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Assessment of the factors influencing the implementation of Public Private Partnerships in the Road Annuity Program in Kenya.

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ASSESSMENT OF THE FACTORS INFLUENCING THE IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN THE ROAD ANNUITY PROGRAM IN KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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ABSTRACT

Globally, most governments are handicapped in terms of developing public infrastructure from exchequer funding alone. Paradoxically, however, the demand for these facilities is on the rise. Consequently, attention is today turning to the adoption of the public private partnership (PPP) investment model that taps into the private sector capitation through dedicated policy frameworks. This is the case in Kenya, where the government recently developed a road annuity program (RAP) to construct 10,000 kilometers of roads. RAP being a relatively new development concept, this study aims to assess the factors that are potentially having a significant influence on the successful implementation of a PPP investment model such as RAP. From the literature review, 39 factors clustered around five themes were identified and were assessed. In an attempt to fill this knowledge gap, the study sought to know the influence of these 39 factors (five themes) on the implementation of RAP as well as the relationship between the five themes. Using a 5-point Likert Scale questionnaire tool, the study targeted to capture the opinions of 60 purposely sampled stakeholders on an ordinal score ranging from 1 to 5 for each of the 39 factors. For validation of the results, the study conducted in parallel a face to face interview on 10 experts selected from the 60 stakeholders using strategically prepared talk notes. A total of 55 responses were returned. The same were cleaned and analyzed using MS Excel, IBM version 25 Statistical Package for Social Sciences (SPSS) for quantitatively using exploratory data analysis through box-plots and Spearman Rank correlation. As a check, NVivo software for qualitative data analysis was deployed on face to face interview transcripts to validate the non-parametric analysis results. From the descriptive statistical analysis, the mean score of both the 15 (27%) private sector actors and 40 (73%) public sector actors, it was established that item number 23, specifically, "High investment capital threshold is discouraging our local companies" is the most influencing factor from both the private (with a mean score of 4.00) and public sector actors (with a mean score of 4.10) including the combined score of both at a mean of 4.07. The factor was again captured as an outlier in the box-plot on the whisker lines of both public and combined mean scores. This view was again validated from the analysis of the face to face interview transcripts as well as by the computation of the Spearman Rank coefficient which returned positive and significant on the relationship between 39 factors(5 themes) influencing RAP implementation from both the private and public sector realms. The study has contributed to the knowledge around the fact that investment threshold is a key determinant in the implementation of RAP projects. The study, therefore, makes a recommendation for a new study on how to improve the Public Private Partnerships policy framework to tweak the investment capitation threshold. This can be done by the Government by forming an Infrastructure Development Finance Company composed of banks and financial institutions to finance the markets hence encouraging the local companies to be involved in PPP project since this will boost their capacity and minimize risks in general.

Keywords: road annuity, public-private partnerships, infrastructure, factors, influencing, implementation.

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LIST OF ABBREVIATIONS

AfDB	African Development Bank
APDMR	Annual Public Debt Management Report
CBD	Central Business District
CCPPP	Canadian Council of Public Private Partnerships
DBFM	Design-Build-Finance-Maintain
DBFMO	Design-Build-Finance-Maintain-Operate
DBFMOT	Design-Build-Finance-Maintain-Operate-Transfer
ETR	Economic Theory of Regulation
GDP	Gross Domestic Product
IDFC	Infrastructure Development Finance Company
JICA	Japan International Cooperation Agency
KeNHA	Kenya National Highways Authority
KeRRA	Kenya Rural Roads Authority
KURA	Kenya Urban Roads Authority
MEFMI	Macroeconomic and Financial Management Institute for Eastern and Southern Africa
NIU Plan	Nairobi Integrated Urban Development Master Plan
Ofgem	Office of Gas and Electricity Markets
PIT	Project Implementation Team
PITR	Public Interest Theory of Regulation
PPP	Public Private Partnership
PSCU	Presidential Strategic Communication Unit
RAP	Roads Annuity Programme
RMLF	Road Maintenance Levy Fund
SPV	Special Purpose Vehicle
SDG	Sustainable Development Goals
UN	United Nations
VfM	Value for Money
WB	World Bank

DEFINITION OF KEY TERMS

Assessment: Systematic process of gathering and discussing information from multiple and diverse sources to develop deep understanding to make appropriate decisions(Huba and Freed, 2000).

Factors: Circumstances that contribute to a result

Implementation: Process of executing the PPP project.

Influencing: Affecting the implementation

Infrastructure: Physical and organizational structures and facilities needed for the operation of a society enterprise.

Public Private Partnerships: Arrangement between public and private to share resources, risks, responsibilities so as to attain set goals (Kwak, Chih & Ibbs, 2009).

Road Annuity Program: Appointment of a private entity to finance, design, construct and maintain a road based on agreed periodical payments by the Government (Oraro, 2018)

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DEDICATION

To my wife Nancy Nyanchama and our children Thomas, Ruth and Ecatherina.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This chapter begins by discussing the background to the study on Public Private Partnerships(PPP) needs globally which is followed by a background to the PPPs in Kenya's Road sector and the Road Annuity Program in Kenya which is the study's case study. Due to the increasing the demand for infrastructure facilities globally, governments are adopting the Public Private Partnership (PPP) investment model which taps into the private sector capitation through dedicated policy frameworks. This is not different in Kenya's road sector where the demand for road development is on a rapid rise yet the fiscal space is low necessitating Public Private Partnerships to fill that gap. Road Annuity Program is a PPP model to implement 10,000km of roads to bitumen standards in Kenya. With this background; the problem statement, objectives, the research questions, the scope and significance of study are discussed in succession.

1.1.1 Background to the study

Globally, approximately US$90 trillion in infrastructural investment is required for the subsequent 15 years (Bhattacharyna, Jeremy & Nicholas, 2015). Woetzel, Jonathan, Nicklas, Jan Martin and Robert (2016) estimate that approximately $2.5 trillion is consumed on transportation, power, water, and telecommunications systems yearly; however, $3.3 trillion is required annually for the current growth rates. This implies that globally, there is underinvestment in infrastructure which is creating huge infrastructure gaps yet the public expects governments to match demand and supply (Sanni, 2016). For Sub-Saharan Africa, approximately $93 billion infrastructural development funds are required annually (Foster, Archondo-Callao, Briceno-Garmendia, Nogales & Sethi, 2008). However, Africa records a financing deficit of more than $50 billion yearly (World Bank, 2017). For Kenya, the infrastructure funding deficit is estimated at US$ 2.1 billion annually while the Roads Sub-Sector records a deficit of US$ 44 million annually (World Bank,2011).

Achievement of the United Nation's Sustainable Development Goals (SDGs) requires the bridging of the infrastructure gap (World Bank, 2017). SDG 9 "*Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation*" prioritizes transportation as a means of bridging the infrastructure gap (UN, 2015). For Africa, in Agenda

2063 (Vision for Africa's next 50 years), transport is identified as a pillar of Africa's development. Agenda 2063 emphasizes that collaborators and strategic partners will be central in attaining this goal.

In a quest to bridge the infrastructure gaps, governments are adopting different approaches to obtain capital and implement the projects. Public Private Partnerships (PPPs) are among the popular methods implemented for bridging the gaps (Liang and Jia, 2018). As noted in a McKinsey study, PPPs will continue to be significant financing sources (Woetzel et al. 2016). This is evidenced by increased interest by development Banks like the Islamic Development Bank, African Development Bank (AfDB) and World Bank in funding PPPs projects. Some of the PPPs road projects in Africa include Platinum Highway in South Africa, Lekki Expressway in Nigeria and the Waiyaki Way Express road (under construction) in Kenya. Even though PPPs have different interpretations, they have been broadly accepted and applied worldwide though with variations (Mesfin & Abera, 2016). Kwame (2011) concluded that when instituted on good practices and principals, PPP are advantageous to both parties. The adoption of PPPs has significantly increased in Sub Sahara Africa and it can be attributed to some of its advantages which include; increased efficiency in project delivery and operation; strengthening competition; advanced technology access; and reduction of budgetary constraints (Yescombe, 2018); competitive tendering, flexibility in negotiation and risk allocation on mutual agreement (Li Akintoye, Edwards & Hardcastle, 2005b); and alternative source of finances for the government (Witters, Marom & Steinert, 2012).

1.1.2 Public Private Partnership in Road Sector in Kenya

The demand for road development in Kenya is on a rapid rise yet the pace of road development is still low (Chileshe, Njau, Kibichii, Macharia & Kavishe, 2020). Because of the widening gap between demand and supply, there is a congestion problem in the face of increasing population growth (Wetangula & Mazurealicz, 2017). This continues to contribute to the degeneration of social conditions, air and noise pollution, and commuter delays. In Kenya's vision 2030, the government acknowledges that congestion is worsening in Nairobi and outlines an improvement plan. In this regard, road infrastructure projects continue to be implemented countrywide. In addition to the projects, studies such as the Nairobi Integrated Urban Development Plan (NIU Plan) and Nairobi Spatial plan by Nairobi Metropolitan Development Authority have been done.

Most studies point out that there is an increase in travel demand, which necessitates the need for transport infrastructure development, however, the key constraint is the projects' financing.

Kenya's Annual Public Debt Management Report (APDMR) 2018/2019 established that the overall fiscal balance for FY2018/19 was Kshs. 721,054 million (7.6% of GDP) which was majorly funded by external borrowing of Kshs. 414, 518 million (4.4% of GDP) (APDMR, 2019). The APDMR 2018/2019 indicates that as of June 2019, the total public debt was Kshs. 5, 808,591 million compared to Kshs. 5,047,234 million as at end of June 2018. The increased debt was contributed by Kshs. 373.4 billion of commercial borrowing during the fiscal year 2018/19 and exchange rate depreciation (APDMR, 2019). This points out that despite Kenya depending on external borrowing; the infrastructure gap has not been met. To make matters worse, there is increased borrowing (APDMR, 2019).

In Kenya, road construction and maintenance is normally financed by the annual budget allocation and proceeds of the Road Maintenance Levy Fund (Oirere, 2015). Multilateral development institutions such as the World Bank and the African Development Bank also finance road projects. Despite fuel levy fees increasing from Kshs.12 to Kshs.18 per litre of fuel in June 2016, the annual collection of fuel levy for FY 2018/2019 of 68.996 billion was inadequate for road maintenance as an estimated Ksh.70 Billion was required for maintenance of the entire road network and a further Kshs. 11.18 billion for the Road Annuity Fund (KRB,2019). Consequently, financing from the private sector can benefit in overcoming these challenges. The government recognizes that PPPs are crucial in meeting financial shortages.

According to Kenya PPP Programme Status Report (2019), on 5th December 2012 and 21st December 2017, the World Bank credited the Kenyan government funds for the Infrastructure Finance and Public Private Partnerships (IFPPP) Project (PPP Framework, 2020). The aim of the project was to increase private investment in the Kenya infrastructure market and to sustain their continuous involvement. The Kenyan government has tried to improve the PPP investment climate in Kenya by: adopting a PPP Policy; gazettement of the PPP Act 2013; establishing a PPP Unit; and the introduction of PPP Regulations (Kamau, 2016). The Kenyan government introduced the PPP Act in 2013 with the main goal of paving way for participation of the private sector in infrastructure development. Public Private Partnerships have become vital in the realization of Vision 2030 goals and enabling service provision (Oballa, 2013). The importance

of PPPs can be seen through projects such as the Roads Annuity Program (RAP) which started in March 2015 (PSCU, 2017).

1.1.3 Road Annuity Program in Kenya

The Roads Annuity Program (RAP) is a PPP program that involves the appointment of a private entity to finance, design, and construct/maintain a road based on agreed periodical payments by the Government. The Annuity Model is suitable for roads that are not viable for Conventional Tolling PPPs. These relate to projects, where it is infeasible to recover substantial costs by charging the users. No construction-stage payments are made, and payments are made through performance payments over an extended length of time (7–15 years post-construction) (Asian Development Bank, 2019).

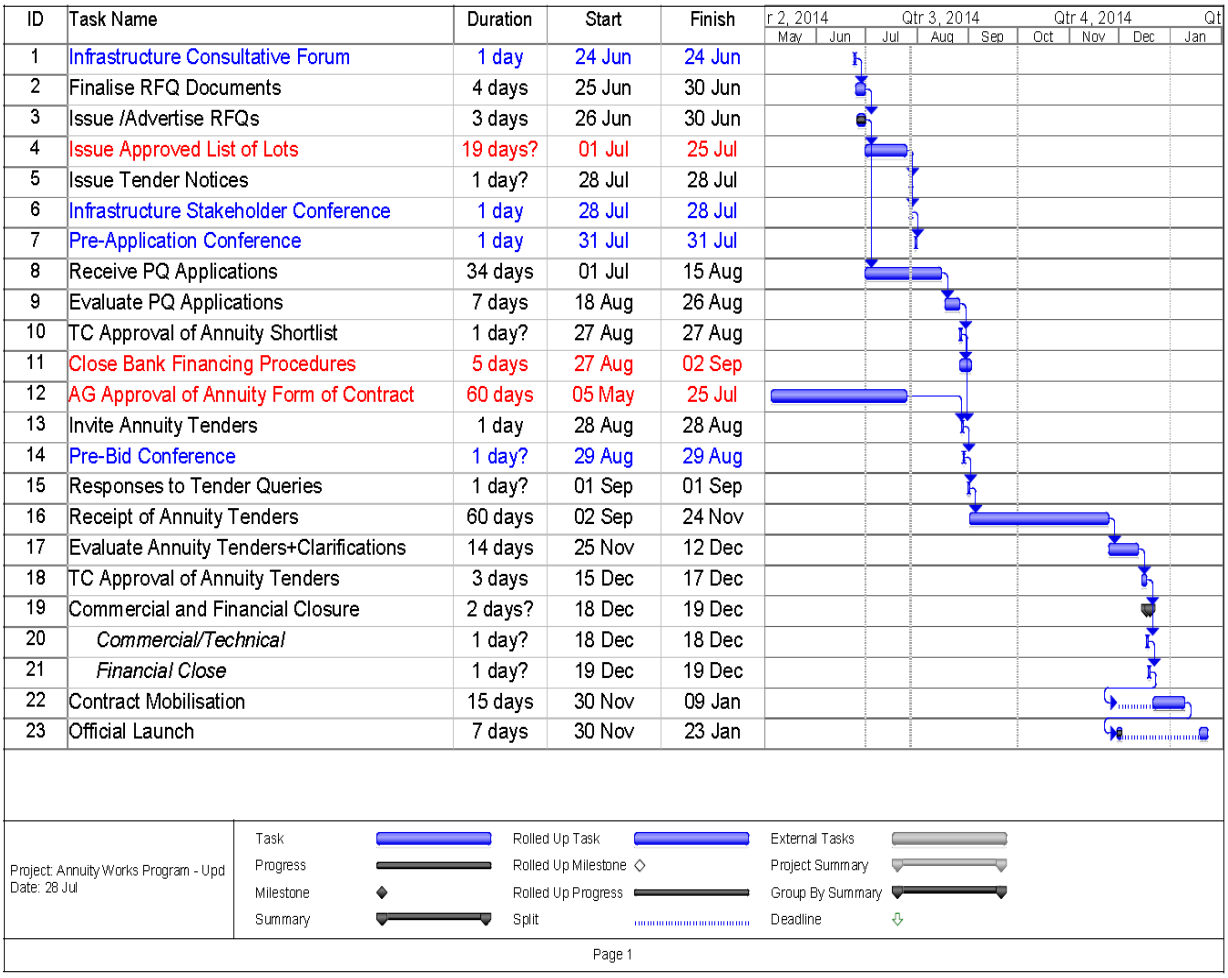
The Road Annuity Program (RAP) is a PPP program that was introduced in Kenya, based on its success in India (Kenya Engineer, 2014). The program targets construction of 10,000 kilometers in three phases (MMAN, 2018). The decentralization of roads (Legal Notice No. 2 of 22nd January 2016) allocated county governments 121,456km of roads and the National Government 39,975kms. Kenya Rural Roads Authority was assigned 18,961kms, Kenya National Highways Authority was assigned 18,549 kms and Kenya Urban Roads Authority was assigned 2,465kms. The 10,000 kilometers under RAP were among the roads assigned to the National Government. The bundle of projects (several roads put together into lots) is expected to be carried out over the period of five years at a cost of USD 2.8billion. The design, construction and maintenance will be carried out by private companies (APAC, 2018). The payment was to be on agreements between the National Treasury, contractor and participating commercial banks. The target budget under the annuity framework was as follows in Table 1.1.

Table 1.1: RAP Targets and Cost Estimate

Phases	**Target output (km)**	**Cost estimate (billion KShs)**
Phase 1	3,000	40
Phase 2	2,000	60
Phase 3	5,000	160
Totals	**10,000**	**260**

Kshs. 3.0 billion was allocated to RAP in the FY 2014/15 budget for Phase I. The program targeted to construct Low-volume rural roads at a range of Kshs. 20-25 million/km while Trunk

and Urban Roads at a range of Kshs. 50-80 million/km. The roads which were to be implemented under Annuity framework had been packaged in lots and Procurement for Phase 1 Annuity projects, request for applications was done on 26th July 2014 and was due by 11th August, 2014. Pre-Application Conference was held for 31st July, 2014 (Kenya Engineer, 2015). Private Sector players were sensitized on 24th June, 2014 while Road Development Stakeholders sensitization was on 30th July, 2014. Figure 1.1 shows the detailed procurement plan for phase 1.



ID	Task Name	Duration	Start	Finish
1	Infrastructure Consultative Forum	1 day	24 Jun	24 Jun
2	Finalise RFQ Documents	4 days	25 Jun	30 Jun
3	Issue /Advertise RFQs	3 days	26 Jun	30 Jun
4	Issue Approved List of Lots	19 days?	01 Jul	25 Jul
5	Issue Tender Notices	1 day?	28 Jul	28 Jul
6	Infrastructure Stakeholder Conference	1 day	28 Jul	28 Jul
7	Pre-Application Conference	1 day	31 Jul	31 Jul
8	Receive PQ Applications	34 days	01 Jul	15 Aug
9	Evaluate PQ Applications	7 days	18 Aug	26 Aug
10	TC Approval of Annuity Shortlist	1 day?	27 Aug	27 Aug
11	Close Bank Financing Procedures	5 days	27 Aug	02 Sep
12	AG Approval of Annuity Form of Contract	60 days	05 May	25 Jul
13	Invite Annuity Tenders	1 day	28 Aug	28 Aug
14	Pre-Bid Conference	1 day?	29 Aug	29 Aug
15	Responses to Tender Queries	1 day?	01 Sep	01 Sep
16	Receipt of Annuity Tenders	60 days	02 Sep	24 Nov
17	Evaluate Annuity Tenders+Clarifications	14 days	25 Nov	12 Dec
18	TC Approval of Annuity Tenders	3 days	15 Dec	17 Dec
19	Commercial and Financial Closure	2 days?	18 Dec	19 Dec
20	*Commercial/Technical*	1 day?	18 Dec	18 Dec
21	*Financial Close*	1 day?	19 Dec	19 Dec
22	Contract Mobilisation	15 days	30 Nov	09 Jan
23	Official Launch	7 days	30 Nov	23 Jan

Figure 1.1: Procurement Plan for Phase 1 of RAP (Source: Kidenda, 2014)

More than 147 bidders applied for pre-qualification out of which 49 contractors were selected to embark on phase 1 of RAP (Ndaiga, 2014). To date, only nine lots have been earmarked for implementation through the annuity program while the rest have been prioritized for development under other programs (KeNHA, 2018). The status of projects earmarked for implementation as of March 2019 was as shown in table 1.2 below.

