate to meet the rising demand. This reveals the constraints that governments in developing countries and especially in Sub-Saharan Africa (SSA), face in terms of scarcity of funds, corruption, poor planning and project formulation, as well as inefficient capacities (World Bank, 2012).

Public Private Partnerships (PPPs) have emerged as one of the ways to overcome these constraints. By tapping into private sector finance and ingenuity, governments are able to finance critical infrastructure, improve project preparation, execution and management and deliver efficient services to the citizens (UNDP, 2015). The main objective of procuring a public project through a PPP mechanism is to achieve value for money (VFM) (Shaoul, 2005). Value for money implies the optimum combination of whole life cycle costs, risks, completion time and quality in order to meet public requirements (Grimsey & Lewis, 2004). Grimsey and Lewis (2005), however, imply that the value for money gains can only be achieved if there is a competitive environment, optimal risk allocation and if the comparison between the financing options is handled in a "fair, realistic and comprehensive" way.

In the early 1990s, PPPs were mostly concentrated in the transportation sector however more recently they have been used in a variety of areas. PPPs are used in the construction of roads, bridges, airports, schools, incarceration facilities, water and waste treatment, medical facilities, recreation facilities, property management, and utilities (Bettignies & Ross, 2004). Previous studies have found that financial markets of emerging regions are poor that's why governments have to use wide range of PPP's instruments to activate investments in infrastructure projects (Farquharson, Torres de Mastle & Yescombe, 2011).

Inderst (2013) found that financing of infrastructure investment requires private capital participation and underlines that institutional investors have to play a significant role in such projects. Although PPP projects are risky that's why financial markets have to offer special instruments for hedging such types of risks (Naumenkova & Gavrysh, 2013). Inadequate infrastructure is a constraint on growth worldwide, and particularly in developing countries. Infrastructure services are often inadequate to meet demand, resulting in congestion or service rationing.

Infrastructure services are also often of low quality or reliability, while many areas are simply un-served (World Bank, 2012). A well-developed transport and communications infrastructure network is a prerequisite for the access of less-developed communities to core economic activities and services (World Economic Forum, 2010). Due to rapid social and economic growth, a massive demand for investment in infrastructure has been witnessed in many countries. Infrastructure is vital to any development process and impacts on the quality of development of any country and consequently on the quality of life of its people.

Infrastructure quality, cost and reliability- whether in power, roads, rail, port or air is directly associated with levels of income; in general, the poorer a country's infrastructure, the poorer are its citizen. With globalization, it will be increasingly difficult for Africa to remain competitive if its infrastructure systems continue to be sub-standard (World Bank, 2008). The main aim of a PPP at the early stage of its development in the United Kingdom was to finance the public infrastructure projects (Meidute & Paliulis, 2011). The issue at that time consisted of a growing need for public infrastructure development which also was the case in Hong Kong (Cheung, Chan, & Kajewski, 2009) and a lack of available public funds to finance this need.

As a result, a new initiative took place – Private Finance Initiative (PFI) – with the purpose to provide additional funds for public infrastructure projects. On the other hand, countries like Australia do not have such an issue. They are capable of financing projects by themselves. However, they still choose to involve the private sector for the possibility of achieving additional value (Cheung et al., 2009). Moreover, Hong Kong and Australia involve a private partner into the procurement of public services with the aim of ensuring better quality of services.

This, on the other hand, does not seem to be the prioritized reason for the PPP development in the United Kingdom, which emphasizes the point that reasons to implement PPP depend on the circumstances surrounding countries' economic and political environment. Investments through PPPs are not a guarantee to delivering value for money for the public good in the absence of rigorous contracts, comprehensive feasibility studies and good governance. Indeed, the merits of engaging the private sector in public infrastructure development have been drawn into question (Inderst & Stewart, 2014).

The United Kingdom's National Audit Office, for instance, urged the government in April 2011

to critically examine the use of the Private Finance Initiative (the United Kingdom's most prevalent form of PPP), as the costs of debt finance had increased by 20–33 per cent since the credit crisis. It concluded that there was need for greater challenge of both the decision to use private finance and the scope of the deal (National Audit Office, 2011).

Other concerns about the financial viability of PPPs derive from the higher cost of private sector borrowing compared to government rates, and the high tendering, transaction and negotiation costs involved in such partnerships (Semple & Turley, 2013). PPP has been used internationally in more than 85 countries as a procurement method for delivering public infrastructure (Regan et al., 2009). There are well established programs in a number of countries (including Chile, Ireland, Mexico and the United Kingdom) (IMF, 2004). Its main characteristics include a competitive bidding process, appropriate balance of project risks, private sector innovation and expertise (Adams, Young & Wu, 2006).

A range of public private partnership arrangements are rapidly becoming the preferred way to provide public services worldwide because PPPs have been seen as a mechanism to tackle inefficiencies and insufficient governmental funds for infrastructure development (Jin & Doloi, 2008). Public private partnerships are an increasingly popular choice for policy makers in implementing public works projects especially in the face of a shortage of government financial resources and where it is necessary to counter public inefficiency (Alfen, et al., 2009). PPPs are more efficient than public investment and government supply of services. One particular concern is that PPPs can be used mainly to bypass spending controls, and public investment off budget and debt off the government balance sheet (IMF, 2004).

Global trends for PPPs relating to both the total amount of investment and the number of projects come from the Private Participation in Infrastructure (PPI) Project Database jointly produced by the Infrastructure Policy Unit (IPU) of the World Bank's Sustainable Development Network and the Public–Private Infrastructure Advisory Facility (PPIAF) (IPU, 2012). From 1991 to 2012, the overall trend for investment in PPP projects was increasing, despite a temporary downturn in 1997–2002. There was a 5.8% increase in the total nominal amount of investment commitments in 2012 compared with that in 2011. The number of PPP projects, on the other hand, oscillated between 200 and 400 projects per year since 1993.

