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An Evaluation of the Shortcomings in the Existing Contractors' Procurement Procedures in the Ugandan Roads Sector

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Abstract:

The success of a project is traditionally measured on time, cost and quality parameters. Most construction projects in Uganda have not performed well on these parameters. Experience has shown that it is when the project fails that implementers realize they should have engaged with the procurement process to strengthen it before embarking on the project. This study aimed at identifying critical shortcomings in the existing road contractors' procurement procedures and their impact on project performance in the Ugandan roads sector. A survey was conducted among construction sector professionals to get their perceptions on procurement-related shortcomings. Case studies of completed major road projects were considered to ascertain procurement shortcomings experienced. According to practitioners' perceptions, the highest-ranking shortcomings in order were: unethical bidders, lack of confidentiality, multiple overlapping audits based on procedures rather than impact, poor performing providers, delays in obtaining Government Solicitor General's clearance, integrity of the procurement system and process, malicious unsuccessful bidders and delays at getting no-objection from donors. From the case studies reviewed, the most prevalent occurrences in order were: significant increase in BOQ Quantities or Inaccurate Estimates, Design changes or inadequacies, Scope Changes, Claims reported, PAP Land compensation not finished in time, Inaccuracies in Bid documents or Inadequacies, Variation of prices or VO, Long Procurement Period, Contract Management inefficiencies or Queries at Implementation and Client decision delays. In terms of schedule performance, only 8.6% of the sampled projects were completed within the original planned schedule. Chi-square tests were performed to study the association between identified shortcomings in relation to cost and time performance. Design changes or inadequacies, Variation of prices or variation orders (VO), Scope changes and Claims reported were found to have significant association with project performance.

Keywords: Procurement, shortcomings, practitioners, projects, project performance

1. Introduction

The construction industry is the vehicle for the provision of shelter, buildings, and other infrastructure that adds to, or supports the quality of life of the citizen. The industry contributes to the growth and development of nations. In addition to the provision of or maintenance of infrastructure, the industry contributes to the gross domestic product of nations (Ogunlana, 2010).

Construction industry contributes over 12% of Uganda's Gross Domestic Product (GDP) and has witnessed steady growth for the last 20 years (Uganda National Commission for UNESCO, 2013). Whereas its importance, its challenges as well as risks are well publicized, with several similarities in developed and developing countries (Uganda National Commission for UNESCO, 2013). The World Bank (1984) summarizes a number of construction industry challenges in developing countries and these include: inadequate procurement and contracting procedures, delayed completion of projects, and price fluctuations, among others. .

Providing the linkage between the public procurement system and project implementation goals has been lacking. Thus, procurement has in the past been relegated by researchers and project implementers to the periphery of public projects implementation process. Hence the high rate of public projects failure. Experience has shown that it is only at the end of the process when the project fails that project implementers realize that they should have engaged with the procurement system with a view to strengthening it, first and foremost, before embarking on the project itself. Alinaitwe (2008) argues that the performance of construction industry clients on the supply chain is also questionable, as they frequently delay payments to contractors, and contribute to a majority of variations and change orders (attributable to incomplete designs and briefs) during construction.

For the last 5 years, the national roads system in Uganda is experiencing a large increase in public spending and institutional reforms designed to enhance the efficiency of this investment (Booth & Golooba-Mutebi, 2009). The roads sector in Uganda is currently being allocated significant proportions of the national budget. The budgetary allocations to it

have been in the tunes of 17.1%, 18.2%, 14.8% and 12.4% in the recent financial years (Budget Speeches: Financial Years 2014/15, 2013/14, 2012/13 and 2011/12 respectively). In May 2004, government formally asked donors for US \$20m annually for the second 10-year Road Sector Development Program (RSDP II). This was for institutional reforms, which entailed the formation of a Roads Authority responsible for a national road network development and management and to complete the backlog of road maintenance projects.

While the success of projects is traditionally measured on time, cost and quality parameters, most construction projects in Uganda have not performed well on these parameters (Basheka & Tumutegyeize, 2010). Rwelamila, Talukhaba and Ngowi (1999) noted that most African construction practitioners had a tendency of adopting procurement approaches, which did not consider local factors, and led to inconsistent and unpredictable outcomes.

Close to 90% of the expenditure of Uganda National Roads Authority (UNRA) is incurred on procurement, and for the most part, UNRA's work is engineering rather than procurement for supplies. The procurement for roads is characterized by the procurement of engineering services, engaging engineering firms to study its projects feasibility and design them, and eventually handle the supervision of the contractors in place (UNRA, 2014).

2. Research Objectives

This study aimed at exploring main shortcomings in the existing contractors' procurement procedures and their impact on project performance in the Ugandan roads sector and pursued specific objectives identification of main shortcomings in the procurement procedures based on perceptions of construction industry practitioners; ascertain procurement shortcomings experienced in completed major road projects; determine the association between the identified main procurement shortcomings and project performance.

3. Methodology Used

Literature from articles and previous research studies concerning procurement of public works infrastructure projects was extensively studied to get an overview so as to guide in refining the research process and also to identify roads procurement-related challenges. A desk study was done to review existing documentation on procurement systems, procedures and processes. A survey based on semi-structured questionnaires was conducted to rank identified procurement-related shortcomings. In the questionnaire the respondents were asked to rate identified procurement-related shortcomings on a Likert scale of 1-5 with 3 as the neutral point. The questionnaires were distributed physically as well as electronically by e-mail.