Table 1.2: Kenya PPPs Programme Status –March 2019 (Source: PPP Unit)

	Lot No.	Contracting Authority	Project Status
1.	Lot 33	Kenya Rural Roads Authority (KeRRA)	Financial close was achieved in February 2018. The PPP Service Provider is INTEX RAF 1 Limited, a limited company incorporated under the provisions of the Companies Act, 2015. The Service Provider has moved to site and construction is ongoing.
2.	Lot 3	Kenya National Highway Authority (KeNHA)	The project is currently in negotiations towards financial close.
3.	Lot 15	Kenya Urban Roads Authority (KURA)	Contract has been approved and shall be signed shortly.
4.	Lot 18	KURA	Contract has been approved and shall be signed shortly.
5.	Lot 32	KeNHA	Contract has been approved and shall be signed shortly.
6.	Lot 8	KeNHA	Contract negotiations are ongoing.
7.	Lot 10	KeNHA	Contract negotiations are ongoing.
8.	Lot 20	KURA	Contract negotiations are underway
9.	Lot 6	KeNHA	Tender evaluation is underway

Kenya National Highways Authority has earmarked for implementation; **Lot 3** which involves the construction and rehabilitation of the roads to augment the existing roads from Modogashe–Habaswein–Samatar (68Kms) and Rhamu-Mandera (75Kms); **Lot 6** which involves the construction and rehabilitation of Kilgoris - Lolgorian (B3) Kehancha – Lolgorian, Turbo - Shikhendu – Endebess, Kakamega – Ingotse –Namukoye - Nzoia River –Musikoma (JN C33) Road, Ugunja - Ukwala – Ruambwa, Ruambwa - Port Victoria and Kimaeti - Malakisi–Lwakhakha through Njukini; **Lot 8** involves the construction and rehabilitation of the

71.5 km roads to augment the existing roads from Bomasi to Magadi; Bomas to Ruiru via Dagoreti and other link roads; **Lot 10** which involves the Ngurunit-Nursery (South Horr) (B74) Road- approximately 136 Kms; and **Lot 32** which involves construction of Illasit to Taveta road through Njukini on (KeNHA, 2018). Construction and rehabilitation of Nanyuki – GwaKungu (B22) Road 83.6 Km and Laisamis – Kenya Urban Roads Authority has earmarked for implementation; **Lot 15** comprising of ten roads varying in length from 0.90 km to 6.80 km in the central part of Kenya that total 44.90 km and are in Nyeri, Laikipia, Kirinyaga, Embu, Murang'a and Tharaka Nithi counties; **Lot 18** comprising of six roads varying in length from 3 km to 7.60 km, totaling35.10 km in length, located in Kakamega, Vihiga, Bungoma and Busia Counties in the western part of Kenya; and **Lot 20** involves the construction and rehabilitation Kamiti-Roysambu-Kasarani-Mwiki Roads, James Gichuru-Thika By-pass, Kajiado By-pass and Komarock road (65.5kms project on DBFOMT PPP Model with 10 years payment plan**)** (KURA,2018).

Kenya Rural Roads Authority has earmarked for implementation; **Lot 33** which encompasses the construction of Ngong to Isinya ("Ngong-Kiserian-Isinya") and from Kajiado to Imaroro ("Kajiado-Mashuru-Isara") which is approximately 90.55km (on DBFOMT PPP Model with 10 years payment plan**)** and the construction of the project is ongoing (PPPU,2018). The Authority further implemented the Low Volume Sealed Roads approach for road construction in an effort to reduce construction costs and project delays. Low Volume Sealed Roads approach uses existing road corridor and reduces pavement width, hence minimizing social disruptions and degradation of the environment. The program is equitably distributed in forty-three counties and the payment is based on the milestone done by the contractor. In 2016-2017, 258kms was upgraded to bitumen standard against a target of 83kms while in 2017-2018 760.7kms against a target of 503kms was upgraded to bitumen. As at June 2018, a total of 5,757.4 kms had been procured and were at various stages of implementation (KeRRA, 2018).

The RAP has faced several challenges since its commencement. The Transport and Infrastructure Ministry indicated that the traditional EPC (Engineer/Procure/Construct) model was more favorable than the annuity program because of the following (Nduire, 2017); [1] Concerns of inflated costs of construction [2] Rejection by the banks on the government's proposal of a uniform interest rate of 12-13 percent to be levied on loans to contractors [3] Slowness due to

involvement of many parties — financiers, legal teams and contractors [4] Local contractors could not get funding because commercial banks qualified them as credit unworthy. The Bank's rejection to lend contractors can be attributed to the existing economic situation in Kenya which is characterized by the loss of local currency value, surging lending rates and high default risk. The banks could not charge contractors a uniform rate of interest as they argued that the contractors were borrowers like any others (Anyanzwa, 2015). Further, it can be seen that PPPs still being new in Kenya, banking industry's knowledge about the PPPs is limited. Kamau (2016) study of the PPPs in Kenya indicated that for the 71 ongoing PPP projects, no commercial banks was involved. The banks with RAP knowledge claimed that the financing model was too complex and had potential to lead to increased non-performing loans (Kamau, 2016).

The RAP is also too ambitious to implement as the 10,000km is to be done in 5 years. 91 percent of the projects, valued at Sh3.1 trillion, should be completed before 2022 implying that 1,230 projects that should be finished in two years (Omondi, 2017). Considering what has been done: at independence, Kenya's road network was 45,000 km of which 2,000 km (4.4%) was paved (Kidenda, 2014). In 2014, at the time of introduction of RAP project, the road network was 161,000 km, of which only 14,100 km (8.8%) was paved and this implies that the average rate of expansion of paved roads in the first 50 years after independence was at 242 km per year. However, the Jubilee government through RAP aims to pave 10,000 km in five years in accordance with their Manifesto: an intention of paving 71% of the road network in the country.

1.2 Problem Statement

The application of PPP model in infrastructure development continues to stir considerable research interest in many countries (Lam and Yang, 2020). For example, in Kenya, a discussion paper by (Oguso, 2015) indicates that PPP legislation was enactment in 2013. This was done for the simple reason that, Kenya faces a steeply rising infrastructure gap particularly in the road sector to serve a surging population growth, just as it is in many other global south countries (Chowdhury, Chen & Tiong, 2011; Shendy, 2011). Presently, the Big Four Agenda, being the prevailing development vision carrier in Kenya, has planned for a Road Annuity Program which will see the development of up to 10,000 kilometres of road network using PPP model. This ambitious plan incorporates the participation of private investors who are to be paid upon the construction, completion and maintenance performance. Because of this rising interest in use of

PPP model both in Kenya and elsewhere, a lot of studies have been done to identify factors influencing its adoption.

For instance, in a study by (Roumboutsos and Macário, 2013), it was established that even though the value for money (VfM) is a major factor to consider before on-boarding a PPP project, stakeholder participation is equally a very important factor to consider. Similarly, a study by (Kang et al., 2019) listed at least five determinants of success on a PPP model driven project in developing countries as being; political, economic, legislative, financial and managerial issues. Further, another study done in Yemen by (Al-Shareem et al., 2015) singled out ,governance policies, market readiness and environmental uncertainty as key external factors influencing the readiness for implementing public-private partnerships among public and private organizations. In the United Kingdom and China, a study by (Wang et al., 2020) found that governance framework also plays a crucial role in the implementation of Public-Private Partnerships.

Given that the legislative framework in Kenya on PPP model of investment is hardly a decade old, research on its performance is still in its cradle stage. Credit however goes to a handful of scholars who have tried their hand in this area. For example, Oballa (2014) studied the implementation of PPPs in the public sector in which he identified governance as a key success determinant which affirmed the results of Muasya (2014) study on the Ministry of Transport and Infrastructure. Similarly, Bosire (2015) study assessed the determinants of success in infrastructure projects financed by PPPs in Kenyan counties whose finding identified financing risks as a major barrier discouraging private actors' interest. This reinforced the record of a similar study by Ojwang' (2015) on the affordable housing sector in the Nairobi City County. In 2018, a study by Kiplagat (2018) on the implication of PPP model on road infrastructure development in Kenya affirmed its usefulness in spurring development in rural areas.

Separately, some other scholars like (Muthoga, 2019) have argued that the PPPs' legal framework is still very weak in Kenya. Additionally, the study by (Idris, 2020) also listed positive financial feasibility and a steadfast government commitment as other influential factors for PPPs success stories. These findings do add to the need for a continuous building of staff capacity as per the study by (Moses, 2019). From the ensuing discussion, there are five emerging strands of determinants on the success of any PPP, that is, the project selection process factors,

economic viability factors, procurement process factors, risk factors and governance factors. This study is of a strong view that, the Road Annuity Program (RAP) in Kenya is a unique form of PPP model which is allowing both the private and the public sector actors to participate in the identified road projects sharing a view in the work by (Oguso, 2015). Actually, the successful RAP implementation is hailed as a way of opening up the rural Kenya for economic development. Despite this positive potent nature of RAP in Kenya, little has been done to assess the extent to which the above five factors do influence its successful implementation from the viewpoint of the participating private and public stakeholders. To fill this knowledge gap, the present study, therefore, aims at answering the question, *to what extent is the implementation of RAP in Kenya influenced by the five factors that are known to drive the success of PPPs?* The outcome of this study will identify the order of influence just as it will tell the nature of the relationship between the five factors. The study's finding may in the future shape the modification process of the PPP policy framework and will also illuminate the direction which the future research needed in the PPPs' landscape in Kenya should follow. The PPP investors, policymakers and researchers may benefit a lot from the conclusion and recommendation of the study.

1.3 Objectives

The main objective of this study is to assess the extent of influence of the following 39 factors clustered into five themes; the project selection process, economic viability, procurement process, risk allocation and governance on the implementation of PPPs in the RAP project from the viewpoint of the participating private and public stakeholders. The specific objectives of the study are;

i. To assess the factors influencing the implementation of PPPs in the RAP in Kenya.
ii. To establish a statistical relationship between the five themes in RAP in Kenya.

1.4 Research Questions

This study will answer the following questions;

i. Which factors influence the implementation of PPPs in the RAP in Kenya?
ii. What sort of relationship exists between the five themes which influence PPPs in RAP?

1.5 Scope of Study and Limitation

The focus of the present study is on Kenya's Road Annuity Program which is one of the PPPs strategies being used by the Kenyan government to construct roads and reduce budgetary constraints. Particularly, this study is to examine how the five factors influencing the PPPs' implementation are playing out on Kenya's RAP which is a special form of a PPP scheme. It will also compute the Spearman's correlation coefficient between the five themes. The study is therefore limited to the RAP projects being implemented by the three road agencies in Kenya; KeNHA, KURA and KeRRA. These three agencies were created by the Kenya Roads Act of 2007 and are the only entities with legal mandate to undertake road developments. The Road Annuity Program is a special scheme whose framework is meant to spur the development of up to 10,000 kilometers of road length; it is only those three agencies that are involved. The program is being supervised by the Ministry of Transport, Infrastructure, Housing, Urban Development and Public Works through the same road agencies using The Public Finance Management (Road Annuity Fund) Regulations 2015 (regulation 2 (2)).

1.6 Significance of the Study

1.6.1 Policy makers and PPP investors

This study's findings will benefit policy makers and PPP investors. The insights from this research will inform policy makers on the factors influencing RAP implementation in Kenya which runs on PPP investment model. The policymakers are likely to use the identified barriers impeding the success of RAP projects to shape policy improvements that will do away with bottlenecks. The investors may use the ranked 39 influencing factors to plan their future intentions to invest in road annuity programs in Kenya. Therefore, the research will guide on where PPPs investment model needs reforms so that future projects may run smoothly without any bottle necks.

1.6.2 Researchers and academicians

The research community drawn from both industry and academia may use the results of the study to model a more innovative road annuity program in their laboratories for the future benefit of society at large. The study will be a reference for researchers and academicians in future

studies. Academicians and researchers in the area of PPPs will find it valuable to refer to some of the areas of discussion in this study.

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CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the relevant literature related to the 39 factors clustered into five themes that are deemed to be influencing the successful implementation of PPPs initiatives and how they relate to the success of a RAP project roll out in Kenya's road sector. These are extracts from both theoretical and empirical reviews. The chapter also presents a conceptual framework guiding the study.

2.2 Theoretical Review

This study hinges on the political economy and stakeholder theoretical frame. From a neoclassical economics firm perspective, a road investment involves a rigorous planning process to ultimately benefit all stakeholders involved. In planning, a lot of decisions are made by people placed at different levels. In the scheme of development, the setup of systems in place contributing in the decision process is termed as an organization. Experts in development argue that in order to maximize organizations' performances, they (organizations) sometimes resort to use of partnership approaches. A partnership is a common concept where a cooperative action is expected. For any intended development by a government, the actors in the partnership are drawn from both the public and private sectors (Babatunde, Opawole & Akinsiku, 2012).

The popularity of the use of partnership approach in government development initiative is due to some expected accruing advantages such as; mutual benefits for the parties, potential synergy in action, development catalyst, cooperation, resource and risk sharing, efficiency and creativity (Osei-Kyei & Chan, 2017). Partnering provides the parties involved with mutual objectives which stimulate trust buildup, teamwork and focus to attain their objectives efficiently (Kavishe and Chileshe, 2018a). The PPPs originated from the partnership concept and is currently the most popular partnership approach in national development programmes of many countries world over. Scholars of PPPs argue that they are based on the common interests of the public and private parties. PPPs programmes are hailed as being a fostering force in the delivering of public infrastructure to people of many nations (Al-Saadi and Abdou, 2016). This approach has been widely adopted since the late 1990s but is a relatively new phenomenon in Kenya (Chileshe et al., 2020). In fact, most of the PPPs' projects are known to face a lot of teething challenges

(Ngacho and Das, 2014). In order to explain or forecast PPPs scenarios, it is important to understand how the two theories; Political economy theory and the stakeholder theory work in a concert frame help deliver PPP projects.

2.2.1 Political Economy Theory

This theory is based on the works of Adam Smith, John Stuart Mill and Jean-Jacques Rousseau. The theory expounds on the behavior of governments and firms based on their motivation. The theory brings out the relationship of the PPPs actors in their capacities (Buchanan, 1996). The outcomes and PPPs social values are illustrated by the political economy of regulation (Obermann, 1999) as PPPs are regulations by virtue of them being long-term contracts. The regulation outlook is portrayed by the 'Economic theory of regulation'(Peltzman, 1976). Political economy theory assumes that all governmental actions are influenced by the political interest of the ruling class (Bruton et al., 2010). This sort of notion is popularly called the 'nirvana fallacy' which assumes the following (Boardman et al, 2012):

i. Cooperation between the public and private actors;
ii. Maximization of the social value by the public entity;
iii. Minimization of government expenditures by the private sector;

Whereas the aim of the economic theory of regulation is to portray a "perfect solution fallacy", most often, it has been found that the corporation between the private and public sectors is normally riddled by deep seated suspicion. As a result PPP models sometimes attract least interest from the private sector actors hence the "nirvana fallacy".

This theory is important to this study in that it informs the governance and economic-related factors influencing implementation of public private partnerships. Policies that anchor PPP model in RAP implementation require well-informed decisions, which should be achieved through proper governance. And these decisions must be subjected to the legislative political debates (political economy) in order for the transparency door to open. In the end, such actions end up potentially buoying the confidence of the private sector actors to get involved in the public sector driven PPP implementations appeals.

2.2.2 Stakeholder Theory

The stakeholder theory was first described by Dr. F. Edward Freeman, a Professor at the university of Virginia, in his landmark book," Strategic Management: A Stakeholder Approach" (Freeman,1984). The theory suggests that shareholders are merely one of many individuals holding shares in a company. By this, it is assumed that a stakeholder ecosystem entails anyone interested and is involved in or is affected by the company such as; the employees, the environment around the company plant, vendors, governmental agencies and more. The theory is centered on "the principle of whom or what really counts" which revolves around the ethical consideration of every organization's actions (Freeman, 1984).The theory stands as an ethical code prescribing equitable profit between the company and its shareholders at large. The theory is defined by three taxonomies: descriptive, instrumental and normative (Donaldson & Preston, 1995).

In the stakeholder theory, a PPP project is defined as an 'environment' with different stakeholders who have different relationships with each benefiting equitably (Li et al., 2013). The client's role is to deliver the infrastructure asset by ensuring that the project objectives are met and the interests of the public are safeguarded (Shaoul et al., 2012).The private sector is branded as a group organization that jointly operates through a project company called a Special Purpose Vehicle (SPV) (Grimsey & Lewis, 2004). The SPV is in charge of negotiations and contract agreement with the Client or the implementers (McErlan et al., 2016; Boer et al., 2015; Roehrich & Caldwell, 2012).

This theory is important to the study as it explains the project selection factors, procurement factors and the risk allocation factors in the implementation of projects. This is because both private and public organizations are bound through contracts and bundle solutions, skills and resources needed during the different stages of project implementation.

2.3 Empirical Reviews to Identify Factors Influencing the Implementation of PPPs

Empirically, pundits do argue that the private sector is more efficient, and is biased to complete projects faster and can better maintain the assets over the concession period. This notion is based on the assumptions of: competitive markets, effective identification, pricing and transfer of project risks and the ability to write comprehensive contracts (OECD, 2010). The factors

influencing PPPs in transportation projects can be broadly summarized as: project selection, economic, procurement, risk allocation and governance(Osei-Kyei and Chan, 2015).

2.3.1 Project Selection Factors

The main objective of selecting a PPP project is to provide the best practical solution for the necessity, and to pre-assess how suitable a project is a potential PPP so as to avoid unnecessary resource commitment which can result in unworthy projects (Osei-Kyei et al., 2017a). Unsuccessful projects sometimes result from lack of defining the project and its scope at the commencement of the project (Mirzaa, 2013).Robust project PPP scoping delivers benefits related to uncertainty reduction, including (Hatman,2000): More accurate risk calculations(Li et al., 2005); Reduced control costs; More effective teams and improved planning (Babatunde et al., 2012; Babatunde and Perera, 2015).When a PPP project selection is being done, the following questions about a project may assist governments in resolving uncertainty as to the PPP scope(Chapman &Ward, 2002): Which parties are involved?, What is to be achieved?, What are the parties' interests?, How will the work be done and with what resources? And what is the timeline? Amos (2004) prepared a comprehensive checklist of factors to be considered when selecting the transportation PPPs projects at various stages in the PPP process and broadly classified the factors as: project objective, practicability and value for money.

Project Objectives is one of the factors considered during project selection which motivates the private sector. Some of the motives for private sector financing include (World Bank, 2004): [1] Introduction of technology and innovation from private sector [2] Leveraging on the private sector strengths of timely project delivery and within budget, [3]Imposing budgetary certainty by establishing current and future infrastructure costs [4]A tool to developing capabilities by cooperation with large international firms [5] A way of gradually exposing state owned enterprises and government to increasing levels of private sector participation (especially foreign) for skills transfer[6] A way of increasing the country's competitiveness in terms of its facilitating infrastructure base [7] Boosting the country's business and with infrastructure development industry [8] To obtain value for money.