In 2012, there was a 13% decline in the number of PPP projects worldwide. Overall, this means that the average size of investment commitments increased in 2012. Brazil and India constituted approximately 55% of all PPP commitments across the developing countries in 2012 (World Bank, 2012). The deplorable state of African infrastructure is attributed to budgetary deficit. The infrastructure deficit estimates for Sub-Saharan Africa is substantially higher than what domestic resources can meet, further it has been shown that there is insufficient public funding to close the gap between infrastructure needs and availability of funds. Leveraging the private sector through Public Private Partnerships (PPP) is one option that is increasingly being pursued the world over, to help address the infrastructure gap. The advent of the new millennium saw the re-introduction of PPPs in Kenya for the mobilization of resources (Shendy et al., 2011). These partnerships can leverage public funds and offer advantages of contracting with well qualified private enterprises to manage and deliver infrastructure services (Delmon, 2007). More importantly, PPP projects help mobilize competition to drive down project costs and improve innovation (Delmon & Juan, 2008). Leveraging private sector participation in infrastructure can bring experience, efficiency

and finance in providing quality infrastructure services at better value for money than traditional government procurement (Shendy et al., 2011).

1. PUBLIC PRIVATE PARTNERSHIP IN KENYA

The development of a comprehensive investment framework for PPPs was initially driven by the Government's commitment to achieving the objectives of Vision 2030, the country's development blueprint that is focused on Kenya becoming a middle-income economy by 2030. To achieve this, Vision 2030 has set out a 10% per annum GDP growth target, and to realize these high growth rates the Government emphasized the importance of enabling PSP in infrastructure in Vision 2030's First Medium Term Plan (2008 – 2012) and the Second Medium Term Plan (2013 – 2017).

The First Medium Term Plan (2008 – 2012) provided the basis for improving the institutional and regulatory framework for PPPs, which was driven by the adoption of the Public Procurement and Disposal (Public-Private Partnerships) Regulations (2009). These regulations outlined what constitutes a PPP and also described the roles of the PPP Steering Committee and the PPP Secretariat, both of which were established in 2010. While the regulations provided the institutional and regulatory basis for PPPs, this was based largely on the Public Procurement and Disposal Act (2005), which was implemented to manage how obsolete and unserviceable entities and equipment would be procured by public entities, and did not provide an explicit legal basis for PPPs in infrastructure.

Therefore, to demonstrate the Government's commitment to PPPs a policy statement was released in 2011. The statement outlined steps the Government was looking to implement so that a more comprehensive framework for PPP development could be realized, and as such included the restructuring of the existing PPP Committee and the PPP Secretariat as well as developing procurement processes for PPPs. Such policies were formalized with the passing of the PPP Act (2013). This Act established the current structure of the PPP Steering Committee and the PPP Unit (which replaced the PPP Secretariat), and also laid the foundations for establishing PPP nodes within the line ministries responsible for screening and proposing new PPP projects. In 2014, national PPP regulations were also passed into law, and draft regulations were drawn up for sub national PPPs in Kenya's 47 counties and are currently under review through public consultation. More recently, the Public Private Partnerships (Project Facilitation Fund) Regulations 2015 were drafted and are currently awaiting approval in parliament.

2. STATEMENT OF THE PROBLEM

Today's society expects to see the government more as a governor and regulator rather than the direct provider of public services. In addition, it requires infrastructure of better quality, more efficient provision of public services, as well as better use of public money. Considering all this, PPPs are seen as a project financing mode that may satisfy these changing needs. Nevertheless, PPPs are not a 'miracle' solution (Meidute & Paliulis, 2011) to the problems of the conventional procurement; they are complex and expensive and, as a result, only certain projects qualify for the use of public-private partnerships. Kenya's Africa Infrastructure Country Diagnostic (AICD) report estimates that, to address the country's infrastructure deficit will require sustained expenditures of approximately \$4 billion per year (20% of GDP) over the next decade. As of

2006, Kenya needed an additional \$2.1 billion per year (11 percent of GDP) to meet that funding goal. The need shot up considering the desire to meet the vision 2030 and remain the regional hub for East Africa and beyond.

Currently, the Government of Kenya faces a growing gap between public investment needs and available resources to finance them. Indeed, the Government and development partners have over the years been the main financiers of public infrastructure and services. This has however been limited by the level of resources available from these sources. Unfortunately, the investment resources emanating from these sources have remained far below the requirements needed to support the accelerated economic growth as set forth in Vision 2030. To address this end, the Government has developed a policy framework for engaging the private sector through Public Private Partnerships (PPP) arrangements to facilitate the closing of the gap in investment capital, technology and know-how needed to improve the efficiency and delivery of public services.

Few studies have been done focusing on the determinants of mobilization of infrastructural finance through PPPs. Reetika, Ashish and Nidhi (2015) did a study on critical success factors for implementation of PPP based on literature review in India. The study establishes five underlying factors including: favourable economic condition; project implementability; effective procurement; stable political and social environment; and government control as Critical Success Factors (CSF) for PPP. Amanyo (2013) undertook a study on public-private partnership in local governance in Ghana. Further James and Jane (2015) did a study on factors affecting the performance of public-private-partnerships in infrastructure financing in Kenya. The study found that political risks influence the performance of PPPs in infrastructure financing in Kenya Urban Roads Authority most followed by corruption, management and control and regulatory framework. The study established that implementation performance of PPP depends on policy standards and objectives, communication and enforcement of regulations and contract terms as well as resources and administrative structures employed. The researcher notes that these studies failed to cover financial risks, project viability, initial capital and community support as factors determining the success of PPPs. Further none of the studies have investigated the moderating role of legal framework on factors influencing implementation of PPPs. Based on the foregoing; this study looked into the determinants of mobilization of infrastructural finance through public private partnership in the National Treasury in Kenya.