Transportation projects under PPP may have different goals such as transport accessibility and affordability increase in the country concerned or the need to involve the private sector due to lack of funding to meet the infrastructure demand (Mwelu et al., 2019). Whichever the goal set,

the government entity should ensure that the PPP projects meet the criteria set. For instance, for the World Bank projects, key objectives to be met include: Transport accessibility and affordability increase for the poor, adherence to environmental and other safeguards and economical (Amos, 2004). Some of the key challenges experienced in meeting the project objectives are in some countries; PPPs being initiated without a clear reason despite being uneconomical projects. The other challenges experienced is the projects may have clear goals but are wholly unrealistic which may lead to involvement of private sector in assuming high risks for low rewards (Kavishe and Chileshe, 2019). The consequence of not having clear objects is that in the long run, the projects become costly in time and money, they may affect the government credibility and also on some instances result in failure (Amos, 2004).

According to project selection, Project practicality is one of the areas to be considered. Private parties' participation in projects requires a strong policy commitment (Amos, 2004).World bank (2004) study concluded that majority of transport projects PPP financing requires a legal enabling, enforcement environment and legal and financial advisors for their success; however, on some instances the implementing agencies may not be sufficiently capable of implementing or managing the specialist advisers. Therefore some of the key requirement for the implementing agencies is the patience as the process might require several years of preparation and the know-how to ensure that the agreement is properly monitored. The other suggestion which will ensure practicability is carrying out some early market tests in order find out if there is significant private sector interest. Consequently, the institutional environment prerequisites strengthening by ensuring that that the selection process is not tainted, there strong regulation and there is concession agreements are enforced.

PPP proposals ought to provide equivalent or better value for money than a public sector project approach (Amos, 2004). What investors look out for in projects is their sustainability, financial viability and profitability. Assurance of value for money is influenced by the economic environment, government policy, and the competition (Grilo et al, 2005). Investors will venture in PPPs if they have significant financial interest on a reasonable scale (Ng et al., 2010). In order to ensure value for money, one of the ways to check is a comparison with a public sector project "base case" and assessing the incremental net benefits. An assessment against an appropriate distribution of risks should be done so as to estimate the value for money. Little private sector

risk implies that higher government costs while wrong risks transfer to the private sector imply escalation of financing costs, improper risk management and quantification (Amos, 2004). A realistic analysis of the costs to the government and the private entity should be done prior. It is estimated that about half of all concessions become subject to renegotiation, often due to inflated demand or yield estimations, or unrealistic operating cost assumptions. From the foregoing, at least 14 sub-factors have been extracted on which stakeholders will give their scores on how they feel they influence RAP implementation as shown in Table 2.1.

2.3.2 Economic Factors

Transportation investment are important for economic growth and social benefits, however, they requires a large capital investment upfront (Cchun,2014). Although relatively new in Kenya, private sector financing for highway infrastructure is common in developed countries. Developed countries such as Spain have been active in highway PPPs since 1960s. Spain has used 22 toll highway concessions to construct its 3,000 km national roads at little cost to the government. Creating a need for new sources of capital such as public/private tolling, expanded private equity has always been one of the prime motivation for public agencies to adopt PPPs.

GAO (2008) found that the key advantage for the concessionaires is they can easily access funding which is normally their own capital or a combination of their capital with loans from equity investors, commercial banks, or bondholders to pay project costs and when the project is completed they hope to use project income to payback their lenders. For example in the USA, the Private sector has an advantage over public sector because they can have higher total debt capacity than the public sector which must abide by legal limits for any debt issued. This comes with an advantage of the private partner increasing their up-front financing for projects as they are comfortable with longer- term borrowings (FHWA, 2010). However the main disadvantage is it has a higher cost of raising capital compared to tax-exempt and lower interest loans available for the public sector and a higher chance of bankruptcy due to unforeseen risks or unrealistic revenue projections used to pay off the debt.

Given the scale and challenges of the capital investment, robust financing instruments are required to find an optimal financing structure. It is more favorable when a PPP project is financed by banks in the same country as it comes with advantages such as complete avoidance

of risk and synergy in the activities of PPP projects' implementation as banks are acquainted with the business conditions (Yescombe, 2010). Commitment by the Government of Kenya to improving private sector participation can be seen by the National Treasury's gazettement of regulations to operationalize a special fund for roads annuity program. This fund will meet the National Government's annuity payment obligations of construction and maintenance of RAP roads. The regulations have been set to ensure the road annuity program operates smoothly by guaranteeing timely payment of contractors. However, Kamau (2016) found that Kenya's transport sector received a share of 1% of the accounts loans and advances compared to households which had 83.6% while trade had 9.8% and agriculture 2.9%. This indicates that transport sector is viewed as a risky sector. When it comes to the Road Annuity Program in Kenya, only two commercial banks financed Kshs. 48 billion out of the Kshs. 300 billion required (Kamau, 2016). In addition, Kenyan banks are reluctant to commit funds to the annuity program because the financing models seem complicated and likely to cause losses.

In the United States, Department of Transportation (USDOT) has developed various innovative finance tools and programs (Federal Credit Assistance Tools, Federal Debt Financing Tools and Federal-Aid Fund Management) to assist project sponsors in improving the effectiveness of grant management techniques and bridging investment gaps between available resources and infrastructure needs (FHWA, 2013). However, while these innovative finance program facilitate the delivery of projects, most of the States still lack the good will of the government and revenue sources to successfully realize PPP projects (Sereyrithy, 2014). A good example is in the USA is the $2.5 billion 99- year lease proposal for the Chicago Midway Airport project in 2008 which was canceled because the consortium could not secure financing (CChun, 2014). From the foregoing, at least 5 sub-factors have been extracted on which stakeholders will give their scores on how they feel they influence RAP implementation as shown in Table 2.1.

2.3.3 Procurement Factors

During the last two decades, Public Private Partnership (PPP) has grown as an alternative procurement method to traditional methods of delivering public infrastructure. The main challenge in procurement is the concessionaire in infrastructure sometimes opens up to opportunistic behaviors from both private and public sectors and generally requires large specific sunk costs- costs that cannot easily be retrieved if economic conditions deteriorate or if the

operator discontinues operations. Gausch (2014) after studying more than 1,000 concessionaires in Latin America and the Caribbean which were constructed under PPPs found that such high sunk costs had tempted government to be opportunistic. Typical examples arising from such a situation are (Gausch, 2004): [1] Either a government seeks to secure popular support during a reelection campaign by cutting tariffs or not honoring agreed-upon tariff increases which were granted by a previous administration, [2] A new administration pursuing different priorities that require a different action plan, [3] The concessionaire may insist on contract renegotiation so that they can get more favorable terms. and [4] The concessionaire may also reopen other issues to its benefit because there isn't any competition once the concession contract is awarded and the private operators have a stronger bargaining position (Bajari, 2006).

The highway public private partnerships also face the challenge of additional costs associated with the required financial and legal advisors (GAO, 2018). These relatively higher transaction costs have been viewed as one of the main reasons for the incomplete nature of concession contracts (CChun, 2014)). Hughes et al (2006) study on the cost of the construction industry's procurement acknowledges that there is a "desperate need for robust data" in respect to tendering costs. Although identifying costs seems to be direct, it may not be the reality in bidding costs identification for specific projects. The major problem of quantification of the costs of tendering has been reported in different literature as the tendency of estimating the bidding costs without accounting for the relationship between the different project stages. Most of the costing is founded on generalized estimates, rather than data analysis of the value added by the expenditure (Hughes et al, 2006).

Mexico's highway PPPs projects had high tolls which led to empty highways and contracts renegotiation. This is because of a longer construction period which necessitated the need for the government to pump US $ 2 billion to save some of the firms from bankruptcy (Engel et al. 1997).Prudent procurement of the PPPs will highly influence the way the services will be delivered as well as guaranteeing the private party hence avoiding bankruptcy. From the foregoing, at least 7 sub-factors have been extracted on which stakeholders will give their scores on how they feel they influence RAP implementation as presented in Table 2.1.

2.3.4 Risks Allocation Factors

Risks can arise in any road infrastructure investment irrespective of ownership structure, financing or operation. PPPs in transportation normally have higher risks especially because of their long duration (ranging from 35 to 40 years, or even up to 99 years), which can compromise project performance (FHWA, 2012). It is therefore very crucial for both public and private parties to comprehend and address the risks involved in a PPP project before they are involved. The private or public entity will only show interest in PPP project when the risks are less than the reward which the project gets. The risks can fall in any of the stages of the project: Development phase: Construction scope changes: Operational concerns (Building Solutions,2018).

For better risk allocation process, a relationship of trust is required between the parties should exist first and in order to ensure the trust relationship the following can be done (Erikson et. al., 1978): understanding of who bears, owns and manages the risks, dedication of more time, effort and adequate experience in the project so that the management or mitigation of the risks is ensured, incorporation of a negotiation phase before the commencement of the contract for the purpose of trust relationship building and having sufficient risk-sharing or risk-reward system for benefits sharing if the risk do not occur during the project. These criteria form the basis for better risk allocation between owners and contractors which ought to be followed to avoid inappropriate risk allocation and additional costs for parties involved. The importance of risk allocation is that it ensures balanced responsibilities. Risk allocation is a primary measure of assignment between the public and private sector. Walker (2007) study indicated three key principles in structuring PPP projects in terms of risk; identification of the key risks , evaluation of the acceptability level of each risk and allocation of risks to the parties.

Research on risk allocation in PPPs in different countries conclude that: the public and private sector partners should accept risk allocation schemes before the contract is awarded so as to attain VfM (Jayaseela & Tan, 2006); Grimsey& Lewis, 2000; Ibrahim et al., 2006; Abednego & Ogunlana, 2006). One of the key transportation PPP projects which experienced problems due to risks allocation is the Taiwan's high-speed railroad project which begun in the late 1980s but was faced with financial problems in 2009. Taiwan carried out an international competitive bidding for its first PPP project in October 1996, the western corridor Taiwan High Speed Rail (THSR) project, and the contract was signed in July 1998, which was the largest Build-Operate-

Transfer (BOT) project worldwide at the time(Hsueh & Chang, 2017). Taiwan High Speed Rail Corporation (THSRC) experienced deep financial trouble with consistent under projected ridership resulting in bankruptcy. The financial problems were rooted to the following: planning, inaccurate ridership projections and cost-benefit analysis and the contracting process. The project had a record of 500-stakeholder engagement and it was discussed in the legislature for fifteen years. However, during the process the banks were ignored because the Engineers thought that they had no responsibility. The Government also thought that the banks had no responsibility during the project planning and also distancing themselves in making key decisions affecting the operator.

The issues of transparency in the project became more pronounced and the leading banks did not carry out any independent evaluations of ridership projections. However, there was political goodwill since the president wanted big infrastructure. Due to lack of proper projections and estimates, Taiwan High Speed Rail Corporation (THSRC) (the operator) after two years of operation was in financial trouble because of low ridership which was worsened worldwide economic crisis. Between 2002 and 2014, a total of 1,217 infrastructure development projects under PPPs were launched for improving Taiwan's infrastructure, most of which were successful (Hsueh & Chang, 2017). The success factors identified for these projects include adequate legal frameworks, a conducive investment environment, political good will and public support (Hsueh and Chang 2017), same issues which were earlier identified by (Yuan et al.,2010; Al-Saadi and Abdou, 2016) for China and United Arab Emirates respectively.

The Kenya Railways PPP with Rift Valley Railways (RVR) is one of the PPP projects in Kenya which failed due to risk allocation challenges. The 25-year railway management contract between Kenya Railways and Rift Valley Railways (RVR) had to be terminated in 2017 due to several years of underperformance (Otieno, 2018). The main failures identified for the partnership were the lack of maintenance of assets to the set standards and not achieving freight volume targets. The failure to maintain assets led to inefficiencies and unreliable services which caused low cargo volumes and failure to achieve financial sustenance. The RVR argued that the project was costly and the payback period was too long for an investor looking for a quick return on capital, therefore, profit would only be achieved only if the public and the operator were involved in infrastructure and equipment maintenance (Otieno, 2018). From the foregoing, at

least 6 sub-factors have been extracted on which stakeholders will give their scores on how they feel they influence RAP implementation as presented in Table 2.1.

2.3.5 Governance Factors

Governance of a country greatly affects the successful implementation and also the adoption of PPP projects. Previous experience in infrastructure projects can predict PPP outcome of a future project as it reflects governments 'and private party capability. Bad past experiences imply unsuccessful PPP projects and could be a lesson for improvement or might result in discouraging future private investors. Taiwan High Speed Rail (THSR) project and Kenya Railways and Rift Valley Railways (RVR) are classical examples on how Governments have gone a head implementing most PPPs project notwithstanding the challenges encountered in previous projects.

Many researchers have concluded that for the success of PPP to be realized the following is required: appropriate and developed legal framework and regulation ((Cuttaree, 2018); (CCPPP, 2018), (Smith, 2018)), political support (FGN, 2013), Positive perception of the country by investor (MEFMI, 2016), Skilled personnel in management of PPP projects (Kwame, 2011); (Rodriguez, 2019); (Babatunde& Solomon, 2015). The main role of the government is in the development of institutions, processes, and procedures for PPP projects delivery. If institutions are not performing well, PPP projects will reveal lengthy negotiations between parties, sluggishness of reaching closure, inflexibility in risk-sharing, and the termination of many projects (UN,2008).Therefore, in addition to creation of new institutions, the government should develop the essential expertise. Strong PPP systems require skilled managers in creating partnerships, negotiation, contract management and risk analysis. Good governance objectives for PPPs are as follows (UN,2008): Fairness and transparency in the selection process of partners; Assurance that VfM has been attained; Improved services particularly for the socially disadvantaged; Adequate training for those in the concessions; Fairness in incentives and returns for risk takers; Assurance of continuation of services by ensuring that negotiations of disputes are sensible; and Safety and security provision in case of the new threats

Many developed and developing countries have created national PPP units and public private infrastructure advisory facilities. Kenya also has been introducing changes to its legislation and

institutions that enable infrastructure procurement through public private partnerships (PPPs). Dedicated PPP units have full or partial aid of the government to ensure that adequate capacity for the creation, support and evaluation of multiple PPP agreements are availed and reside in government (OECD, 2010).Some major PPP units in different countries include Treasury PPP Taskforce and Partnerships UK in the United Kingdom, National Treasury PPP Unit in South Africa and Kenya PPP Unit. The Public Private Infrastructure Advisory Facility specifies the main functions of the unit: (a) Policy & Strategy formulation (b) Project Creation, (c) Individual Projects analysis (d) Transaction Management, and (e) Contract Management, Monitoring, and Enforcement. In the U.K., the Department's Representative (DR) is one dedicated PPP office responsible for contract administration and monitoring of performance and financials (Garvin, 2009).

In Kenya, PPP Institutional Framework includes the Cabinet, PPP Committee, PPP Unit and PPP Node. The structure facilitates PPP clearance while the Petition Committee facilitates participative dispute resolution. Members of the PPP Committee include; Permanent Secretaries for Treasury (Chair), Planning, Infrastructure, Transport, Lands, Energy, Devolution, the Attorney General, PPP Unit Director & Secretary to the Committee and four private sector members. Members of the PPP Node include the CEO and senior managers in charge of Finance, Legal Affairs, Technical functions, Procurement and Environment and Social Responsibility. High-quality regulation, transparency, access to information, competition, legal framework, proper compliance and enforcement, and adequate appeal procedures are important for the success PPPs from a public policy view (OECD, 2008). Legal and regulatory framework for PPPs should make it easy for investments in PPPs, reduce transaction costs, ensure proper regulatory controls and provide mechanisms for dispute resolution. From the foregoing, at least 7 sub-factors have been extracted on which stakeholders will give their scores on how they feel they influence RAP implementation as shown in Table 2.1.

2.4 Summary of Literature and Research Gaps

Generally, prior studies on factors influencing the implementation of PPPs used methods such as case studies, a questionnaire survey or interviews. Cchun (2014) studied key complex issues

affecting PPPs for transportation projects in the United States. These issues were studied for six case studies in different states and data was obtained through interview and archival records. that PPPs are a means of tapping into private resources by departments of transportation in the US. The study identified and grouped the issues into four key complex issues: Economic, Procurement, Risk Allocation and Governance factors. The study further established that although there are PPP units to facilitate PPPs, there are no standards or best practices set for procurement, concession terms or risk-sharing.

Ball et al. (2007) studied a UK school that was constructed under a PPP. The study reported the following as key challenges experienced: monitoring by the public was not effective, risk allocation was not clear, the government's objective and evaluation criterion was unclear and corruption. These challenges resulted in value for money (VfM) not being achieved. The other challenge was related to the bidding costs which were higher than traditional procurement method. The high bidding costs make PPP projects suitable only for high-capital projects (Ball et al., 2007).

Muasya (2014) studied the implementation of PPPs by the Ministry of Transport and Infrastructure in Kenya. The study sought to establish how the Ministry of Transport and Infrastructure is implementing Public private partnerships and challenges encountered. To obtain primary data, which was qualitative in nature, eight top level executives were interviewed by use of an interview guide. Secondary data was obtained from desk research, the internet and printed records. The study established that improper vetting procedures, political interests and interference, political and socio –economic environment factors and internal vested interests are some of the challenges encountered by the Ministry in the implementation process. The key limitation for the study is that it focused on top executives in the public sector who could be biased for their institution they work for. Further, the research did not collect data for the Private sector Partners.

Bosire (2015) studied the determinants of the success of infrastructure projects financed by public private partnerships in Kenyan counties. The research design used was descriptive where primary data was collected using questionnaires. The study targeted County government employees. The findings reflected that the relationship between government guarantees and

success of the projects was positive and statistically significant. The study did not include data on private partners, the banks and also the contractors who are implementing the projects.

Adongo (2012) studied factors influencing implementation of Public Private Partnerships in Kenya. The study adopted an exploratory survey design and active covered 25 PPPs in Kenya in different sectors. The objective of the study was to identify the major factors influencing implementation of PPP projects in Kenya, establish the major factors contributing to failure of project and to establish the practices that lead to reduction in delay on projects implementation in PPPs. The study identified the following as major factors influencing implementation of PPPs in Kenya: Clarity of project design, project planning and controlling; project organization and top management support; government involvement, regulation and policy; objective management; stakeholder management; and interface towards surrounding projects and management. The major factors that contributed to the failure of project implementation in PPPs were: quality, time, as well as cost-related factors. This study focused on projects in different sectors; transportation, housing and water whose challenges and contractual agreements are different.

The literature review above identifies specific 39 factors clustered into five themes that will be assessed to determine how they affect the implementation of RAP. The 5 themes include; Project selection (14 factors), governance structure (7 factors), procurement processes (7 factors), economic analysis (5 factors) and risk sharing 6 factors). Under each of the five main themes/factors, 39 factors have been identified; see Table 2.6 below. The 39 factors will be presented in a Likert scale for study respondents to give their views.

Table 2. 1 Schedule of 39 factors clustered into 5 themes

Project Objective	1. The Government has clearly spelt out the aims for deploying private sector 2. The RAP project does meets overall tests of economic value 3. The access and affordability of services to the poor has increased 4. The project meets environmental safeguards 5. There is adequate enabling legal and compliance environment 6. The Government is willing to give up appropriate commercial controls to private sector so as to achieve project goals 7. The Government is willing to fund and recruit experienced advisors 8. There is continued commitment through changes of government 9. There is similar and successful PPP in the sector 10. Fair and transparent procurement is done 11. There is private sector interest in financing the project 12. The net benefits obtained are higher compared to traditional methods (EPC -Engineer, Procure and Construct)

	13. The proposals submitted are financially sustainable
	14. The project's impact on government expenditure is realistic and sustainable
	15. There is adequate legal and regulatory framework for PPPs in the country
	16. There is enough required skills in management of PPP projects
	17. There is positive perception of country's risk by the investor
Governance Factors	18. There is good structure systems and business culture in the country
	19. Institutional frameworks favor privatization
	20. There was prior research on the markets and other external forces that could affect implementation of PPP
	21. There is conducive political and socio economic environment.
	22. Small market size in which is worsened by shallow financial markets
Economic Factors	23. High investment capital threshold is discouraging our local companies
	24. There is solid revenue and realistic cost estimations/ realistic revenue projections
	25. There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services
	26. Value for money is realized
	27. There is proper risk allocation
	28. There is adequate clarification of the role to be played by the private sector
Risk Factors	29. There is adequate involvement of communities early enough
	30. There is adequate flexibility in managing macro-risks
	31. There is transparency and integrity
	32. There is increased government costs due to compensation of the participant's risk
	33. There is adequate contract negotiation skills by both parties
	34. There is competitive procurement hence cost-effective partnering
Procurement Factors	35. There is clear understanding and sufficient awareness of PPP options and modalities
	36. There is extensive feasibility study with use of PPP experts
	37. There is proper vetting of the private partners since there is no influence from within the Ministry for some interested and probable partner
	38. There is competitive and transparent procurement
	39. There is adequate monitoring and evaluation of projects

Source: Author 2020

2.5 Conceptual Framework

A conceptual framework describes the study's phenomenon (Adom, 2018) by presenting the relationship between variables and how this relationship answers the overall research objective, as presented in Figure 2.1 below. This study will assess the extent by which the 39 factors clustered into 5 themes influence the implementation of PPPs in the present RAP scheme in Kenya in a ranked order, from most influential to the least influential. Secondly, the study will compute the Spearman's R correlation coefficient to establish which of the 5 themes affect RAP implementation positively or negatively and by what magnitude. From the results, a list of conclusions and recommendation will be developed. The findings may influence RAP policy modification to increase the uptake of RAP in Kenya. This methodological process fits into the

overall goal of assessment of the factors influencing the PPPs in the Road Annuity Program implementation in Kenya.

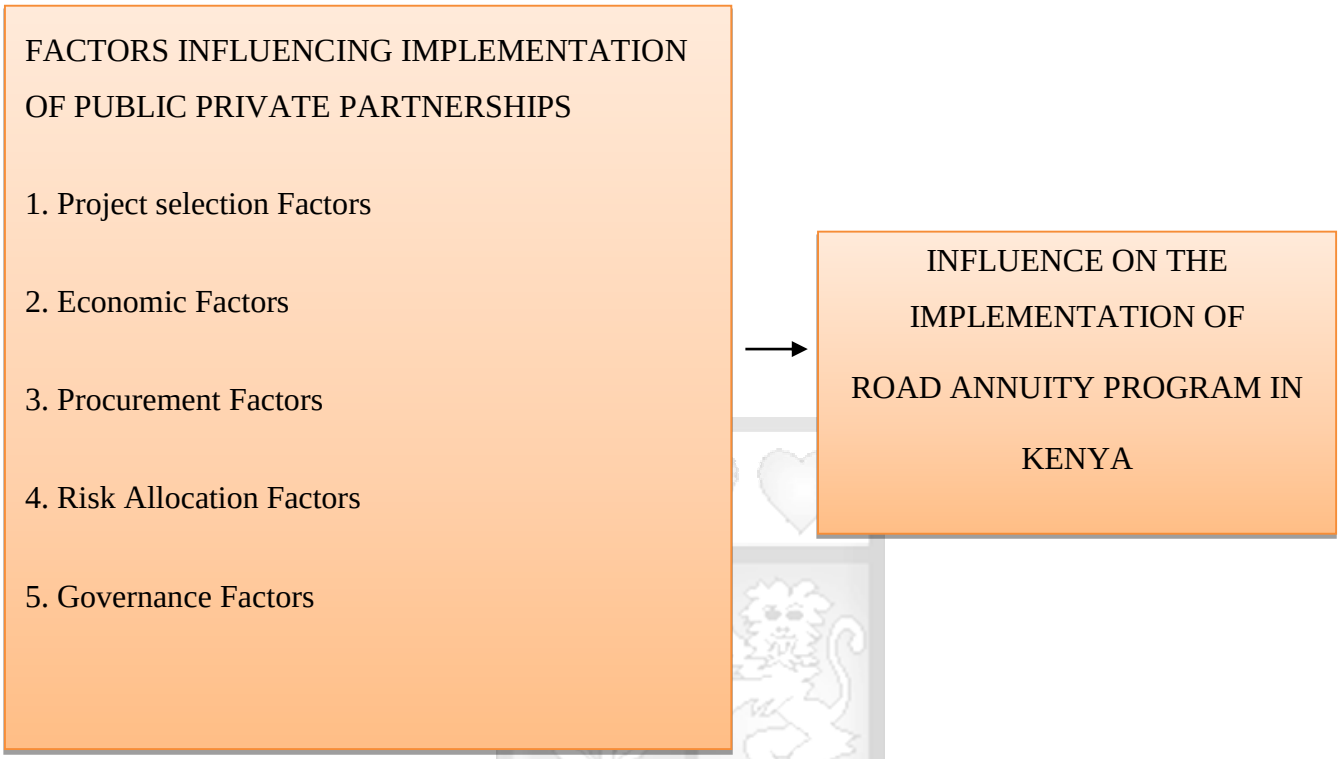

Figure 2.1: Conceptual Framework for the Assessment of the Influence of the Factors on the Implementation of PPPs in RAP in Kenya

CHAPTER THREE

METHODOLOGY

3.1 Introduction

The chapter discusses the research design, study target population, sampling design, sample size and sampling procedure, data collection methods and data analysis procedures.

3.2 Research Design

The study used a descriptive cross-sectional study design. This design was preferred as the study was based on a case study of the participating private and public stakeholders in the implementation of RAP projects in Kenya. The cross-sectional design also helped to assess the views of the stakeholders on the influence of the 39 factors clustered into 5 themes (project selection factors, governance factors, procurement factors, risk allocation factors, economic factors) on the implementation of RAP. The project planning cycle involved different stakeholders at different phases and so the assessment was to record the perceptual view of a given stakeholder as at the time they were involved. The researcher therefore made an observational study of the sample population during a specific point in time, and no follow ups were conducted. In the study, the researcher also collected in-depth quantitative and qualitative data relating to the variables and thereafter performed statistical analysis to determine the findings of the study.

3.3 Sample Frame

In terms of organizational response the study drew sample frame from both public and private sector purposively as devised by Liang and Jia (2018). The study's population sample frame was from the staff at KURA, KeNHA, KeRRA, PPP Unit of National Treasury, the banks' lending /Financiers, Contractors and Consultants. This population sample frame was chosen because they are the individuals who are directly involved in Road Annuity Program, hence were able to provide credible information. Even though RAP was to be implemented in 3 phases only phase 1 commenced albeit lately with the initial proposal to cover 3000 km. In this phase a number of roads were identified and bundled into Lots. As at the time of the study, only nine lots were at various stages of implementation. These were spread thus; five under KeNHA – Lot 3, 6, 8, 10 and 32, Three under KURA – Lot 15, 18 and 20 and One under KeRRA – Lot 33 together

covering a total of 970.45 km. Out of this, it is only Lot 33 which has progressed to construction stage. The balance of 2030 km under phase 1 has been earmarked for development using other programs.

3.4 Selection of Respondents

PPPs are relatively a new phenomenon in most developing nations like Kenya (World Bank, 2016). It is for this reason that this study chose the purposive sampling method. Purposive sampling procedure allows the selected participants to provide the most information-rich data. Accordingly, use of a criterion-based approach was considered ideal for the study in interviewees selection (either a public partner, or private partner or a financier, consultant or a contractor to the road PPP projects). This method has been hailed as being user-friendly for a study such as this. For example, in New Zealand, (Liu and Wilkinson, 2011) used the method to assess the critical success factors (CSFs) for PPP-related projects. Similarly, Osei-Kyei and Chan (2017b) used the method to compare the public and private sectors' perception on key critical factors for the implementation of PPP policy in Ghana and Hong Kong. Additionally, purposive sampling method easily allows the research studies to meet their goals but most importantly it provides the ability to control variance from interviewees (Chileshe et al., 2016). Therefore, this study used the purposive sampling to engage with the respondents based on their experience in PPP projects on road annuity program in Kenya. A total of 60 participants were selected to form the sample frame from the contract details, see Table 3.1 below.

Table 3.1: Number of Participants Sampled from the 9 Lots

Organisation	Designation	Quantity
KURA/KeRRA/ KeNHA	1. Director General (KURA, KeNHA and KeRRA)	3
	2. Director (Development) and Director (Finance &Administration)	6
	3. Deputy Director, Legal Services	3
	4. Deputy Director, Supply Chain Management	3
	5. Deputy Director, Survey	3
	6. Deputy Director, Environmental & Social Safeguards	3
	7. Deputy Director, Finance	3
	8. Deputy Director, Special Projects	3
State Department of Infrastructure	Infrastructure Secretary/Chief Engineer (Roads)/Finance/Legal Department representatives	3
PPP Unit of National Treasury	Director General (Finance/Procurement /Legal Department	3
Contractors	Contractors' Project Manager or Site Agent/Engineer(One for	9

	each Lot). There are 9 lots under RAP	
Financiers	Financiers (One for each Lot)	9
	Consultants representatives (One for each Lot)	9
Total		**60**

3.5 Data Collection

Both qualitative and quantitative approaches were used in the study. The qualitative data was collected using interview guides while the quantitative data was collected using structured questionnaires. The quantitative data analysis followed the normal descriptive statistical approaches. This study identified 39 items that the existing literature had presented as having a significant influence on the implementation of PPPs in general. The study sought to get the view of the involved stakeholders spread between the public and private sector on how they feel the 39 listed factors do influence the implementation of the RAP projects. The framework of research execution steps was adapted from the study conducted by Chileshe et al., (2016). First, the study explored the existing literature. Subsequently, a strategic 5-point Likert Scale questionnaire was developed and administered to 60 stakeholders using kobo collect to capture respondent's opinions. This was preceded by execution of a mock interview as a pilot. Based on the lessons learnt, the questionnaire structure was amended and uploaded on an online platform for administration to the sampled respondents. The online approach was chosen to abide by the public health advisory on management against exposure to Covid-19 pandemic.

In parallel, the principal researcher purposively selected 10 key experts in PPP projects for semi-structured interviews using talk notes through a modified face to face engagement in the form of emailed questions for them to fill in. These two methods were the chosen for data collection because they are sufficient to give detailed information. Due to their flexibility, interviews gave new dimensions of what was not pre-conceived especially in the structured questionnaire. As a matter of fact, interviews also enabled the researcher to get people's opinion, feelings, emotions and experiences and provided a richer feedback because the interviewer could clarify and extend individual items when necessary in a semi-structured manner hence the reason of seeking session with a few selected participants and allowing them room to list their feelings on the various sub-items with liberty.

3.5.1 5-Point Likert Scale Data

Data collection involved undertaking interviews. Since the interviewees were purposively selected, most of them included the team from PPP unit based at the Treasury, the key personnel from three Kenyan road agencies, Consultants, Contractors, Financiers, service providers and independent experts for each of the projects from both sectors. The study used a structured questionnaire to pick the views of the respondents in terms of scoring on a 5-point Likert scale by indicating the degree of agreement to the influence of each of the 39 factors, (see appendix III). Due to the infancy of PPPs in Kenya's road sector, a parallel key informant interview session was organized with 10 selected persons based on the available population (i.e. one for each of the 9 lots and 1 from the head of PPP Unit, see Table 3.1) using a semi-structured interview guide (see Appendix IV). The 10 people were purposely selected from the sample frame given their unique roles they played during the RAP project formulation. They were mainly heads of units of the respective institutions.

The informant interview was to reinforce the response data from the online questionnaire interview which was sent out to the above 60 professionals as in Table 3.1 above. Consent was obtained from the management of the respective institutions to allow the researcher to interview their staff and administer questionnaires. Further, each of the respondents was first requested to voluntarily participate using a consent form, see Appendix II. The consenting participant was then requested to score on each of the 39 questions clustered into five themes as in Table 3.2 below.

Table 3.2 Schedule of 39 Questions Spread in 5 themes for Scoring by Respondents

Themes	**To what extent do you agree with the following statements as factors influencing the implementing of RAP projects? Kindly indicate using this 5 point scale (1=No extent, 2=little extent, 3=Moderate extent, 4=Great extent and 5=Very great extent)**
Project Objective	The Government has clearly spelt out the aims for deploying private sector
	The RAP project does meets overall tests of economic value
	The access and affordability of services to the poor has increased
	The project meets environmental safeguards
	There is adequate enabling legal and compliance environment
	The Government is willing to give up appropriate commercial controls to private sector so as to achieve project goals
	The Government is willing to fund and recruit experienced advisors
	There is continued commitment through changes of government
	There is similar and successful PPP in the sector
	Fair and transparent procurement is done
	There is private sector interest in financing the project
	The net benefits obtained are higher compared to traditional methods (EPC - Engineer, Procure and Construct)
	The proposals submitted are financially sustainable
	The project's impact on government expenditure is realistic and sustainable
Governance Factors	There is adequate legal and regulatory framework for PPPs in the country
	There is enough required skills in management of PPP projects
	There is positive perception of country's risk by the investor
	There is good structure systems and business culture in the country
	Institutional frameworks favor privatization
	There was prior research on the markets and other external forces that could affect implementation of PPP
	There is conducive political and socio economic environment.
Economic Factors	Small market size in which is worsened by shallow financial markets
	High investment capital threshold is discouraging our local companies
	There is solid revenue and realistic cost estimations/ realistic revenue projections
	There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services
	Value for money is realized
Risk Factors	There is proper risk allocation
	There is adequate clarification of the role to be played by the private sector
	There is adequate involvement of communities early enough
	There is adequate flexibility in managing macro-risks
	There is transparency and integrity
	There is increased government costs due to compensation of the participant's risk
Procurement Factors	There is adequate contract negotiation skills by both parties
	There is competitive procurement hence cost-effective partnering
	There is clear understanding and sufficient awareness of PPP options and modalities

	There is extensive feasibility study with use of PPP experts There is proper vetting of the private partners since there is no influence from within the Ministry for some interested and probable partner There is competitive and transparent procurement There is adequate monitoring and evaluation of projects

3.5.2 Semi-Structured Interviews

The interviews took between 10 to 15 minutes. A study by Liu and Wilkinson (2011) investigated factors influencing adoption of PPPs in New Zealand using a similar method. The one to one interview was conducted to validate the responses from the Likert scale survey. Following the guide given by (Bolderstone,2012) the study purposefully selected 10 experts. The interview protocols were shared to them in which their roles in the research was highlighted. Before the set of questions were given, a preamble to the research was given out which also had the consent form. In the package, it was explained that the interview was to last between10 to 15 minutes and that e-mail exchanges was to be used to collect the views on each of the seven questions. In this study the email responses are the raw qualitative data which were later subjected to transcriptions in readiness for analysis.

3.5.3 Pilot Study

The study estimated the internal consistency of the 39 items, which revealed that the Cronbach Alpha coefficient is 0.966. A Cronbach's Alpha of 0.966 indicates that there is a relatively high internal consistency of the items. Generally, a Cronbach's Alpha of 0.7 or more is acceptable in social research. This, however, doesn't mean that the questionnaire items are uni-dimensional or simply, that they measure the same aspect in this study (Lawley and Maxwell, 1962).

3.6 Data Analysis

In answering the study the study objectives, a number of statistical tests were conducted. For objective one of establishing the influence of the factors on RAP implementation, from the Likert scale scores mean scores were computed for each of the 39 items to enable comparisons to be conducted. For the second objective of examining the relationship between the five themes influencing RAP implementation; the project selection process, economic viability, procurement process, risk, governance and their components on the implementation of RAP from the participating stakeholders, data was first analyzed using descriptive statistics to show the

responses distribution for every variable, then Spearman's rank correlation analysis conducted to unfold the relationships that existed between the variables, and ranked them from the highest influence to the lowest.

3.6.1 Likert Scale Data

The data collection tool was framed on the "agree-disagree" approach to measure the perceptions of the public and private road annuity program stakeholders using a five point Likert scale. Not only is this method a simple way of gauging specific opinions, but it also lends itself very easily to the construction of multiple-item measures on the Likert scales, which can measure broader attitudes and values (Rinker, 2014). Likert scale data are analyzed at the interval and ordinal measurement scales (Stevens, 1946).

The study assumed that the responses from the respondents are ordinal in nature hence fitting non-parametric method. Because of this, the study first calculated in MS Excel environment, the composite scores as sums for both public and private. The individual sums were then divided by the number of each stakeholder category, public (40) or private (15) forming a 'battery' of multiple Likert items as averages which also, were on the same 1-5 scale as the individual items (Harpe, 2015).

Using the averages above, the study then followed a four step procedure; step 1: rank each factor's average score, step 2: calculate difference (d) between the ranks and square the resulting d, step 3: sum (add up) all the d^2 scores, $\sum d^2$ and step 4: insert the values in the formula given by (Chambers, 1989). These steps give the Spearman rank coefficient statistical test. Spearman's rank correlation is a non-parametric method used to measure the rank correlation between two variables. It is used to assess both linear and non-linear monotonic relationships, which implies that it can be used for data obtained from Likert-scales. A spearman's correlation coefficient of +1 or -1 indicates that the two variables measured exhibit a perfect monotonic relationship; in other words, there is a perfect correlation (Fieller, Hartley & Pearson, 1957). The summarized Spearman correlation formula is shown below, which was used to answer the relationships that existed between the variables, and ranked them from the highest influence to the lowest.

$$r_R = \frac{6\sum_i d_i^2}{n(n^2-1)} \quad \text{..... Eqn 1}$$

Where;

n is the number of data points of the two variables, the average of the public and private scores

d_i is the difference in the ranks of the i^{th} factor's average score

The study further deployed Exploratory Data Analysis (EDA) method to visually summarize the data (averages) with key characteristics of their distribution being displayed while preserving their original integrity. Further, the study used box-and-whisker plot. The box-plot gives a better picture of the distributional characteristics symbolically by providing the median (50th percentile score) , the upper (75th percentile score) and lower (25th percentile score) which are ideally the hinge points in the construction of the 'box' portion of the graph.

Additionally, the box-plot utilizes the Inter-Quartile Range (IQR) which indicates score boundaries beyond an 'outlier' (or an extreme or unusual value) in the distribution can be identified. In SPSS, the inner fence is 1.5 times the IQR in each direction and a 'far' outlier is 3 times the IQR in either direction (Field 2018, p. 193). The 'whiskers' in a box-plot encompass the data values closest to the upper and lower inner fences. Outliers beyond these 'whiskers' are defined as 'Near' outliers as those beyond the inner fences and 'far' outliers as those beyond the inner fences.