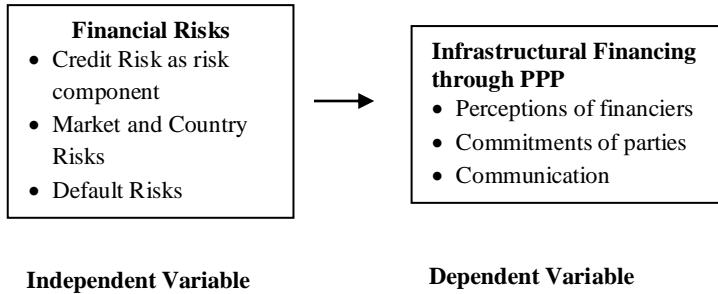
1. Objective of the study

The study sought to examine the influence of financial risks on mobilization of infrastructural finance through PPPs in National treasury in Kenya.

2. Hypothesis of the study

H₀₁: Financial risks have no significant influence on mobilization of infrastructural finance through public private partnership in national treasury in Kenya.

3. Conceptual framework

**Figure 1: Conceptual framework**

4. Theoretical review

7.1 The agency theory

In the Agency Theory a contractual relationship is entered by two persons that is the principal and the agent so as to perform some service. This involves delegating some decision making authority to the agent by the principal (Jensen & Meckling, 1976). At the same time an agent is a person employed for the purpose of bringing his principal into a contractual relationship with a third party. He does not make a contract on his own behalf. The legal doctrine which applies is quifacit per aliumfacit per se (he who does something through another does it himself) (Kanbur, 2009).

Agency Theory is directed at the person presenting the agency relationship. This is where one party delegates work to another party who performs the duty on behalf of the principal (Eisenhardt, 1989). This person is authorized to perform legal acts within his competence and not on his own behalf but for the principal. A growing view in the modern literature recognized however that the two are strange bed fellows. An Insurance Broker is an agent employed to buy and sell on behalf of the principal who in this case is the insurance company. However, in performing his role, he owes a duty to his principal.

The level of care expected will vary; a higher level of care will be expected from a professional broker than from a part-time insurance agent (Wright & Oakes, 2002). According to the English and American law the liability of a principle for his agent torts in the ordinary course of his employment depends upon the existence of a master servant relationship. The master is vicariously liable for his servant tortuous conduct committed within the course of employment (Yin, 1989). There are cases where an agency relationship arises when an individual group called principal hires someone called an agent to perform some service, where the principal delegates decision-making power to the agent.

This kind of relation includes those between stock holders and managers and between stockholders and debt holder. According to Amir, (1993) Agency Theory is a theory concerning

the relationship between a principal (shareholder) and an agent of the principal (company's managers). It further says that Agency Theory is a very academic term which essentially involves the costs of resolving conflicts between the principals and agents and aligning interests of the two groups. The agency theory also adds up to the list of theories examined.

Jensen and Meckling, (1976) alluded that agency relationship as a contractual relationship between `one or more persons called the principal engaging another known as the agent to perform some service on their behalf, which involve delegating decision making authority on the agent. Infrastructural financial mobilization through public private partnership is a case of principle agent agreement. In this case, the government is the principle while the private sector is the agent tasked in performing government roles on its behalf. The theory helped the researcher understand the role of private sector in enabling financial risk mitigation in public private partnership initiatives in infrastructural financing.

5.Empirical review

Bovaird (2004) stated that through PPPs the public sector establishes long-term partnerships which are essentially working arrangements based on a mutual commitment between a public sector organization and any organization outside of public sector. Broadbent, et al., (2003) observed that Public private partnerships (PPPs) are contractual arrangements between public sector organizations and private sector investors for joint, symbiotic and collaborative provision and financing of public projects and services. Financial risks are an impediment to finance mobilization in infrastructural projects. This section provides a review of literature on financial risks and infrastructural financing through PPPs.

5.1Financial Risks and Infrastructural Financing

World Bank report on attracting investors to African PPPs (2009) examined recent projects in Africa implemented using the PPP model. The report noted that the reasons for the success of the projects can be analyzed by looking at some of the key risks involved. The key risks identified were financial viability, demand risks and capital investment, rehabilitation risk, environmental and other physical risks, interface risk, and funding and foreign currency risk. Capital intensity, high up-front costs, lack of liquidity and a long asset life generate substantial financing requirements and a need for dedicated resources on the part of investors to understand the risks involved and to manage them.

Infrastructure projects may not generate positive cash flows in the early phases, which may be characterized by high risks and costs due to pre-development and construction; yet they tend to produce stable cash flows once the infrastructure facility moves into the operational phase. Some infrastructure assets, where users do not pay for services, do not generate cash flows at all, requiring government intervention in order to create investment value (OECD, 2015). The demand for PPP schemes depend on the availability of low-cost credit and a cast of advisors, lead arrangers, syndicated banks, rating agencies and monoline insurers; the deals rely on mutual trust and a good level of liquidity (Willumsen, 2008).