The 39 factors are clustered around five themes (major factors); project objectives (14), governance (7), economic (5), risk Allocation (6) and procurement (7). The study sought to examine how the respondents 'perceptions correlated within each of the five themes. And so using the mean of means of the factors within the major factor grouping, the resulting two sets of variables (public and private) were subjected to analysis using equation 1 above.

3.6.2 Face to Face Interview

The face to face interview data was analyzed using NVivo. The responses from the 10 purposely selected respondents for face to face interview were used to assess the influence / or the intensity of each factor from the perspective of each participant.

The study keenly followed the guide given by (Mero-Jaffe,2011) regarding the analysis of transcription data from interviewees. The study transferred the re-organized transcripts back to the interviewees to validate the transcripts further. This was to preserve research ethics, and to empower the interviewees by allowing them control of what was written, basically they were being allowed to answer the question, "Is this what I Said?". Interviewee responses related to a number of issues like; the ratification of content, the authenticity of that which was said during the interview, corrections of language, additional clarifications, power interactions and changes in the balance of power between the interviewer and interviewees, research ethics, and reflective responses. Following their satisfaction, the study presented analysis as part of the findings corroborating the Likert scale analysis.

3.7 Ethical Considerations

Ethical approval was sought from the Strathmore University Ethics Review Board. Permit to conduct the study was also obtained from the National Council for Science and Technology, Strathmore University School of Graduate Studies. The researcher obtained informed consent from all participants before collecting data guided by the form in appendix II. Additionally, an assurance was given to each respondent as to maintenance of the confidentiality. Anonymity was maintained by the research instrument which concealed the names of the respondents save for disclosing the agency in which they work. The study ensured that data is collected from a representative sample from the developed sample frame. The Strathmore Business School research format and relevant codes of conduct were observed.

CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

This chapter presents the analysis of the data collected during the study using both the questionnaires and interview guides. The results outline a descriptive and quantitative analysis of the data and the assessment of how the factors affect the implementation of the Road Annuity Program in Kenya and the statistical relationship between the main themes.

4.2 Descriptive Analysis

4.2.1 Distribution of the Lots

A total of 55 respondents out of the targeted 60 returned their questionnaires. This translates to 91.67% response rate. Most of the respondents came from lots 15 and 18 which comprised 20% and 19% of the respondents respectively as shown in Table 4.1. A proportion of the respondents, 12% (n=10), have participated in other roads which are under PPP programs while others have participated in more than one lot under RAP hence making the total count to be 85.

Table 4.1: Distribution of Respondents in Lots

Lot	Count	Percentage %
3	9	11%
6	5	6%
8	4	5%
10	3	4%
15	17	20%
18	16	19%
20	9	11%
32	4	5%
33	8	9%
Other	10	12%
Total	85	100%

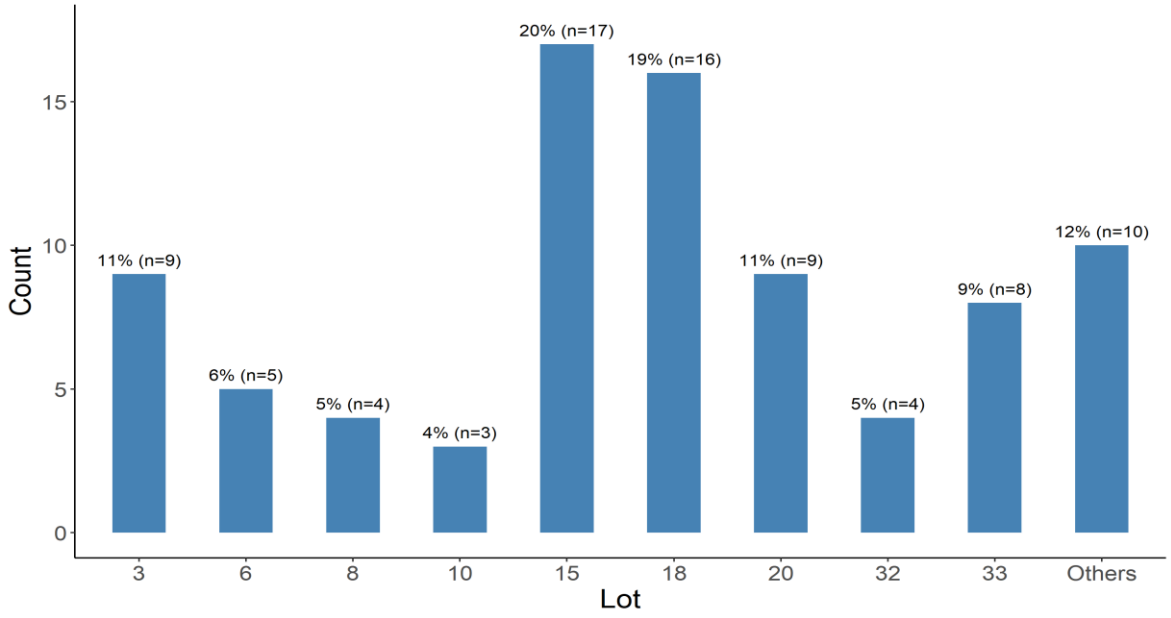

Figure 4. 1: Distribution of respondents in the lots

4.2.2 Status of the Project

Most of the respondents are in projects under construction (41.8%) followed closely by those in projects under the procurement stage (40.2%). The rest (18.2%) fall under various planning stages, as presented in Table4.2.

Table 4.2: Respondents' Project Status

Status of the project	Frequency	Percentage
Under Construction	23	41.8
Under Procurement	22	40.0
Other (Planning)	10	18.2
Total	55	100.0

4.2.3 Type of organization from which respondents were drawn

The sample size was composed of predominantly public, n=40 (72.7%), with only n= 15 (27.3%) coming from the private sector, as shown in Table 4.3.

Table 4.3 Organizations from which respondents were drawn

Type of organization	Frequency	Percentage
Private	15	27.3
Public	40	72.7
Total	55	100.0

4.2.4 Sector and Position of Respondent on the Project

Majority of the respondents (n=40, 72.7%) were from the public sector (government) while only n=15 (27.3%) were from the private sector with the consultants being (5.5%), contractors (12.7%) and financiers being (9.1%) as shown in Table 4.4.

Table 4.4: Position of each Respondent on the Project

Position	Frequency	Percentage
Public/Client (Government)	40	72.7
Consultant	3	5.5
Contractor	7	12.7
Financier	5	9.1
Total	55	100.0

4.2.5 Experience in Construction of Road Projects

Most of the respondents, n=33 (60%) had an experience of above 10 years in the construction of road projects. These included; n=14 (25.5%) who had an experience of between 11to 20 years and n=19 (34.5%) who had more than 20 years of experience as shown in Table 4.5.

Table 4.5 Number of Years in Road Projects

Experience	Frequency	Percentage
Below 5 years	9	16.4
Between 5-10 years	13	23.6
Between 11-20 years	14	25.5
Above 20 years	19	34.5
Total	55	100.0

4.2.6 Attainability of the goals set by the government for Public-Private Partnerships

The majority, n=35 (63.6%) of the respondents believe that the Public-Private Partnerships targets set by the government are realistic and attainable, as shown in Table 4.6.

Table 4.6 Project Goal Attainability Perception by Respondents

Do you think the goals set for PPPs by the Government are realistic and attainable based on your experience?	Frequency	Percentage
Yes	35	63.6
No	20	36.4
Total	55	100.0

4.2.7 Responsibilities and Risks for the PPPs

Majority=41 (74.5%) believe that the risk-sharing in terms of the delegation of responsibilities between contract parties is clearly outlined, see Table 4.7.

Table 4.7 Risk Sharing

Does the government clearly state lead responsibilities and risks for the PPPs?	Frequency	Percentage
Yes	41	74.5
No	14	25.5
Total	55	100.0

4.3 Analysis of Likert Scale Items as factors Influencing the Implementation of RAP

The study assessed the perceptive view of the involved stakeholders from both the public and private sector on the 39 Likert scale items. The respondents scored their perceptions using Likert 5-Point Scale ranging from 1 to 5. Appendix VI is the result of the mean score from the 55 respondents. The 55 completed responses; translated to about 91.67% response rate. This indicates the high level of interest in the RAP for the sample size using mean scores, calculated with the aid of SPSS software. It should, however, be noted that the sample size was predominantly composed of public sector actors 40/55 (72.7%). A graphical representation of the mean score of each of the 39 items is represented in the figure 4.2 below. The items were also presented in a table, for easy interpretation, showing their means and standard deviations (Table 4.8).

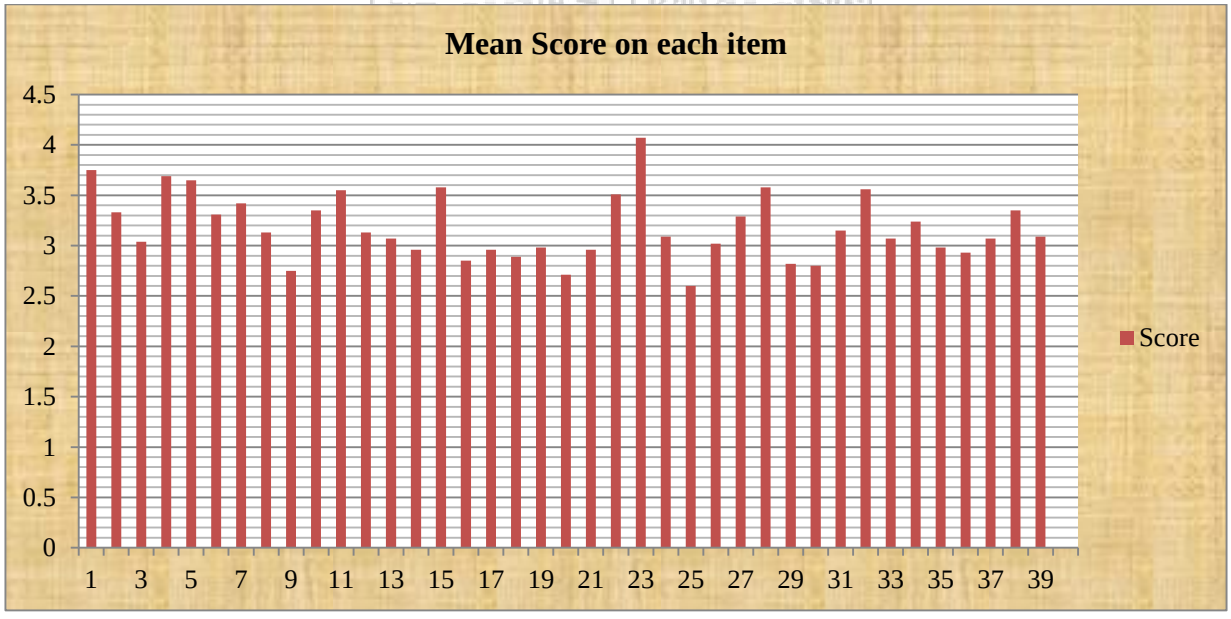

Figure 4. 2 Graphical Representation of Mean Score of Each Item

Table 4.8: Descriptive Statistics for Individual Items

	Mean	Std. Deviation
1. The Government has clearly spelt out the aims for deploying private sector	3.75	.844
2. The RAP project does meets overall tests of economic value	3.33	.944
3. The access and affordability of services to the poor has increased	3.04	1.036
4. The project meets environmental safeguards	3.69	.814
5. There is adequate enabling legal and compliance environment	3.65	.985
6. The Government is willing to give up appropriate commercial controls to private sector so as to achieve project goals	3.31	.940
7. The Government is willing to fund and recruit experienced advisors	3.42	1.049
8. There is continued commitment through changes of government	3.13	1.106
9. There is similar and successful PPP in the sector	2.75	1.158
10. Fair and transparent procurement is done	3.35	1.142
11. There is private sector interest in financing the project	3.55	1.068
12. The net benefits obtained are higher compared to traditional methods (EPC - Engineer, Procure and Construct)	3.13	1.171
13. The proposals submitted are financially sustainable taking assumptions into consideration	3.07	1.103
14. The project's impact on government expenditure is realistic and sustainable	2.96	.999
15. There is adequate legal and regulatory framework for PPPs in the country	3.58	1.049
16. There is enough required skills in management of PPP projects	2.85	.931
17. There is positive perception of country's risk by the investor	2.96	.962
18. There is good structure systems and business culture in the country	2.89	.896
19. Institutional frameworks favor privatization	2.98	.805
20. There was prior research on the markets and other external forces that could affect implementation of PPP	2.71	1.048
21. There is conducive political and socio economic environment.	2.96	.981
22. Small market size in which is worsened by shallow financial markets	3.51	1.052
23. High investment capital threshold is discouraging our local companies	4.07	.959
24. There is solid revenue and realistic cost estimations/ realistic revenue projections	3.09	.908
25. There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services	2.60	1.065
26. Value for money is realized	3.02	1.130
27. There is proper risk allocation	3.29	1.100
28. There is adequate clarification of the role to be played by the private sector	3.58	.975
29. There is adequate involvement of communities early enough which lead to less challenges during project implementation	2.82	1.203
30. There is adequate flexibility in managing macro-risks	2.80	1.007
31. There is transparency and integrity	3.15	1.113
32. There is increased government costs due to compensation of the private participant's risk	3.56	.977

33. There is adequate contract negotiation skills by both parties	3.07	1.052
34. There is competitive procurement hence cost-effective partnering	3.24	1.036
35. There is clear understanding and sufficient awareness of PPP options and modalities	2.98	.991
36. There is extensive feasibility study with use of PPP experts	2.93	1.120
37. There is proper vetting of the private partners since there is no influence from within the Ministry for some interested and probable partner	3.07	1.136
38. There is competitive and transparent procurement	3.35	1.058
39. There is adequate monitoring and evaluation of projects	3.09	1.143

In a scale ranging between 1 and 5 (1=agreement to no extent, 2= agreement to little extent, 3= agreement to moderate extent, 4=agreement to Great extent, 5=agreement to a very great extent), the mean score from the respondents (n=55) showed that under economic factor "*High investment capital threshold is discouraging our local companies"* had the highest combined mean score of 4.07 as represented in Appendix VI indicating that both public and private sector agree to a great extent. As presented in Table 4.8 above, 47 percent of the respondents agreed that to great extent while 36 percent of the respondents agreed to a very great extent that high investment capital is discouraging local companies. Surprisingly item 25 under Economic factor too "*There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services*" had the lowest combined mean score of 2.60 indicating that both public and private sector agree to a little extent. 40 percent of the respondents agreed to this factor to a little extent indicating that it's one of challenges affecting RAP. This clearly indicates that in RAP there were no feasibility studies done hence minimal stakeholder engagement which contributes heavily to it implementation.

Under project selection factors, the factor *'The Government has clearly spelt out the aims for deploying private sector* had the highest combined mean score of 3.75. 40 percent of the respondents agreed that to a great extent this has been achieved while 20 percent agreed to a very great extent this has been achieved. On the other hand, the factor *'There is adequate enabling legal and compliance environment'* had a score of 3.65. 45 percent of the respondents agreed that to a great extent this has been accomplished while 18 percent agreed to a very great extent. The factor *"There is similar and successful PPP in the sector"* had the lowest mean score of 2.75 under project selection factors. 16% of the respondents agreed to no extent while 24 percent of the respondents agreed to little extent on the presence of similar and successful projects. This

shows that there is clear and deliberate move to involve the private by the Government even though there are no similar projects which have been successfully executed in the road sector. PPPs in the road sector are at the infant stages and Government has come up with policies to tap the resources from the private sector.

Under governance factors, the factor '*There is adequate legal and regulatory framework for PPPs in the country'* had the highest score of 3.58. 38% of the respondents agreed to a great extent to this factor while 20% agreed to a very great extent to this factor. This indicates that to a great extent the legal and regulatory policies are favorable for PPPs as evidenced by PPP Unit formation. The factor '*There is enough required skills in management of PPP projects*' had a score of 2.85. 36 percent of the respondents agreed to little extent and 4 percent agreed to no extent that this factor has been dealt with. This indicates that there are very few PPP experts employed to manage RAP projects therefore implying that this has affected RAP implementation. The other factor, '*There was prior research on the markets and other external forces which could interfere with implementation of PPP'* which was the lowest under governance with a score of 2.65. 42 percent of the respondents agreed to little extent and 9 percent of the respondents agreed to no extent on the factor. This indicates that no prior studies are done before commencement of the project which affects the project implementation in the subsequent stages. The other factor, '*There is positive perception of country's risk by the investor'* had a score of 2.95 indicating that most of the respondents did not agree to this factor. From the results, 35 percent of the respondents agreed to little extent and 2 percent of the respondents agreed to no extent on the factor. This implies that the investors need to be attracted to the RAP projects through government incentives.

Under risk factors, the factor '*There is adequate clarification of the role to be played by the private sector'* had a score of 3.58. From the results, 44% of the respondents agreed to a great extent to this factor while 16% agreed to a very great extent. This indicates that at the start of the project, explanation of the responsibility of the parties is done therefore reducing risks later. The factor, 'There *is proper risk allocation'* had a score 3.29. From results, 38% of the respondents agreed to a great extent to this factor while 11% agreed to a very great extent to this factor. This also supports the factor on role clarification to mitigate the risks. On the other hand, the factor '*There is adequate involvement of communities early enough which lead to less challenges*

during project implementation had a score of 2.82. This is supported by 38% of the respondents agreeing to a little extent to this factor while 11% agreed to no extent. This pinpoints to lack of prior studies and engagement of affected people leading to the non-acceptance of the project when implementation begins. '*There is adequate flexibility in managing macro-risks* had a score of 2.80 as indicated by 33% of the respondents who agreed to a little extent to this factor while 7% agreed to no extent.

Under procurement factors, the factor '*There is competitive and transparent procurement'* had a score of 3.35. This is further supported by 27 percent of the respondents who agreed to a great extent to this factor while 16% agreed to a very great extent to this factor. The results indicate that the procurement processes have been structured towards transparency and are competitive. The factor '*There is proper selection of the private partners and it's not influenced from within the Ministry'* had a score of 3.07. From the results, 24% of the respondents agreed to a great extent to this factor while 13% agreed to a very great extent to this factor. This also points out to the procurement processes not being affected by internal forces implying transparency. The factor '*There is adequate monitoring and evaluation of projects'* had a score of 3.09 and is further supported by the results that 24% of the respondents agreed to a great extent to this factor while 13% agreed to a very great extent to this factor. In general the procurement factors had high scores indicating that it's a strong influencer in RAP implementation. The factor, '*There is extensive feasibility study with use of PPP experts'* had the lowest score of 2.93 in the procurement factors. This is supported by 30% of the respondents agreeing to a little extent to this factor while 11% agreed to no extent.

4.3.1 Contribution of Each Theme under Private, Public and Overall Categories

The contribution of each theme to the private, public and the overall scoring is as illustrated in the Figure 4.3 below.

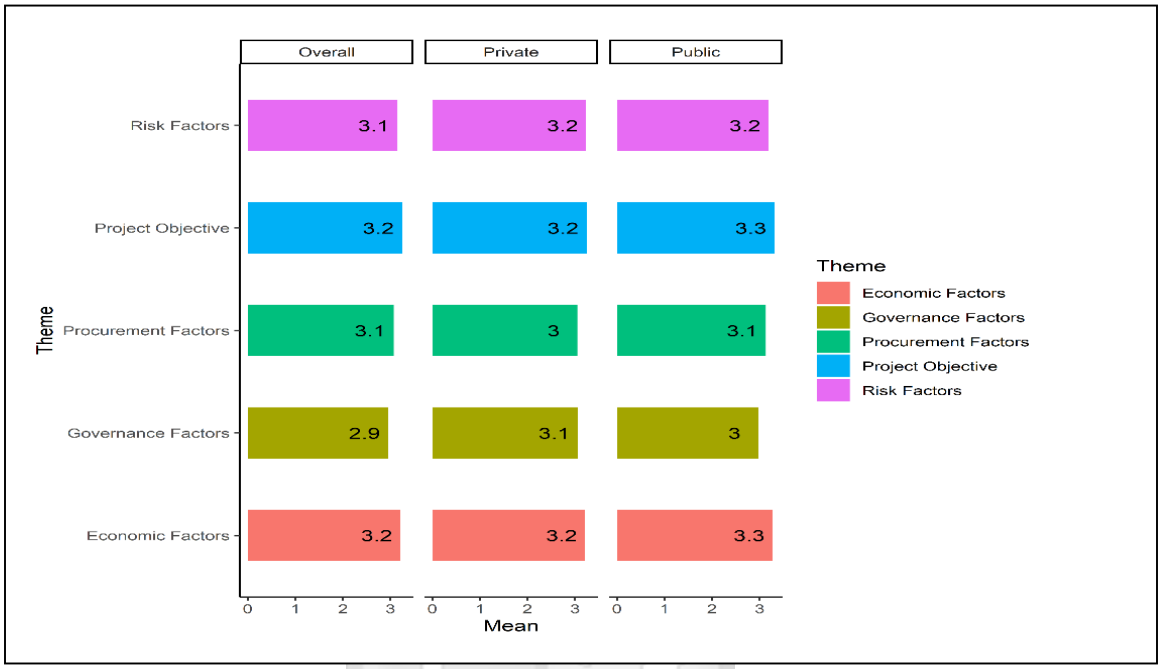

Figure 4. 3 Contribution of Each Theme under Private, Public and Overall Categories

From Figure 4.3 it is evident that the respondents consensus on the factors influencing the implementation of RAP where economic factors seem to hold sway. This is closely followed by project objectives, risk factors, procurement factors and governance factors in that order.

In order to understand the contribution of each theme as scored by respondents, pie charts were plotted. The pie charts were drawn from the mean scores as presented in figure 4.3.

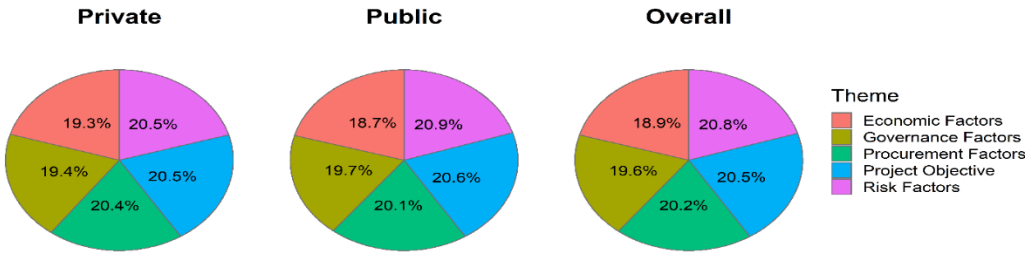

Figure 4. 4 Contribution of each theme under private, public and overall

From Figure 4.4, it is clear that all the themes had almost equal importance to the public and private sectors, which implies that all themes are important in RAP implementation and should be considered. This is important in addressing the first object of the study on the factors influencing the implementation of RAP in Kenya.

The standard deviation indicates the percentage of observations that fall specific distances from the mean. When it comes to the variance, a distribution has lower variability when the values in a dataset are more consistent. However, when the variability is higher, the data points are more dissimilar and extreme values become more likely. Form the results obtained, there is no much variation between the private, public and overall sectors as the standard deviation values are very low (Table 4.9).

Table 4.9: Standard deviation and Variance of the mean scores

	Mean of means	Standard Deviation	Variance	Coefficient of variation
Private	3.17	0.33	0.11	0.10
Public	3.20	0.34	0.12	0.11
Overall	3.14	0.35	0.12	0.11

4.3.2 Distribution of means from public, private and overall

The score range for the overall data is 2.47-4.07. Through a frequency plot, the data was distributed into four quartiles. The upper quartile (Q4) comprises the quarter of the dataset with the highest values (3.49-4.07) while the lower quartile (Q1) contains dataset with the lowest values (2.47-2.9). The interquartile range is the middle half of the data that is in between the upper and lower quartiles. In other words, the interquartile range includes the 50% of data points (20 factors=51%) that fall between Q1 and Q3. From the excel calculations, the upper quartile has 9 key factors (23%), while the lower quartile has 10 factors (25%). An analysis of the 9 upper quartile factors and the 10 lower quartile factors gave a different contribution to each theme with other themes having higher percentages and other themes missing in the upper and lower quartiles.

Figure 4.5 is a display of distribution of means from overall, private and public using regular box-plots. These plots clearly show the contrasting degree of skewness in each cluster of responses (shown by one or more outliers in one 'tail', unequal whiskers and the median line offset), the contrasting variability of scores within each type of cluster, and the differing central tendency in each type of cluster (the median lines not being at the same level of accuracy score). Using a box plot, two outliers were observed for the public sector and Overall.

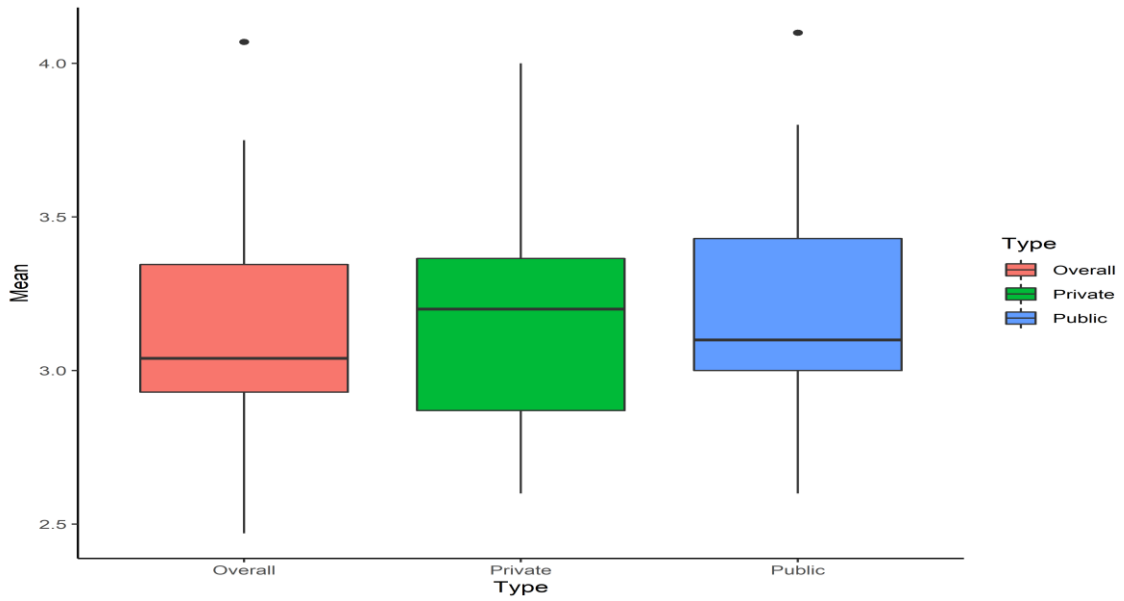

Figure 4. 5: Box plot to Show the Distribution of the Means from the Public, Private and Overall

The mean plots in Figure 4.5 above show median values of between 3s and 4s, roughly about 50% of the data fall between 3s and 4s and there is only one outlier "*High investment capital threshold is discouraging our local companies"* which scored more than 4s. The mean box-plot (Figure 4.5) demonstrates asymmetrically distributed data due to skewness in one direction. Such data may have their median offset from the middle of the box and/or whiskers of unequal length extending out from the box and outliers in the direction of the longer whisker. In the mean box-plot (Figure 4.5), the data are clearly positively skewed (the longer whisker and extreme values are in the private 'tail').

4.3.3 Most Influencing Factor for Public and Private Sectors

The respondents from the public sector accounted for 72.72 % (40 out of 55, see Table 4.3). In terms of the public sector view, Likert Scale item 23 "High investment capital threshold is discouraging our local companies" had the greatest influence on RAP implementation with a mean score of 4.07 (see Appendix VI). This is the only outlier as per the box plot in Figure 4.5, as it is the only value outside the box plot and dotted above the box plot.

The respondents from the private sector accounted for 27.3% (15 out of 55, see Table 4.3). In terms of the private sector view, Likert Scale item 23 "*High investment capital threshold is discouraging our local companies*" had the greatest influence on RAP implementation with a mean score of 4.07 (see Appendix VI). This is almost a parallel to the public sector score. Interestingly, the combined average score still identified the same factor as the one with the greatest influence on RAP implementation at a mean score of 4.07, see Appendix VI. The study plotted the combined average score as presented in Figure 4.1 above, which clearly shows that item 23 is the leading in terms of influence confirmed by Figure 4.5 since it is the only outlier, as it is the only value outside the box plot and dotted above the box plot.

4.4 Spearman's Rank Correlation Analysis

The study sought to assess the factors that influence RAP implementation. This was useful in addressing the second objective on examining the relationship between the five themes; the project selection process, economic viability, procurement process, risk factors and governance factors on the implementation of RAP. Spearman's rank correlation was used as data was measured on a Likert scale of 1 to 5. Table 4.10 presents the findings obtained.

Table 4.10:Correlation Matrix

			RAP implementation	Project Selection Factors	Governance Factors	Procurement Factors	Risk Factors	Economic Factors
Spearman's rho	RAP implementation	Correlation Coefficient	1					
		Sig. (2-tailed)	.					
	Project Selection Factors	Correlation Coefficient	.709**	1				
		Sig. (2-tailed)	.000	.				
	Governance Factors	Correlation Coefficient	.687**	.744**	1			
		Sig. (2-tailed)	.000	.000	.			
	Procurement Factors	Correlation Coefficient	.589**	.648**	.660**	1		
		Sig. (2-tailed)	.000	.000	.000	.		
	Risk Factors	Correlation Coefficient	.694**	.750**	.776**	.738**	1	
		Sig. (2-tailed)	.000	.000	.000	.000	.	
	Economic Factors	Correlation Coefficient	.834**	.731**	.744**	.707**	.816**	1
		Sig. (2-tailed)	.000	.000	.000	.000	.000	.

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

The spearman correlation between the respondents' viewpoints on the 5 themes with RAP implementation was done to address the second objective of the study, and the correlation coefficient obtained was the highest at 0.834 (p value = 0.000) for the relationship between economic factors and RAP implementation indicating a strong positive correlation; followed by 0.709 (p value = 0.000) for projection selection factors indicating a strong positive correlation with RAP implementation; 0.694 (p value = 0.000) for risk allocation factors indicating a moderate positive correlation with RAP implementation; 0.687 (p value = 0.000) for governance factors indicating a moderate positive correlation with RAP implementation and 0.589 (p value = 0.000) for procurement factors indicting a moderate positive correlation with RAP implementation.

Based on the 5 themes relationship with each other, the study found that the factors were correlated and affected each other. Economic factors which had the highest influence on RAP implementation, for instance, had a positive correlation with project selection factors (r = 0.731, p = .000), governance factors (r = 0.744, p = .000), procurement factors (r = 0.707, p = .000) and risk factors (r = 0.816, p = .000). Projection selection factors had a positive correlation with economic factors (r = 0.731, p = .000), governance factors (r = 0.744, p = .000), procurement factors (r = 0.648, p = .000) and risk factors (r = 0.750, p = .000). Risk factors had a positive correlation with economic factors (r = 0.816, p = .000), governance factors (r = 0.776, p = .000), procurement factors (r = 0.738, p = .000) and project selection factors (r = 0.750, p = .000). Governance factors had a positive correlation with economic factors (r = 0.744, p = .000), risk factors (r = 0.776, p = .000), procurement factors (r = 0.660, p = .000) and project selection factors (r = 0.744, p = .000). Finally, procurement factors had a positive correlation with economic factors (r = 0.707, p = .000), risk factors (r = 0.738, p = .000), governance factors (r = 0.660, p = .000) and project selection factors (r = 0.648, p = .000).

4.5 Results from the Face to Face Interview

In order to further answer the first objective, interviews were conducted so as to: validate the questionnaire data; get people's opinion, feelings, emotions and experiences; and obtain detailed information that could not be obtained from the questionnaire. The study therefore, emailed to each of the 10 purposely selected respondents the following 7 questions that were constructed to gauge further response on the 5 thematic areas, derived from both objective one and two.

1. What role do you think the selection of the projects under RAP contributed to their implementation status?
2. What economic factors might have contributed to the uptake of the RAP by the financial institutions?
3. How was the procurement of RAP done? Can you suggest any methods to improve the process of procurement of PPP projects in Kenya?
4. In your opinion was the risk allocation between the private partners and the government well apportioned in the RAP?
5. What can be done different in terms of risk allocation to enhance the uptake of the PPP projects in Kenya?
6. In terms of governance, what do you think the Government of Kenya can do to build the confidence of the investors?
7. In your opinion, which areas do you think the government and/or the private sector should put more effort for the successful implementation of the PPPs programs/projects in Kenya?

Figure 4. 6: Talk Note Guide for the Face to Face Interview

The transcribed results from the respondents were analyzed. Many pertinent issues were brought out from the interviews. On project objectives, majority of the participants (7 out of 10) in this category were of the view that economic factors are significant factors in the RAP implementation. This confirms the position of the extreme overall ranking in Appendix VI of the economic factors as well as outliers in Figure 4.5. In addition, in terms of the economic factors; they asserted that RAP is a flexible route for equity ventures willing to invest in government projects. For procurement, most were of the view that PPP Act 2013 which is in use is too rigid due to its many approval stages which have led to multiple challenges.

On the other hand, they all concurred that in terms of the risk allocation, the government procedures clearly outlined the risk sharing which agrees with the main finding in the mean

scores. Because every investment is about the value for money, the respondents proposed that the government should create risk hedging framework as a cushion against foreign currency fluctuation. This tied to their proposal that the PPP legal and regulatory framework need to be adjusted to make it more attractive for the private sector players, whose majority feels the risk exposure, is still high. For the project practicality, they all asserted that both private and public sector actors should undergo capacity building in order to acquire adequate skills for RAP implementation.

The transcribed results from the respondents shows that all the 5 themes influences the implementation of the RAP. Each theme has its own contribution hence significant in influencing the RAP.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The objective of the research was to assess the factors influencing the implementation PPPs specifically on the RAP implementation in Kenya; the project selection process, economic viability, procurement process, risk and governance. The study also established if a statistical relationship exists between the factors using the spearman correlation. The chapter presents a summary of the study discussion, conclusions, recommendations, policy implications, limitations of the study and suggestion for further research.

5.2 Discussion

The study focused on the factors influencing the implementation of RAP in Kenya and the relationship between factors. These factors are discussed according to the themes of the study in the section below. The discussion is centered of the factors on the first and fourth quartiles as well as the outliers because they represent the extremes which the respondents strongly agreed to and strongly opposed to.

5.2.1 Economic Factors

The upper quartile had the following factors 'High investment capital is discouraging our local companies' and 'Small market size worsened by shallow financial markets' while the lower quartile had 'There is a thorough financial and economic analysis which leads to public acceptance when asked to pay for the services'. The item "High investment capital threshold is discouraging our local company" was identified as the most influencing factor in the implementation of RAP with an overall mean score of 4.07 and it is the only outlier in this study. This is in line with the findings obtained by Sadekya (2017) who identified the role of investment capital and its role in encouraging and discouraging local companies. High investment was also found to discourage the local companies, which pinpoints to the need of putting instruments so as the private entities can mobilize resources for PPPs. One of the solutions of this challenge is the creation of Infrastructure Development Finance Company

(IDFC). This will connect projects and finance institutions to finance markets and this will develop and nature the creation of a long – term debt market. IDFC has advantages such as risk reduction, can hold assets and securitization as observed by Sadekya (2017). The IDFC provides an opportunity for investors who are not interested in participating in projects directly to invest in the vehicle and then their investments are lend to the companies in infrastructure project PPPs. An example of such a company is Tamil Nadu Urban Development Fund (TNUDF) in India which obtains its finances from private entities for infrastructure projects by local government.

Alternatively, a bank that is government owned can be created specifically to provide loans for to construction companies to enhance their capacity. The findings of the study are similar to those by FHWA (2010) who found that reducing the amount of capital investment needed from private entities improves the availability of finance, mitigates risks and reduces the costs by reduction risk premiums, consequently, making it attractive to private entities. A key advantage of this approach is that projects will not lack funding for construction and the loan will be provided at terms that are unavailable in the market. In India for instance, India Infrastructure Finance Company Limited (IIFCL) is a wholly government owned company that was created purposely to finance PPPs. The company provides financial assistance through direct lending to eligible projects, refinance to banks and Financial Institutions for loans with tenor of five years or more and any method approved by the Government of India (World Bank, 2019). This may be the reason why annuity projects in India were successful. Besides direct financial support, the government can support PPPs by waiving fees, costs and other payments which the private company may have been required to pay to the public sector entity. On the other hand, the government may take contingent liabilities for the companies which will in turn reduce the high investment costs for the private companies. These contingent liabilities are in terms of providing guarantees, insurance and taking some project risks.

The Kenyan government's efforts towards ensuring that financing of the PPPs is ensured is evidenced by their engagement with World Bank and other financial institutions so that they can provide loans under favorable conditions to private entities, as supported by Kamau (2016). Some private sector providers of capital view bilateral or multilateral involvement as improving the likelihood of priority being given to their interests in the event of restructuring by the host government. Additionally, the government proposed commercial banks to reduce interest rates

for Public Private Partnership contractors which was not successful as the banks considered this to be too risky. Provision of investment incentives by the government will encourage commercial banks investment in infrastructure hence making them reducing interest rates.

Additionally, the item "Small market size worsened by shallow financial markets" was identified as a factor in upper quartile. In order for more PPPs to materialize in Kenya, the business environment needs to be improved. This is in terms of global trade and investment, market size, infrastructure and financial markets. The financial market of a country can affect PPPs by interfering with: inter-bank lending market and their liquidity, bank margins and project finance market as bank withdraw from lending (EPEC, 2009). The government guaranteeing a supportive and efficient environment for investors can encourage private entities (Kamau, 2016). The formation of Road Annuity Fund is a measure by the Government to ensure that they have facilitated the local companies in participating in RAP.

The other factor "There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services' was identified in the lower quartile. This indicates that most respondents strongly disagreed to this factor. Economic and financial analysis ties down to the first stage of project studies which is the feasibility study. In Kenya, this is evidenced by the fact that RAP projects were just announced by the government without prior studies being done. RAP was just announced by the Jubilee government after which studies of the designs, economic analysis and environmental impact followed. Without proper prior studies the realization whether the project is realistic and sustainable cannot be established which can create problems in the government expenditure in the future and failure of the project to attain value for money. From the literature review, Hsueh and Chang (2017) agrees that most of roads PPPs failed due to financial problems which were rooted to the following: planning, inaccurate ridership projections and inaccurate cost-benefit analysis. Therefore, the initial studies of a project are critical in the success of a project and a feasibility study of the project with use of transport economists.