According to Abadie (2008) Liquidity constraints affect not only the price of credit, but also the quantity available as financial institutions ration credit regardless of price. Banks are wary of

extending loans and the downgrading of monoline insurance companies (who guaranteed the repayment of infrastructure bonds at a fee) has shrunk the bond market for infrastructure projects. In those cases where banks might be interested in extending loans, they might not be able to do so because their capital is too small. Projects procured by PPP tend to be subject to more risks compared to those projects that are procured traditionally because of the complexity of PPPs in terms of documentation, financing, taxation, technical details and sub-agreements involved in major PPPs (Cheung & Chan, 2011).

The nature of risks alters over the duration of the project (Grimsey & Lewis, 2002), in addition, recognition of obstacles at an early stage allows detection of obstacles and enables the PPP stakeholders to avoid them and take mitigation measures (Chan, Lam, Chann, Cheung & Ke, 2010). The underlying rationale behind risk transfer in PPP is that risk should be allocated to the party that is best placed to manage it at the least cost (Glaister, 1999). Thus management of risks is critical to the success of any PPP project.

Large scale capital-intensive projects usually require substantial investments up front and only generate revenues to cover their costs in the long term. Therefore, matching the time profile of debt service and project revenue cash flows implies that on average project finance loans have much longer maturities than other syndicated loans. Official sector entities such as multilateral development banks (MDBs) can play a useful catalytic role, helping to share risk with private investors to enhance the viability of investments. MDBs can help their clients attract additional financing from the private sector through a combination of the following: strong financial position; preferred creditor status; technical expertise; prudent risk-management policies; credible application of well-understood standards in project design, execution, and corporate governance; a long-term perspective; and cross-country experience (Chelsky, Morel, & Kabir, 2013).

The advantages of PPP over traditional public sector procurement have been observed to be that PPP involves a substantial degree of risk transfer to the private sector associated with constructing, operating, and maintaining the assets, that PPP provides an improved form of public procurement; and offers a higher quality of public services with greater innovation in the design, which consequently could render better value for money from the use of public resources (Broadbent et al., 2001).

However, PPP has been criticized as often being more expensive than publicly financed projects due to higher borrowing costs incurred by the private sector, excessive profits made by the private sector to the detriment of the public and adverse effects on the pay and conditions of the employees. Thus for a PPP scheme to deliver value for money, the benefits achieved must outweigh the higher borrowing costs (Ratcliffe, 2004).

Risk is inherent in every project. Conventional public sector procurement has tended not to take risk into account adequately, often resulting in unbudgeted cost overruns. In addition the character of infrastructure investments and the nature of PPPs shape the riskiness of any individual project (National Treasury, South Africa, 2004). Financial risks are considered as the

risks that have a negative impact on the cash flows of the financial plan in a way that endangers project's viability or limits profitability (Xenidis & Angelides, 2005).

The aim of PPP contracts is to reduce cost and price; to increase the quality; reduce risks and failures; improve coordination and to share responsibility and capacity (Andersen, Cao, Tvarno & Wang, 2010). The costs and risks faced by private investors in infrastructure are high, particularly in Low Income Countries (LICs), where economic and financial conditions may be weaker and less stable. In addition to risks specific to the infrastructure sector, other risks might exist or be perceived to exist that are unique in emerging and developing countries.

For example, securing the investment-grade rating necessary for institutional investors to invest in certain projects may be particularly challenging (Inderst & Stewart, 2014). Moreover, options to mitigate regulatory, currency and political risk might be generally less available or more costly to obtain. Investment contracts that are not standardised across countries make due diligence more time consuming and expensive and international arbitration is often not an option, leaving disputes to be solved in local courts.

5.2 Infrastructural Financing through Public Private Partnerships

PPP is an effective approach to enhance project productivity by bringing in management efficiency and creative skills from business practice, and reducing governmental involvement by using private sectors in the provision of public services (Shen et al., 2006). Ample evidence exists in developing countries of the efficiency role of public private partnerships in public projects. Arthur, Andersen and LSE (2000) evaluated 29 projects in the UK already in operation, a third of all PPPs in the UK at that time, and showed that the average percentage of estimated saving (against a public sector comparator) was 17 percent. Risk transfer accounted for 60 percent of forecast cost savings. Additionally, the National Audit Office in the UK in 2003 examined construction performance in 37 UK projects compared to projects built by the public sector.

The results show: 80 percent of PPP/PFI deals delivered price certainty; small price increases were evident in 20 percent of deals; 73 percent of publicly built projects experienced significant cost overruns; and 66 percent of PPP deals delivered on time compared to 30 percent for those publicly built. Furthermore, the motorway in Finland between Helsinki and Lahti was built five years earlier than expected and at lower cost. Finally, figures published by the European Construction Industry Federation (FIEC) in December 2010 state that the global savings of PPPs is estimated around 25 percent compared to classical procurement. This evidence on sound performances of private participation should not been regarded without recognizing the critical role of a strong enabling environment.

Gassner and Pushak (2008) examine the impact of private sector participation in water and electricity distribution using a data set of more than 1,200 utilities in 71 developing and transition economies. The results of the study show that the private sector delivers on expectations of higher labor productivity and operational efficiency, convincingly outperforming a set of comparable companies that remained state owned and operated. These findings echo those for Latin American countries where Andres (2004) and Andres, Foster, and Guasch (2006) find significant increases in quality, investment, and labor productivity and a decrease in

employment in telecommunications, electricity, and water distribution services.

Apart from Guasch (2004), there are a number of anecdotal studies on the outcomes of PPP projects. Chief among these is a study by Woodhouse (2006), which analyzed global anecdotal evidence from 33 independent power producer (IPP) projects. Woodhouse argued that sophisticated risk engineering in contracts; payment security and official credit support; participation by MFIs; and arbitration and dispute resolution were of limited effectiveness in improving IPP outcomes. Instead, strategic management of IPP programs, including competitive bidding and cost management; managing counterparty risk; commercial planning and flexible management; local partnerships; and managing rights, responsibilities, and incentives, were more effective in mitigating IPP problems.

5.3 RESEARCH METHODOLOGY

The study employed cross sectional survey research design. Cross-sectional survey research design is a design in which a group of subjects (sample) is selected from a defined population (source population) and contacted at a single point in time. This study sought to obtain descriptive and self-reported information from the financial officers in the national treasury in Kenya. The design allows the researcher to expose the respondents to a set of questions to allow comparison. The target population included all the management staff including chief executive officers, project managers, finance officers, procurement officers and transaction advisors in all government contracting authorities in Kenya. A sample of 145 respondents was drawn from the target population using Yamane's formula. To arrive at the sample, the researcher employed stratified random sampling method where different parastatals were treated as strata. The researcher then used proportionate sampling to allocate the number of respondents to be picked from each stratum. Finally, simple random sampling was used to pick out the respondents from each stratum. The study used a structured questionnaire that was distributed to all the management staff involved in the sample. The questionnaire contained various items seeking different information from the targeted respondents. The questionnaire contained a five point Likert scale (5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree) to measure the variables under the study. The questionnaire was pilot tested to check for validity and reliability prior to the actual data collection. Cronbach alpha coefficient was used to indicate the reliability of the research instrument. Factor analysis was done to explore the underlying relationships and the structure of the measurement models for the independent variable items and dependent variable items and to summarize data. The collected data was analyzed using both descriptive and inferential statistics with the aid of Statistical Package for Social Sciences (SPSS). Descriptive analysis involved frequencies, percentages, means and standard deviations while inferential statistics included correlation analysis to test for relationships between independent and dependent variables and both simple and multiple regression analysis to test the hypothesis. Regression analysis showed that R square, t-tests and F-tests and Analysis of Variances (ANOVA) tests were all generated by SPSS to test the significance of the relationship between the variables under the study and establish the extent to which the predictor variables explain the variation in dependent variable. In testing the hypothesis the following model was used.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon \dots \dots \dots \text{(I)}$$

Where Y = Infrastructure finance mobilization through PPPs

X₁ = Financial Risks

β_1 = Parameter estimate for financial risks

β_0 = Model Constant

FINDINGS AND ANALYSIS

Out of 145 questionnaires distributed to the respondents for the purposes of data collection, 133 of them were returned. This constitutes 91.7% which exceed 70% suggested by Mugenda and Mugenda (2003) as very good. According to Babbie and Mouton (2002) a response rate of above 50% is adequate for analysis thus a response rate of 91.7 % in this study was considered adequate.

Financial Risks and infrastructural finance Mobilization

The first objective of the study was to examine the influence of financial risks on mobilization of infrastructural finance through PPPs. The instrument was first tested for sampling adequacy using the KMO and Bartlett's tests of sampling adequacy. The findings from the analysis are as illustrated in table 1.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.505
Bartlett's Test of Sphericity	Approx. Chi-Square	103.796
	Df	45
	Sig.	.000

KMO measure had a value of 0.505 which was above the recommended threshold of 0.5 (Field 2005). Therefore, the questionnaire on financial risk was deemed adequate for data collection. Bartlett's test of sphericity chi square value of 103.796 was found to be significant at p<.05 level of significance which enables the factorability of the correlation matrix. Eigen value criterion was used to extract the sub-variables of financial risk. The findings were as illustrated in table 2.

Table 3: Total Variance Explained

Compon ent	Initial Eigen values			Extraction Loadings		Sums of Squared Loadings	Rotation
	Total	% of Variance	Cumulative %	Total	% Variance	Cumulative %	Sums of Squared Loadings ^a
1	3.820	38.201	38.201	3.820	38.201	38.201	3.503
2	2.630	26.300	64.501	2.630	26.300	64.501	2.502
3	1.333	13.335	77.835	1.333	13.335	77.835	2.322
4	.923	9.235	87.070				

5	.631	6.305	93.375
6	.285	2.850	96.225
7	.165	1.653	97.878
8	.134	1.343	99.221
9	.050	.499	99.720
10	.028	.280	100.000

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Principal component analysis revealed the presence of three factor components with Eigen values above explaining cumulatively 77.835% of the total variance. A clear factor solution was obtained for 10 out of 13 financial risks items. Therefore three items () were found to be redundant and were excluded from the questionnaire. The pattern matrix was derived for the financial risks to find out how each item loaded on the three subcomponents of financial risks. The findings were as shown in table 4.

Table 4: Pattern Matrix^a on Financial Risks

	Component		
	1	2	3
PPP involves greater financial risks in their undertaking	.610		
Interest rates on debt financing for PPP have always been very high compared to local market rates	.803		
The rate of inflation in the country have affected PPP arrangement in the country	.877		
Slow economic growth in the country discourages PPP Investments	.949		
There is high demand for imported materials for infrastructural financing in PPP since most private partners come from overseas		.778	
We have been unable to start many projects through PPP due to challenges in financing	.649		
Due to lower default risks, the government is able to access credit on lower rates to finance PPPs			.862
The government is the guarantor in case the private partner defaults on loan repayment.		.799	
Default risks have reduced in PPP's due to commitment by both contracting authorities and private parties			.820
The government bears the residual responsibility in case of default from private sectors		.834	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 13 iterations.