Using the interpretation guide outlined in the work by Zar (2005), this study's finding indicates that both the public and the private stakeholders concur that the economic factors have the strongest influence in the RAP success. This is attributed to the fact that the private sector aims to maximize profit while the public sector aims to provide infrastructure and a conducive

environment to encourage private entities to participate in PPPs. The findings of the study are also in line with political economy and stakeholder theory which explains that the behavior of public and private is based on their motivation.

5.2.2 Project Selection Factors

Under project selection factors, the factors identified in the upper quartile were: 'The Government has outlined the aims for deploying private sector, 'The project meets environmental safeguards', 'There is satisfactory enabling legal and compliance environment' and 'There is private sector interest in financing the project.' On the other hand, the factor identified in the lower quartile was 'There is similar and successful PPP in the sector'.

The item "The Government has outlined the aims for deploying private sector" is identified in the upper quartile as an influencing factor in the implementation of RAP with a mean score of 3.75. This is evidenced by the government acknowledgement of the huge infrastructure gap which cannot be met by the traditional funding methods. This is in agreement with the findings of Wetangula and Mazurealicz, (2017) who observed that in vision 2030, the government recognizes PPPs are key in infrastructure development. It is clear that the external borrowing, the annual budget and fuel levy funds cannot meet the infrastructure demand. Further, the government created a PPP unit which has been communicating to local governments and to private investors the national government's commitment to private sector partnerships.

The Kenyan government may make PPPs attractive and successful if they part with commercial controls to private sector with the aim of achieving project goals. This can be achieved by offering direct support for the project through subsidies and approaches of reducing costs. For instance, as observed by the World Bank (2019), for the Zagreb-Macelj toll road in Croatia, a PPP model was created by the government company that was partly privatized with 49% shares being held by Republic of Croatia and 51% of the shares being held by Pyhrn Concession Holding GmbH. For this project, the government provided in-kind support in the form of land and contingent debt drawn down whenever revenues were insufficient to cover debt service. In the long run, the government's objective of engaging the private party which was to develop, design, finance, build, operate and maintain the motorway and all facilities was achieved. The success of the project was due to the collaboration of both the government and private company.

In Kenyan projects for instance, Mwelu et al. (2019) agree that compensation costs normally increase the projects costs significantly. With the government taking care of these costs, the SPV burdens will be reduced which will result in successful projects implementation hence addressing "High investment capital threshold is discouraging our local company" which has been considered as the most influencing factor in the implementation of the RAP.

The other first quartile item is "The project meets environmental safeguards." This is evidenced by the requirement that any project in Kenya fulfils the Environmental and Social Management Plan (ESMP) according to the National Environment Management Authority (NEMA). Any on-going project must have an Environmental Impact Assessment (EIA) license. EIA ensures that the project implementers identify, assess and mitigate the environmental and social impacts of their activities. It can therefore be categorized as a key driver in RAP implementation. Additionally, the item "The RAP project does meets overall tests of economic value" is identified as key in the implementation of RAP. Economic value can be analyzed through a cost and benefit analysis which is usually done in order to select the best project amongst different alternatives, as postulated by Hsueh and Chang (2017). Despite having done an economic analysis for the project, there are normally different uncertainties which can affect the projections during the operation. There is no complete RAP project currently and therefore we cannot ascertain that the RAP projects meets the tests of economic value.

The finding that 'There is adequate enabling legal and compliance environment' is further supported by the fact that the Government has put considerable efforts in providing a conducive environment for implementation of PPPs. The creation of a legal and regulatory framework is evidenced by the laws and regulations that promote and encourage PPPs which are enacted by PPP Act No. 15 of 2013 ("the Act") (PPP Unit, 2013). The PPP Act 2013 aims at enabling the private sector to finance, construct, develop, operate and maintain infrastructure projects through PPPs. The PPP Unit ensures that the best practice is followed in the PPP processes, identifies problems, makes recommendations to the PPP Committee on potential solutions, and ensures that projects meet such quality criteria as affordability, value for money, and appropriate transfer of risk. This factor is reinforced by the factor "There is private sector interest in financing the project". Without proper systems and business culture, private entities will not participate or will not be attracted to PPPs, therefore, the government should put considerable effort in making the

country and PPPs attractive. The past experience of RAP projects acts as a predictor of the outcome of future PPPs in road projects therefore will affect the perception of investors. If the perception by investors is positive, it implies that the government's has a good reputation in its capacity to honor agreements with the private sector or there are successful projects in the sector.

The factor 'There is similar and successful project in the sector' emerged in the lower quartile indicating that respondents strongly disagreed to this. This is in line with the findings obtained by Mirzaa (2013) and results from the fact that currently there is no completed RAP project. This is mainly because RAP implementation is still new and progressing although experiencing challenges. There may be other successful PPP projects in other sectors but not in roads sector in Kenya. Lack of public confidence contributes to the program failure.

5.2.3 Governance Factors

Under governance factors, the factor identified in the upper quartile is 'There is adequate legal and regulatory framework for PPPs in the country' while the lower quartile had the following factors:' There is conducive political and socio economic environment', 'There is enough required skills in the management of PPP projects 'and 'There is good structure systems and business culture in the country.'

The factor "There is adequate legal and regulatory framework for PPPs in the country" emerged in the upper quartile indicating that most of the respondents strongly agreed to this. The findings are further supported by the fact that the government has put considerable efforts in providing a conducive environment for implementation of PPPs. The creation of a legal and regulatory framework is evidenced by the laws and regulations that promote and encourage PPPs which are enacted by PPP Act No. 15 of 2013 ("the Act") (PPP Unit, 2013). The PPP Act 2013 aims at enabling the private sector to finance, construct, develop, operate and maintain infrastructure projects through PPPs. The PPP Unit ensures that the best practice is followed in the PPP processes, identifies problems, makes recommendations to the PPP Committee on potential solutions, and ensures that projects meet such quality criteria as affordability, value for money, and appropriate transfer of risk. Without legal certainties, proper systems and business culture, private entities will not participate or will not be attracted to PPPs.

The factor "There is conducive political and socio economic environment" is categorized in the lower quartile indicating that most respondents strongly disagreed to this. When it comes to the political environment in Kenya, change of government regime can affect a PPP project because every government has different priorities and agenda, as observed by Kamau (2016). The Road Annuity Program is a Jubilee government project and the political environment does not guarantee that change in government will not affect the project. Adequate political stability encourages private parties to participate in PPPs. It is recommended that the government should adopt measures to shield PPPs from being affected by change of government.

The factor "There is enough required skills in management of PPP projects" was identified in the lower quartile indicating that most respondents strongly disagreed to this. Lack or limited experts hinder or may lead to a delay in the achievement of the project objective. According to World Bank (2014) hiring PPP experts is indispensable to an Authority undertaking a PPP project as they will add skills, practical experience, and additional capacity and reduce significant risks in delivering the project.

The factor 'There is good structure systems and business culture in the country' was identified in the lower quartile indicating that most respondents strongly disagreed to this. The government should put considerable effort in making the country and PPPs attractive, as postulated by OECD (2008). One of the ways of achieving this is by ensuring the risks of change in government regime affecting the PPP projects are reduced thereby attracting investors. The past experience of RAP projects acts as a predictor of the outcome of future PPPs in road projects and therefore will affect the perception of investors. If the perception by investors is positive, it implies that the government's has a good reputation in its capacity to honor agreements with the private sector. This will ensure future successful projects in the sector and attract more investors.

5.2.4 Risk Factors

Under risk factors, the factors identified in the upper quartile are: 'There is adequate clarification of the role to be played by the private sector' and 'There are increased government costs due to compensation of the private participant's risk'. On the other hand, the lower quartile factor is: 'There is adequate involvement of communities early enough which lead to less challenges during project implementation.'

The factor "There is adequate clarification of the role to be played by the private sector'' is identified in the upper quartile indicating strong agreement by the respondents. According to Woetzel et al. (2016) study during the initial stages of roles, objectives and goals definition, it is vital that it is clear and specific as possible and each partner's contribution is outlined clearly. In order to be successful in risks management, there is need of both parties to comprehend their roles. Knowing what each party is to do and when they have to do it ensures that efficiency is increased. The private party must understand and address the risks involved in a PPP project before they are involved. In PPPs, optimal risk allocation is one of the key VfM drivers in a PPP delivery model (Andersen, 2000).

Conventionally, most long-term risks are borne by the public party. In a PPP project, the public party transfers the risk it cannot manage, such as cost overruns during the construction phase, construction delays and long-term maintenance of the asset- to the private party as observed by Otieno (2018). One of the ways in which the private party can be encouraged to participate in the PPPs is by ensuring efficient risk allocation. Since infrastructure projects are highly capital intensive, the individual private entities normally prefer creation of a SPV so that some of the risks can be absorbed. If the IDFC models are adopted in Kenya for the infrastructure projects, the project costs will be lower as the risk of government defaulting payment will not be assessed and included in project cost by the private party. Additionally, excessive risk premiums which normally increase the cost of the project can be avoided making the construction costs lower and thereby solving the main challenge of high investment costs. Further, the IDFC arrangement shields the government and financiers from counterparty risk.

The factor "There is increased government costs due to compensation of the private participant's risk" is also emerged in the upper quartile. This is evidenced by the government's willingness in taking more risks which encourages the private to participate in PPPs. This is part of government efforts in providing the right and conducive environment for implementation of PPPs by encouraging the private entities, as also postulated by (PPP Unit, 2013).

Despite the positive efforts by the government, the study highlighted the factor, 'There is adequate involvement of communities early enough which lead to less challenges during project implementation" in the lower quartile indicating strong disagreement to the statement by the respondents. In Kenya, this is evidenced by the fact that RAP projects were just announced by

the government without prior detailed studies being done. RAP is a classic example were Jubilee government after coming to power immediately commenced without studies of the designs, economic analysis and environmental impact, also seen in the Government of Kenya (2011). Without proper prior studies the realization whether the project is realistic and sustainable cannot be established which can create problems in the government expenditure in the future.

5.2.5 Procurement Factors

When it comes to procurement factors, the factor "There is extensive feasibility study using PPP experts" it appeared in the lower quartile. This points out to the challenge encountered in the procurement of RAP projects. In Kenya, this is evidenced by the fact that RAP projects were just announced by the government without prior studies being done. In order to ensure that RAP project implementation is successful, project development activities must include a detailed feasibility study, land acquisition, environmental impact assessment and licensing. Babatunde and Solomon (2015) agrees that without extensive feasibility studies and use of experts, the issues of community involvement and inaccurate projections will cause more problems during implementation and after project completion.

RAP was adopted after its success in India projects which does not necessarily imply that it will be successful in Kenya because of the differences in political and social environments of the two countries. Another example of a PPP project in Kenya which has encountered challenges due to lack of prior studies is the Nairobi expressway project which was just announced by the government after which studies of the designs, economic analysis and environmental impact followed. This led to problems such as opposition from environmentalists on the effect of the project on Uhuru Park as well as issues of clearance on the use of the flight path by Kenya Airways Authority and Kenya Civil Aviation Authority. Same problems have also been addressed by Amos (2004). Without proper prior studies, the realization whether the project is realistic and sustainable cannot be established which can create problems in the government expenditure in the future.

Lack or limited experts hinder or may lead to a delay in the achievement of the project objective. According to World Bank (2014) hiring PPP experts is indispensable to an Authority undertaking a PPP project as they will add skills, practical experience, and additional capacity

and reduce significant risks in delivering the project. Steps to address capacity include ensuring that the PPP Unit is adequately staffed, resourced and empowered to make decisions. Alternatively, assistance can be provided in specific projects by hiring of external advisors; however, long-term institutional capacity should be the main goal. Additionally, under practicality, the item 'The Government is willing to part with commercial controls to the private sector' were identified as a driver of RAP implementation. The government may offer direct support for the project through subsidies, equity investment and/or debt (World Bank, 2019). The other option is the government waiving fees which would have had to be paid by the private entity to the government.

5.3 Conclusion

This research has revealed how the implementation of RAP in Kenya is fairing in terms of factors influencing the implementation of RAP. Firstly, this study identified and assessed the factors affecting implementation of PPPs in Kenya's road annuity projects. The study concludes that the economic, project selection, governance, risk allocation and procurement factors are related to each other. Therefore knowing the factors that have higher influence on projects' success supports the management process and increases its efficiency.

On spearman correlation, the study found that the factors were correlated and affected each other significantly and positively. The findings of the study align to those earlier posited by various scholars on the relationship between the factors influencing implementation of RAP. Ball et al. (2007) for instance reported the factors to be related in terms of monitoring, risk allocation, objectives and evaluation criteria and governance factors. Muasya (2014), on the other hand, established that improper vetting procedures, political interests and interference, political and socio –economic environment factors and internal vested interests were all inter-related in the implementation process of RAP. Bosire (2015) also reflected that the relationship between the factors and success of the projects was positive and statistically significant. The study concludes that economic factors positively and significantly influenced implementation of RAP in Kenya. The same can be said about project selection, governance, risk and procurement factors. Therefore, PPPs enable the private and public sector to benefit as the public sector taps into the private sector efficiencies and also benefits in terms of skills transfer, innovation in method of infrastructure, service delivery and adequate clarification of the role to be played by the private

sector, addressing the high investment capital threshold, creation of an adequate legal and regulatory framework for PPPs in the country and clearly spelling out the aims for deploying private sector,

The study further revealed that the perception of public and private sectors on factors influencing RAP implementation was similar to a large extent. It was established that the factor "High investment capital threshold is discouraging our local companies" is an outlier as it had the highest score from both the private (with a mean score 4.00) and public sector actors (with a mean score of 4.10) with a combined average score of 4.07. This view was validated from the analysis of the face to face interview notes.

5.4 Recommendations

Under objective one of the study on the influence of project selection factors, governance factors, procurement factors, risk allocation factors and economic factors on RAP implementation in Kenya, the study found that these factors have a positive and significant effect on implementation of RAP. These factors, therefore, allow the relevant parties to take the desired measures to ensure that the maximum benefit is achieved. The section below provides recommendations on each of the 5 themes based on the findings of the study.

5.4.1 Economic Factors

The findings indicated that high investment capital is discouraging the local companies indicating that financial resources have a significant effect on implementation of RAP. The study therefore recommends the adoption of Infrastructure Development Finance Company (IDFC) which will pull funding from private parties so that funding is guaranteed. On the other hand, a government bank or a Road Annuity fund can be created so as to ensure that investors are paid promptly and this will not be interfered when there are changes in government regimes. Alternatively, the government should consider putting in place a framework to guarantee investors through multinational banks to access credit facilities or give contingency liabilities having favorable interest rates. This will not only attract investors but also improve the business environment.

5.4.2 Project Selection Factors

The study recommends that the government considers giving up appropriate commercial controls to private sector so as to achieve project goals. This can be achieved by offering direct support for the project through subsidies and approaches of reducing costs that hinder implementation. The study further recommends that the government should put considerable effort in making the country and PPPs attractive. This can be achieved by having proper systems and business culture. As the findings indicate private entities will participate in PPPs which they are attracted to and if the perception by investors is positive, it implies that the government's has a good reputation in its capacity to honor agreements with the private sector or there are successful projects in the sector.

5.4.3 Governance Factors

The study recommends that the government should ensure stability of the country and favorable political and legal environment for the investors to be attracted in the country's project. Before an investor bids for a project, due diligence of the existing legal framework is normally done so as to ascertain that the legal environment is sufficiently attractive. The study proposes that a full review of the legal framework is done prior so as to ensure that nothing prevents the successful implementation of a PPP and a clear project scope be defined

5.4.4 Risk Factors

On risk factors, the study recommends that communication between the public and private partners should be continuous. This will ensure that risks which may affect the project are mitigated by apportioning each risk to the relevant party. When it comes to adoption of IDFC, in terms of risks this arrangement shields private entities, the government and financiers from different risks and also ultimately reduces the high investment costs. This makes the model conducive for the PPPs in Kenya.

5.4.5 Procurement Factors

The study recommends that extensive feasibility study using PPP experts is done before projects commence. This will solve the challenges of the community accepting projects and also mitigate the risk of inaccurate projections which cause more problems after project completion. The study further recommends that PPPs policy makers continue reviewing relevant legal and policy framework so as to make it favourable for PPPs to be successful. With adoption of IDFC, the PPPs will not be affected by election cycles as they will be partly owned by the government. These challenges should be addressed so as to give investors' confidence hence increased uptake of RAP Projects. Further, the study recommends the formation of different IDFC to encourage competition during procurement thereby ensuring the best alternative is chosen in terms of costs and achievement of the project objective.

In general, the study recommends the formation of IDFC which will act as a solution to "high investment capital is discouraging the local companies" in RAP implementation hence increasing the uptake of RAP projects.

5.5 Limitations of the Study

Due to the fact that RAP is still ongoing and there are no completed projects, it is difficult to state with certainty that the implementation of RAP is effective or successful and that it will produce the desired results until at least one phase is completed.

5.6 Suggestions for Further Research

For further research, a study is recommended on how the improvement of the Public-Private Partnerships policy framework can be achieved by tweaking the investment capitation threshold. Further, it is recommended that a study is done after the completion of the first phase of RAP so that there is a clear picture on the factors influencing the implementation of RAP at the different stages of implementation.

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APPENDICES

Appendix I: Letter of Introduction

Ole Sangale Rd, Madaraka Estate,
P.O Box 59857 00200, Nairobi, Kenya.
Cell: +254 703 414/6/7, Twitter: @SBSKenya
Email: info@sbs.ac.ke or visit www.sbs.strathmore.edu

Strathmore UNIVERSITY
BUSINESS SCHOOL

Thursday, 16 April 2020

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – JUSTUS ONYIKWA MORARA

This is to introduce Justus Onyikwa who is a **Master's in Public Policy and Management** (MPPM) student at Strathmore University Business School, admission number MPPM 111327. As part of our MPPM Program, Justus is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MPPM course. To this effect, he would like to request for appropriate data from your organization.

Justus is undertaking a research paper on **"Assessment of implementation of Public Private Partnerships of Kenya's Road Annuity Program."** The information obtained from your organization shall be treated confidentially and shall be used for academic purposes only.

Our MPPM Program seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.

Yours Faithfully,

Veronica Muniu
Manager – MBA Programs.

Strathmore Business School is a Proud member of:
Association of African Business Schools AABS EFMD AACSB

Strathmore UNIVERSITY

30th April 2020

Mr Onyinkwa, Justus
jonyinkwa@kura.go.ke

Dear Mr Onyikwa,

RE: Assessment of Implementation of Public Private Partnerships in Kenya's Roads Annuity Program

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0751/20**. The approval period is **30th April 2020 to 29th April 2021.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

Dr Virginia Gichuru,
Secretary; SU-IERC

Cc: Prof Fred Were,
Chairperson; SU-IERC

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU-IERC)
30 APR 2020
TEL: + 254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

Final Decision Certificate

This document certifies that the study:

"ASSESSMENT OF IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN KENYA'S ROADS ANNUITY PROGRAM"

Principal Investigator: Mr. Onyinkwa, Justus Morara
Reference number: SU-IERC0751/20

Was reviewed and received the following status:
"done"
Additional Comments: Final decision: **approved**
Comments sent:

```
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Reviewer #1:
'None'
```

Appendix II: Informed Consent Form

PARTICIPANT INFORMATION AND CONSENT FORM

ASSESSMENT OF IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN KENYA'S ROADS ANNUITY PROGRAM

SECTION 1: INFORMATION SHEET

Investigator: Justus Morara Onyinkwa

Institutional affiliation: Strathmore University Business School (SUBS)

SECTION 2: INFORMATION SHEET–THE STUDY

2.1: Why is this study being carried out?