The pattern matrix indicated the distribution of the various questionnaire items on the three components of financial risk (credit risk, market/country risk and default risk). Five items loaded strongly on the first component (Credit risk), three loaded strongly on the second component (Market/country risk) while two loaded strongly on the third component (default risk). All the items had loading factors greater than 0.6 indicating that they significantly explained the variances in responses in regard to each item.

The distributions of respondent's views in relation to financial risks in the National Treasury were presented in percentages, means and standard deviation. The findings from the analysis were as shown in table 5.

Table 5: Descriptive Statistics on Financial Risks

	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Std. Dev
PPP involves greater financial risks in their undertaking	18.8	46.6	9.0	19.5	6.0	3.53	1.178
Interest rates on debt financing for PPP have always been very high compared to local market rates	15.0	39.1	15.0	27.8	3.0	3.35	1.129
The rate of inflation in the country have affected PPP arrangements in the country	33.1	40.6	13.5	11.3	1.5	3.92	1.027
Slow economic growth in the country discourages PPP investments	33.8	48.9	5.3	11.3	0.8	4.04	.957
There is high demand for imported materials for infrastructural financing in PPP since most of private partners come from overseas	16.5	56.4	12.8	9.0	5.3	3.70	1.022
We have been unable to start many projects through PPP due to challenges in financing	20.3	42.9	15.8	17.3	3.8	3.59	1.109

Due to lower default risks, the government is able to access credit on lower rates of finance PPPs	18.8	42.9	22.6	12.0	3.8	3.61	1.043
The government is the guarantor in case the private partner defaults on loan repayment	19.5	35.3	20.3	18.8	6.0	3.44	1.176
Default risks have reduced in PPP's due to commitment by both contracting authorities and private parties	12.8	53.4	22.6	8.3	3.0	3.65	.914
The government bears the residual responsibility in cases of default from the private sector	18.0	37.6	17.3	18.8	8.3	3.38	1.217
Valid N (listwise)	133						

From the table, findings indicated that 65.4% of the respondents strongly agreed and/or agreed that PPP involves greater financial risks in their undertaking. This assertion registered a mean of 3.53 and a standard deviation of 1.178. The findings are in line with OECD (2015) who observed that infrastructure projects may not generate positive cash flows in the early phases, which may be characterized by high risks and costs due to pre-development and construction. They however noted that once the project is in operational phase, they tend to produce stable cash flows. Further, it was observed that respondents were undecided on whether interest rates on debt financing for PPP have always been very high compared to local market rates or whether the government bears the residual responsibility in cases of default from the private sector registering means approximately equal to 3 (undecided). Abadie (2008) observed that liquidity constraints affect not only the price of credit, but also the quantity available as financial institutions ration credit regardless of price. Banks are also wary of extending loans towards these infrastructural projects.

The respondents were required to indicated whether the rate of inflation in the country have affected PPP arrangements in the country. 73.7% of the respondents strongly agreed and agreed which recorded a mean of 3.92 and a standard deviation of 1.027. According to Visconti (2012), in the allocation of capital to investment projects, it is unlikely that optimal decisions will be reached unless anticipated inflation is embodied in the cash-flow estimates. In addition, 82.7% of the respondents agreed that slow economic growth in the country discourages PPP investments with a mean of 4.04 and a standard deviation of .957. Donaldson (2010) advanced the proposition that infrastructure development supported increased income and productivity. Using

data on rural infrastructure, Fan and Zhang (2004) found that investing more in infrastructural is key to an increase in overall income of the population spurring economic growth.

Also, majority of the respondents 72.9% of the respondents agreed that there is high demand for imported materials for infrastructural financing in PPP since most of private partners come from overseas with a mean of 3.70 and a standard deviation of 1.022. This goes contrary to Ratcliffe (2004) view that for the PPPs scheme to deliver value for money, the benefits achieved must outweigh the higher borrowing. Imports do not grow local economy but benefit the countries of origin to the detriment of the local economy.

The researcher also observed that majority of the respondents agreed that they have been unable to start many projects through PPP due to challenges in financing. 20.3% of the respondents strongly agreed while 42.9% of the agreed with a mean of 3.59 and a standard deviation of 1.109. 61.7% of the respondents agreed that due to lower default risks, the government is able to access credit on lower rates of finance PPPs. The findings registered a mean of 3.61 and a standard deviation of 1.043. Additionally a mean of 3.44 and a standard deviation of 1.176 were registered where 54.8% of the respondents agreed that the government is the guarantor in case the private partner defaults on loan repayment. Finally the researcher observed that 66.2% of the respondents agreed that default risks have reduced in PPP's due to commitment by both contracting authorities and private parties registering a mean of 3.65 and a standard deviation of .914

The study further proceeded to establish the responses regarding infrastructural financing through public private partnership initiatives. The findings of the analysis were as indicated in Table 6.

Table 6: Descriptive Statistics on Infrastructural Financing

	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	Std. Dev
Kenyan banks are very supportive of infrastructural finance through PPPs	6.8	54.1	25.6	9.8	3.8	3.50	.901
Local investors have been very cooperative in financing infrastructure through PPPs	6.0	50.4	26.3	15.8	1.5	3.44	.882
The economic environment in Kenya has helped attract foreign investors in the PPPS	22.6	48.9	15.0	10.5	3.0	3.77	1.012
Private investors are willing to commit their investments in PPPs	19.5	56.4	15.0	6.0	3.0	3.83	.914
Guarantees from the government make it easier for investors to commit their funds to PPPs	24.1	48.1	10.5	11.3	6.0	3.73	1.129
Clear communication channels are set up to ensure smooth communication between the contacting authorities, the government and the private investors regarding PPPs	15.8	57.1	13.5	11.3	2.3	3.73	.938

Frequent communications on PPPs projects make them very transparent and forthright	16.5	53.4	18.0	8.3	3.8	3.71	.968
PPPs projects are delivered on time in comparison to publicly funded projects	21.1	42.9	12.9	16.5	6.8	3.55	1.190
The government honors its commitments towards the PPPs	13.5	51.1	24.8	6.0	4.5	3.63	.949
Valid N (listwise)	133						

From the findings it was observed that 54.1% of the respondents agreed that Kenyan banks are very supportive of infrastructural finance through PPPs. The mean of this aspect was 3.50 and a standard deviation of 901. The respondents agreed that local investors have been very cooperative in financing infrastructure through PPPs. 50.4% of the respondents agreed registering a mean of 3.44 and a standard deviation of .882. On the other hand, majority of the respondents agreed that economic environment in Kenya has helped attract foreign investors in the PPPs. These findings concur with (Ozen, Sahin, & Unalmis 2013) findings in turkey who observed that the remarkable economic environment of the country helped attract foreign direct investments in infrastructural projects thus spurring economic growth in the country.

Further 48.9% and 22.6% of the respondents agreed and strongly agreed with a mean of 3.77 and a standard deviation of 1.012. 79.5% of the respondents agreed that private investors are willing to commit their investments in PPPs registering a mean of 3.83. Mean while a mean of 3.73 was registered where the respondents agreed that guarantees from the government make it easier for investors to commit their funds to PPPs and that clear communication channels are set up to ensure smooth communication between the contacting authorities, the government and the private investors regarding PPPs consecutively. Additionally, respondents agreed that frequent communications on PPPs projects make them very transparent and forthright. A mean of 3.71 and a standard deviation of .968 were registered where 53.4% of the respondents agreed and 16.5% of them strongly agreed.

However, findings indicated that respondents agreed that PPPs projects are delivered on time in comparison to publicly funded projects. 42.9% of the respondents agreed and 21.1% of the respondents strongly agreed with a mean of 3.55 and standard deviation of 1.190. In conclusion, the respondents were in agreement that the government honors its commitments towards the PPPs where 51.1% and 13.5% of the respondents agreed and strongly agreed respectively registering a mean of 3.63 and a standard deviation of .949.

The composite mean scores of the responses on financial risks were computed and correlated with composite mean scores for infrastructural finance mobilization. Correlation analysis results were as shown in table 7

Table 7: Correlations between Financial Risks and Infrastructural Financing

		Financial risks	PPPs	Infrastructural financing
Financial risks	Pearson Correlation	1	.298**	
	Sig. (2-tailed)		.000	
	N	133	133	
PPPs Infrastructural financing	Pearson Correlation	.298**	1	
	Sig. (2-tailed)	.000		
	N	133	133	

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

Findings from the table indicate that there exist weak positive significant ($r=.298$, $p<.000$) relationship between financial risks and infrastructural financing through public private partnership initiative. Therefore, it was observed that financial risks have crucial role in determining the infrastructure financing through PPP. According to Cheung and Chan (2011), projects procured by PPP tend to be subject to more risks compared to those projects that are procured traditionally because of the complexity of PPPs in terms of documentation, financing, taxation, technical details and sub-agreements involved in major PPPs.

World Bank report on attracting investors to African PPPs (2009) observed that capital intensity, high up-front costs, lack of liquidity and a long asset life generate substantial financing requirements and a need for dedicated resources on the part of investors to understand the risks involved and to manage them. On the other hand, Ryzhkova (2012) observed that PPPs financing depends on the type of capital, affecting proceeds, the level of risks, project structure, loan terms and the financial attractiveness of the project.

The study further sought to establish how each of the indicators in financial risks related with the various indicators of infrastructural financing through PPPs. The findings were as shown in Table 8

Table 8: Correlations between Indicators of Financial Risks and Infrastructural Financing

		Credit Risk	Market Risk	Default Risk
Financiers Perceptions	Pearson Correlation	.144	.135	.205*
	Sig. (2-tailed)	.097	.123	.018
	N	133	133	133
Financiers Commitment	Pearson Correlation	-.059	.247**	.315**
	Sig. (2-tailed)	.501	.004	.000
	N	133	133	133
Communication	Pearson Correlation	.079	.265**	.365**
	Sig. (2-tailed)	.365	.002	.000
	N	133	133	133

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

*. Correlation is significant at the 0.05 level (2-tailed).

From the table, findings indicated that credit risks and market risks had no significant relationship with financiers' perceptions in infrastructural financing through PPPs. However default risk was shown to have a weak positive but significant ($r=.205$, $p<0.05$) relationship with financiers perceptions in infrastructural financing in PPPs. As such, increased potential for default risks influences financiers' perceptions as far as infrastructural financing through PPPs is concerned.

The findings agreed with Chege (2001) findings that public financing was perceived to be volatile and rarely meets crucial infrastructural expenditure requirements in a timely and adequate manner. Hoffman 2008 observed that as providers of capital, banks are fundamentally dependent on parameters that are out of their control that inhibit them to recoup their investments. Beeferman and Wain (2012) observed that infrastructural projects often have higher levels of leverage than non-infrastructure investments given the less volatile cash flows and the willingness of sponsors of infrastructure projects to accept higher levels of debt.