The study aims to assess the implementation of Public-Private-Partnership (PPP) of the Road Annuity Program. Specifically the study aims to determine the factors which influence the selection of PPP projects in Kenya's Roads Annuity Program (RAP) and to examine the challenges experienced in the implementation of the Program with a view of proposing key areas to be addressed to enhance the implementation of the Program. This research will therefore address areas where PPPs need reforms, change or incentives in order to successfully complete initiated projects under RAP.

2.2: Do I have to take part?

No. The decision to take part in the study is entirely optional and the decision rests only with you. If you decide to take part, you will be asked to fill the questionnaire aimed at obtaining information on RAP in Kenya. If you wish to stop participating in the study after you begin, you can stop at any time by informing the interviewer.

2.3: Who is eligible to take part in this study?

The study will involve Staff of Kenya Urban Roads Authority (KURA), Kenya National Highways Authority (KeNHA), Kenya Rural Roads Authority (KeRRA), State Department for Infrastructure, PPP Unit of National Treasury, the banks lending RAP projects/Financiers, Contractors and Consultants involved in RAP who have the ability to provide relevant information, ideas, and insights on the subject under investigation.

2.4: Who is not eligible to take part in this study?

Individuals who are not involved in the implementation of the RAP.

2.5: What will taking part in this study involve for me?

You will be approached and requested to take part in the study. If you are satisfied that you fully understand the study and its goals, you will be asked to sign the informed consent form (this form) and then taken given a questionnaire to fill.

2.6: Are there any risks or dangers in taking part in this study?

There are no risks in taking part in this study. All the information you provide will be treated as confidential and will not be used in any way without your express permission.

2.7: Are there any benefits of taking part in this study?

The study will address areas where PPPs need reforms, change or incentives in order to successfully complete initiated projects under RAP which will enhance the general welfare of the Kenyan citizens in general.

2.8: What will happen to me if I refuse to take part in this study?

Participation in this study is entirely voluntary. In the event that you agree to take part in the study but later change your mind, you are free to withdraw at any time.

2.9: Who will have access to my information during this research?

All research interview records will be stored in securely locked cabinets and all your information will be kept confidential.

2.10: Who can I contact in case I have further questions?

You can contact me, Justus MoraraOnyinkwa at the Strathmore Business School, or by e-mail justus.onyinkwa@strathmore.edu or by phone +254 722864092. You can also contact my supervisor, Dr. Elizabeth Muthuma, at the Strathmore Business School, Nairobi, or by e-mail at emuthuma@strathmore.edu.

If you want to ask someone independent anything about this research please contact:

The Secretary–Strathmore University Institutional Ethics Review Board, P. O. BOX 59857, 00200, Nairobi, email ethicsreview@strathmore.edu Tel number: +254 703 034 375

I, _____, have had the study explained to me. I have understood all that I have read and have had explained to me and had my questions answered satisfactorily. I understand that I can change my mind at any stage.

Please tick the boxes that apply to you;

Participation in the research study

☐ I AGREE to take part in this research

☐ I DO NOT AGREE to take part in this research

Participant's Signature:

_____

Date: _____/_____/_____
DD / MM / YEAR

Participant's Name:

_____

Time: _____ /_____
HR / MN

I, _____ (Name of person taking consent) certify that I have followed the SOP for this study and have explained the study information to the study participant named above, and that s/he has understood the nature and the purpose of the study and consents to the

participation in the study. S/he has been given opportunity to ask questions which have been answered satisfactorily.

Investigator's Signature:

_____

Investigator's Name:

_____

(Please print name)

Date:

_____/_____/_____

DD / MM / YEAR

Time: _____ /_____

HR / MN

Appendix III: Questionnaire

Appendix III: Questionnaire

ASSESSMENT OF IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN KENYA'S ROADS ANNUITY PROGRAM

SECTION A: Project and Respondent Information

1. Name of Project – Indicate the Lot No.:3, 6, 8, 10, 32, 15, 18 20 and 33.....
2. Status of your project ☐ Under Construction ☐ under procurement ☐ other.....
3. Organization: ☐ Public ☐ Private ☐ Other .....
4. Your position on the project: ☐ Government ☐ Consultant ☐ Contractor ☐ Financier
5. Please indicate how long you have been involved in the construction of road projects?
   ☐ Below 5 years ☐ Between 5-10 years ☐ Between 10-20 years ☐ Above 20 years
6. Do you think the goals set for Public Private Partnerships by the Government are realistic and attainable based on your experience?

   YES ☐ NO ☐
7. Does the government clearly state lead responsibilities and risks for the PPPs?

   YES ☐ NO ☐
8. To what extent do you think the implementation of RAP has been achieved in Kenya?

No extent	
Little extent	
Moderate extent	
Great extent	
Very Great extent	

SECTION B: Factor influencing the Implementation of RAP Projects

To what extent do you agree with the following statements as factors influencing the implementing RAP projects? Kindly indicate using this 5point scale (1=No extent, 2=little extent, 3=Moderate extent, 4=Great extent and 5=Very great extent)

(1)Project Selection Factors					
To what extent do you agree with the following statements as factors influencing the implementing RAP projects? Kindly indicate using this 5point scale	Extent				
i) Project Objective	No extent	Little extent	Moderate extent	Great extent	Very great extent
a) The Government has clearly spelt out the aims for deploying private sector					
b) The RAP project does meets overall tests of economic value					
c) The access and affordability of services to the poor has increased					
d) The project meets environmental safeguards					
ii)Practicality					
a) There is adequate enabling legal and compliance environment					
b) The Government is willing to give up appropriate commercial controls to private sector so as to achieve project goals					
c) The Government is willing to fund and recruit experienced advisors					

2) Governance Factors					
To what extent do you agree with the following statements as factors influencing the implementing RAP projects? Kindly indicate using this 5point scale	Extent				
	No extent	Little extent	Moderate extent	Great extent	Very great extent
a) There is adequate legal and regulatory framework for PPPs in the country					
b) There is enough required skills in management of PPP projects					
c) There is positive perception of country's risk by the investor					
d) There is good structure systems and business culture in the country					
e) Institutional frameworks favor privatization					
f) There was prior research on the markets and other external forces that could affect implementation of PPP					
g) There is conducive political and socio economic environment.					

3) Economic Factors					
To what extent do you agree with the following statements as factors influencing the implementing RAP projects? Kindly indicate using this 5point scale	Extent				
	No extent	Little extent	Moderate extent	Great extent	Very great extent
a) Small market size in which is worsened by shallow financial markets					
b) High investment capital threshold is discouraging our local companies					
c) There is solid revenue and realistic cost estimations/ realistic revenue projections					
d) There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services					
e) Value for money is realized					

4) Risk Factors					
To what extent do you agree with the following statements as factors influencing the implementing RAP projects? Kindly indicate using this 5point scale	Extent				
	No extent	Little extent	Moderate extent	Great extent	Very great extent
a) There is proper risk allocation					
b) There is adequate clarification of the role to be played by the private sector					
c) There is adequate involvement of communities early enough which lead to less challenges during project implementation					
d) There is adequate flexibility in managing macro-risks					
e) There is transparency and integrity					
f) There is increased government costs due to compensation of the private participant's risk					

5) Procurement Factors					
To what extent do you agree with the following statements as factors influencing the implementing RAP projects? Kindly indicate using this 5point scale	Extent				
	No extent	Little extent	Moderate extent	Great extent	Very great extent
a) There is adequate contract negotiation skills by both parties					
b) There is competitive procurement hence cost-effective partnering					
c) There is clear understanding and sufficient awareness of PPP options and modalities					
d) There is extensive feasibility study with use of PPP experts					
e) There is proper vetting of the private partners since there is no influence from within the Ministry for some interested and probable partner					
f) There is competitive and transparent procurement					
g) There is adequate monitoring and evaluation of projects					

Have there been any additional factors during the implementation of the project that are not listed above? If yes, what other factors?

.....

.....

.....

.....

Are there specific areas that you propose be addressed in order to improve the implementation of RAP?

.....

.....

.....

THANK YOU VERY MUCH FOR YOUR TIME.

Appendix IV: Interview guide

INTERVIEW GUIDE

ASSESSMENT OF IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN KENYA'S ROADS ANNUITY PROGRAM

1. What role do you think the selection of the projects under RAP contributed to their implementation status?
2. What economic factors might have contributed to the uptake of the RAP by the Financial institutions?
3. How was the procurement of RAP done? Can you suggest any ways we can improve the procurement process of PPP projects in Kenya?
4. In your opinion, was the risk allocation between private partners and the government well apportioned in the RAP?
5. What can be done different in terms of risk allocation to enhance the uptake of the PPP projects in Kenya?
6. In terms of governance, what do you think the Government of Kenya can do to build the confidence of the investors?
7. In your opinion, which areas do you think the government and/or the private sector should put more effort for the successful implementation of the PPPs programs/projects in Kenya?

THANK YOU VERY MUCH FOR YOUR TIME.

Appendix V: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 844155

Date of Issue: 15/May/2020

RESEARCH LICENSE

This is to Certify that Mr.. JUSTUS MOBARA ONYINKWA of Strathmore University, has been licensed to conduct research in Nairobi on the topic: ASSESSMENT OF IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIPS IN KENYA'S ROADS ANNUITY PROGRAM for the period ending : 15/May/2021.

License No: NACOSTI/P/20/4947

844155

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR Code

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National Commission for Science, Technology and Innovation
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Mobile: 0713 788 787 / 0735 404 245
E-mail: dg@nacosti.go.ke / registry@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix VI: Likert Scale scores, summation and averages (Public mean (Pum), Private mean (Prm) and Combined mean (All).

		1	1	2	2	3	3	4	4	5	5	Sum of Scores												
	Item	NE		LE		ME		GE		VGE		NE		LE		ME		GE		VGE		Mean		All
Themes	No.	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Pr	Pu	Prm	Pum	
Project Selection Factors	1	0	0	1	2	5	14	6	16	3	8	0	0	2	4	15	42	24	64	15	40	3.73	3.75	3.75
	2	0	0	3	9	5	14	5	13	2	4	0	0	6	18	15	42	20	52	10	20	3.40	3.30	3.33
	3	1	2	4	11	5	13	4	11	1	3	1	2	8	22	15	39	16	44	5	15	3.00	3.05	2.98
	4	0	0	1	2	5	15	6	17	2	7	0	0	2	4	15	45	24	68	10	35	3.40	3.80	3.69
	5	0	1	2	5	3	9	7	18	3	7	0	1	4	10	9	27	28	72	15	35	3.73	3.63	3.64
	6	1	1	2	6	5	15	6	15	1	3	1	1	4	12	15	45	24	60	5	15	3.27	3.33	3.27
	7	1	2	2	5	4	12	6	16	2	5	1	2	4	10	12	36	24	64	10	25	3.40	3.43	3.36
	8	1	4	2	6	7	17	3	8	2	5	1	4	4	12	21	51	12	32	10	25	3.20	3.10	3.04
	9	2	7	4	10	6	15	2	5	1	4	2	7	8	20	18	45	8	20	5	20	2.73	2.80	2.62
	10	1	3	3	7	3	8	6	17	2	5	1	3	6	14	9	24	24	68	10	25	3.33	3.35	3.27
	11	0	0	3	9	4	10	5	13	3	8	0	0	6	18	12	30	20	52	15	40	3.53	3.50	3.51
	12	1	4	3	8	5	14	3	9	2	6	1	4	6	16	15	42	12	36	10	30	2.93	3.20	3.04
	13	1	3	4	9	4	12	4	12	1	4	1	3	8	18	12	36	16	48	5	20	2.80	3.13	2.96
	14	1	3	4	11	6	16	3	8	1	3	1	3	8	22	18	48	12	32	5	15	2.93	3.00	2.91
Governance Factors	15	0	1	2	7	4	9	6	15	3	8	0	1	4	14	12	27	24	60	15	40	3.67	3.55	3.56
	16	1	1	5	15	5	14	3	9	1	1	1	1	10	30	15	42	12	36	5	5	2.87	2.85	2.82
	17	0	1	5	14	5	15	3	8	1	3	0	1	10	28	15	45	12	32	5	15	2.80	3.03	2.95
	18	1	3	4	9	7	19	3	7	1	1	1	3	8	18	21	57	12	28	5	5	3.13	2.78	2.80
	19	1	1	3	8	8	21	3	9	0	1	1	1	6	16	24	63	12	36	0	5	2.87	3.03	2.95
	20	1	4	6	16	3	9	4	10	1	1	1	4	12	32	9	27	16	40	5	5	2.87	2.70	2.65
	21	1	2	4	11	6	15	4	9	1	2	1	2	8	22	18	45	16	36	5	10	3.20	2.88	2.91
Economic Factors	22	0	1	3	8	3	8	6	17	2	7	0	1	6	16	9	24	24	68	10	35	3.27	3.60	3.49
	23	0	0	2	5	1	1	7	19	5	15	0	0	4	10	3	3	28	76	25	75	4.00	4.10	4.07
	24	1	1	3	9	6	16	5	12	1	1	1	1	6	18	18	48	20	48	5	5	3.33	3.00	3.05
	25	2	5	6	16	4	11	2	6	1	2	2	5	12	32	12	33	8	24	5	10	2.60	2.60	2.47
	26	1	3	4	12	4	12	3	10	2	4	1	3	8	24	12	36	12	40	10	20	2.87	3.08	2.95
Risk Factors	27	1	3	2	7	4	11	6	15	2	4	1	3	4	14	12	33	24	60	10	20	3.40	3.25	3.22
	28	0	0	3	7	3	9	7	17	2	7	0	0	6	14	9	27	28	68	10	35	3.53	3.60	3.58
	29	2	4	6	15	3	8	3	8	2	4	2	4	12	30	9	24	12	32	10	20	3.00	2.75	2.71
	30	1	3	5	13	6	16	2	5	1	3	1	3	10	26	18	48	8	20	5	15	2.80	2.80	2.73
	31	1	2	4	10	5	12	4	10	2	5	1	2	8	20	15	36	16	40	10	25	3.33	3.08	3.09
	32	0	1	2	5	4	12	6	16	2	7	0	1	4	10	12	36	24	64	10	35	3.33	3.65	3.55
Procurement Factors	33	1	1	4	11	6	16	2	7	2	5	1	1	8	22	18	48	8	28	10	25	3.00	3.10	3.04
	34	0	0	4	11	6	15	3	7	2	7	0	0	8	22	18	45	12	28	10	35	3.20	3.25	3.24
	35	1	1	4	12	6	17	2	7	1	4	1	1	8	24	18	51	8	28	5	20	2.67	3.10	2.95
	36	1	4	4	12	5	12	3	9	1	4	1	4	8	24	15	36	12	36	5	20	2.73	3.00	2.84
	37	1	2	5	12	4	11	4	9	2	5	1	2	10	24	12	33	16	36	10	25	3.27	3.00	3.02
	38	0	1	3	9	5	13	4	11	2	7	0	1	6	18	15	39	16	44	10	35	3.13	3.43	3.33
	39	1	3	4	9	5	12	4	10	2	5	1	3	8	18	15	36	16	40	10	25	3.33	3.05	3.05

i) Project Objective	No extent	Little extent	Moderate extent	Great extent	Very great extent
a) The Government has clearly spelt out the aims for deploying private sector	0%	5%	35%	40%	20%
b) The RAP project does meets overall tests of economic value	0%	22%	35%	33%	11%
c) The access and affordability of services to the poor has increased	5%	27%	33%	27%	7%
d) The project meets environmental safeguards	0%	5%	36%	42%	16%
ii) Practicality					
a) There is adequate enabling legal and compliance environment	2%	13%	22%	45%	18%
b) The Government is willing to give up appropriate commercial controls to private sector so as to achieve project goals	4%	15%	36%	38%	7%
c) The Government is willing to fund and recruit experienced advisors	5%	13%	29%	40%	13%
d) There is continued commitment through changes of government	9%	15%	44%	20%	13%
e) There is similar and successful PPP in the sector	16%	24%	38%	13%	9%
f) Fair and transparent procurement is done	7%	18%	20%	42%	13%
g) There is private sector interest in financing the project	0%	22%	24%	33%	22%

iii) Value for money					
a) The net benefits obtained are higher compared to traditional methods (EPC -Engineer, Procure and Construct)	9%	20%	35%	22%	15%
a) The proposals submitted are financially sustainable taking assumptions into consideration	7%	25%	29%	29%	9%
b) The project's impact on government expenditure is realistic and sustainable	5%	27%	40%	20%	7%
Have there been any additional factors that influence the selection of the RAP projects?	0%	0%	0%	0%	0%
If Yes, please explain	0%	0%	0%	0%	0%
Governance Factors					
a) There is adequate legal and regulatory framework for PPPs in the country	2%	16%	24%	38%	20%
b) There is enough required skills in management of PPP projects	4%	36%	35%	22%	4%
c) There is positive perception of country's risk by the investor	2%	35%	36%	20%	7%
d) There is good structure systems and business culture in the country	5%	25%	47%	18%	4%
e) Institutional frameworks favor privatization	4%	20%	53%	22%	2%
f) There was prior research on the markets and other external forces that could affect implementation of PPP	9%	42%	22%	24%	4%
g) There is conducive political and socio economic environment.	5%	27%	38%	24%	5%

Economic Factors					
a) Small market size in which is worsened by shallow financial markets	2%	20%	20%	42%	16%
b) High investment capital threshold is discouraging our local companies	0%	13%	4%	47%	36%
c) There is solid revenue and realistic cost estimations/ realistic revenue projections	4%	22%	40%	31%	4%
d) There is thorough financial and economic analysis which leads to public acceptance when asked to pay for the services	13%	40%	27%	15%	5%
e) Value for money is realized	7%	29%	29%	24%	11%
B4. RISK FACTORS	0%	0%	0%	0%	0%
Risk Factors					
a) There is proper risk allocation	7%	16%	27%	38%	11%
b) There is adequate clarification of the role to be played by the private sector	0%	18%	22%	44%	16%
c) There is adequate involvement of communities early enough which lead to less challenges during project implementation	11%	38%	20%	20%	11%
d) There is adequate flexibility in managing macro-risks	7%	33%	40%	13%	7%
e) There is transparency and integrity	5%	25%	31%	25%	13%
f) There is increased government costs due to compensation of the private participant's risk	2%	13%	29%	40%	16%
Procurement Factors					
a) There is adequate contract negotiation skills by both parties	4%	27%	40%	16%	13%
b) There is competitive procurement hence cost-effective partnering	0%	27%	38%	18%	16%
c) There is clear understanding and sufficient awareness of PPP options and modalities	4%	29%	42%	16%	9%
d) There is extensive feasibility study with use of PPP experts	9%	29%	31%	22%	9%
e) There is proper vetting of the private partners since there is no influence from within the Ministry for some interested and probable partner	5%	31%	27%	24%	13%
f) There is competitive and transparent procurement	2%	22%	33%	27%	16%
g) There is adequate monitoring and evaluation of projects	7%	25%	31%	24%	13%