On the other hand, credit risk was shown not to have a significant relationship with the financiers commitment to infrastructural financing through PPPs. Market risk had a weak positive but significant ($r=0.247$, $p<0.05$) relationship with financiers commitment to infrastructural financing through PPPs. Thus, financiers' commitment to infrastructural financing through PPPs is dependent on market risk. Further, default risk was also shown to have a weak positive but significant ($r=0.315$, $p<0.05$) relationship with financiers commitment to infrastructural financing through PPPs. Therefore, default risk is a determinant of the financiers' commitment to infrastructural financing through PPPs.

Purda (2008) noted that bank and other funds providers are concerned about the security of the funds provided for PPPs. This means that the way the banks perceive risk is crucial for the success of the PPPs initiatives. Purda observes that if the banks feel that a project is too risky, the natural reaction is for them to refuse to provide the funds needed for the project and the project is automatically aborted. He however observes that such an action leads to the opportunity costs in the loss of interest income which would have accrued from the loan. As providers of capital resources, banks are fundamentally dependent on various parameters completely out of their control (for example the ability of other partners to be successful in delivery and the future performance of the project to deliver anticipated income streams), in order to recoup their investment (Finnerty, 2007; Hoffman, 2008).

Additionally, credit risk had a very weak positive but insignificant ($r=0.07$, $p>0.05$) relationship with communication in infrastructural financing through PPPs. Thus, credit risk does not affect communications between stakeholders in infrastructural financing. However, market risk had a weak positive significant ($r=0.265$, $p<0.05$) relationship with communication in infrastructural financing through PPPs. Therefore, market risks affects communication between the stakeholders in infrastructural financing through PPPs. On the other hand, default risk also had a weak positive significant ($r=0.365$, $p<0.05$) relationship with the communication aspect in

infrastructural financing. As such, default risk cannot be overlooked as far as communication in infrastructural financing in PPPs is concerned. The demand for PPP schemes appears to depend on the availability of low-cost credit and a cast of advisors, lead arrangers, syndicated banks, rating agencies and monoline insurers; the deals rely on mutual trust and a good level of liquidity (Willumsen, 2009).

The study further undertook regression analysis for the purposes of testing the first hypothesis. The first objective sought to establish the financial risks on mobilization of infrastructural finance through public private partnership in the national treasury in Kenya. To achieve this, the following hypothesis was formulated

H₀₁: Financial risks have no significant effect on mobilization of infrastructural finance through public private partnership in national treasury in Kenya

The analysis yielded results shown in Table 9

Table 9: Model Summary on Financial Risks and Infrastructural Financing

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.298 ^a	.089	.082	.59566
a. Predictors: (Constant), financial risks				

The findings from the model indicated R-squared value of .089 meaning that financial risks explained 8.9% of the total variation in infrastructural financing through PPPs initiative. Therefore financial risks play a substantial role in determining the mobilizations of infrastructural finance through PPPs. Results from analysis of variance were indicated in Table below.

Table 10: ANOVA^a on Financial Risks and Infrastructural Financing

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.539	1	4.539	12.793	.000 ^b
	Residual	46.480	131	.355		
	Total	51.019	132			
a. Dependent Variable: Infrastructural financing						

From the table, the model indicated an F-Value ($F_{(1, 131)} = 12.793, p=.000$) which was found to be significant at $p<.05$. This implies that financial risks have a significant influence on infrastructural financing through PPP initiative. The researcher concluded that financial risks had a significant influence on infrastructural financing through public private partnership initiative. Therefore, the null hypothesis **H₀₁**, that financial risks have no significant effect on mobilization of infrastructural finance through PPPs in national treasury in Kenya was consequently rejected. Analysis further yielded the models coefficients shown in Table 11.

Table 11: Coefficients for Financial risks and infrastructural financing

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error			
1	(Constant)	2.223	.404	5.507	.000
	Financial risks	.396	.111	.298	3.577 .000

a. Dependent Variable: Infrastructural financing

The coefficients table indicated that infrastructural financing through PPPs would be a constant value of 2.223 units with all the other factors held constant with a standard error of 0.404 units. On the other hand, the effect of financial risks on infrastructural financing through PPPs would be a positive increment of 0.396 units for each unit increase in financial risks. The t-value for both the beta values were significant at $p<0.05$ level of significance. Therefore, the following simple regression model was derived

Where Y is infrastructural financing through PPPs and X_1 is financial risks

Conclusion of the study

The study concluded that financial risks were very crucial in determining infrastructural financing through PPPs. The findings indicated that the perception of greater financial risks in PPPs undertakings would repel financiers from committing to infrastructural financing. On the other hand the rate of inflation in the country determined the attractiveness of the PPPs projects. On the flip side, lowered financial risks attract the financiers to PPPs projects. Alongside this, the government is able to access credit on lower rates to finance PPPs. Hence, the study concluded that the success of infrastructural financing through PPPs is highly dependent on the level of financial risks within the country.

The study recommended that the government ought to have a PPPs steering committee to address issues related to the PPPs implementation. Given that the findings demonstrated that perceptions of risk influence financiers' decision to finance PPP projects, the committee should work on mitigating the financial risks inherent in PPPs. This will go a long way in enhancing infrastructural financing through PPPs. The government should in addition to risk mitigation come up with proper policies that regulate the rate of inflation in the country. Reduced inflation risk will mitigate on the chances of market risk and encourage foreign direct investments in the PPP infrastructure. On the other hand reduced inflation would go a long way in lowering the cost of finance. This will enable the private investors and the government to acquire credit facilities from financial institutions at lower interest rates. Lowered interests rates on the other hand will reduce default risks on money borrowed hence credit worthiness of institutions involved in PPPs financing. These initiatives would inculcate positive perceptions among the financiers and encourage the financing of PPPs.

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