Interviews and questionnaires were administered to corporate members of Uganda Society of Architects (USA), corporate members of Uganda Institution of Professional Engineers (UIPE) and registered Quantity Surveyors knowledgeable on the subject and were involved in planning, procurement and administration of projects. Stratified sampling was used to select technical people in the construction sector in terms of membership of professional institutions for quantity surveyors, engineers and architects. This was mainly because they were directly involved in procurement and managing or administering projects and were in the best position to avail the researcher with the best technical information.

4. Review of the Major Findings

The results of the rankings of the 39 procurement shortcomings are summarized in Table 5.1 to aid their discussion. This ranking was based on relative importance indices.

4.1. Ranking of Procurement-Related Shortcomings Based on Practitioners' Perceptions

Factors	Ranking
Unethical bidders, false information	1
Lack of confidentiality	2
Multiple Audits	3
Audits on procedures than impact	4
Poor performing providers	5
SG clearance delays	6
Integrity of System, process	7
Domestic Industry low capacity	8
Malicious unsuccessful bidders	9
No-objection Donor delays	10
Anonymous allegation	11
Inadequate Specifications	12
Understaffing	13
Procurement workload	14

Factors	Ranking
Need for Due diligence	15
Long time to handle variations	16
Delays in PPDA clearance	17
Complying with PPDA and Donors	18
Unmanaged relationships	19
Late Initiation of Procurement	20
Conflict of Interest	21
Project Preparation, sequential plan	22
Pace of Implementation	23
Procurement conclusion uncertainty	24
SG unclear role	25
CC delays and inefficiency	26
Procurement delays/long bidding	27
Funding Delays	28
Power concentration on CC	29
Funding Arrangements	30
Contracting Strategies	31
PPDA Prescriptive Nature	32
Reliance on Extension of Contracts	33
Underfunding	34
Retrospective rejections	35
Distorted Evaluation System	36
AO Ambiguous Role	37
AO Less Empowered	38
Lack of Interest	39

Table 1: Ranking of Procurement-Related Shortcomings Based on Practitioners' Perceptions

As per Table the highest-ranking shortcomings in order were: unethical bidders who also declare false information, lack of confidentiality, multiple overlapping audits, the audits are based on procedures rather than impact, poor performing providers, delays in obtaining Solicitor General's clearance, integrity of the procurement system and process, malicious unsuccessful bidders, delays at getting no-objection from donors, anonymous allegations, inadequate specifications and understaffing.

As pointed out by Chandra (2008), Oladipo (2008) and Gurung et al (2002), among other scholars on the subject under study, the key factors that influence public projects implementation are planning, monitoring and control, choice of procurement procedure, and communication. The Government public procurement legal framework speaks quite categorically to all these four factors (PPDA, 2005). However, it may be noted that there could be other procurement practices other than these that also impact on project implementation. This provides a room for further research in this area to provide a comprehensive body of knowledge that can profoundly benefit public policy makers and academicians. These study findings are in agreement with these scholars and Barasa (2014), who states that there seems to exist a congruence of ideas on the whole phenomenon of public projects implementation. Inadequate specifications, understaffing, procurement workload, improper sequential planning during project preparation, pace of project implementation and uncertainty in the conclusion time of the procurement process, can all be broadly classified under shortcomings in planning.

This is in agreement with Lysons and Farrington (2006) who espouse the view that implementation is about converting a strategic plan into action and doing what needs to be done to achieve the targeted strategic goals and objectives. In most cases, if not all, projects form the heart of those strategies and as such, a successfully implemented project would determine the success of any given strategy for creating a competitive edge.

The remaining challenges can likewise be broadly classified appropriately under monitoring and control, choice of procurement procedure or communication.

These study findings are also in agreement with Aiyetan et al., (2008) who point out that the three most significant factors that adversely impact construction project delivery time performance are: quality of management during construction, quality of management during design and design coordination.

A study by Kumaraswamy and Chan (1998) on causes of construction delays in Hong Kong found differences in perceptions as to causes of delays by different groups of participants in building and civil engineering works. They suggested that biases of different industry groups might direct blame for delays to other groups. This was also observed in this study among the different stakeholders namely Solicitor General, Contracts Committee, PPDA, Funding Agencies and Donors. In the findings of this research, it was observed that this can result from communication gaps; weaknesses in quality of management, and monitoring and control; as well as integrity.

The user department's first role is preparation of the procurement requisition filled with clear specifications, terms of reference and scope of work as a task during planning. Thus, inadequate specifications and scope changes result from shortcomings within the user department which can be due to understaffing in terms of staff numbers, skills, competencies or experience. This is in agreement with Wixom (2001) who postulates that user participation and team skills are two of the serene imperative implementation factors that determine project success or failure, and that these two are essential communication skills. He argued that user participation occurs when users are assigned project roles and tasks, which lead to a better communication of their needs and helps to ensure that the system is implemented successfully. He further emphasizes that team skills are a critical factor in implementation success. Team skills are enhanced by interpersonal abilities which are in turn determined by good interpersonal communication skills.

It should be noted that many of the stakeholders in the procurement cycle have a role to play in the successful monitoring and control of the project during implementation, for example contract management and performance evaluation. This is why the shortcomings in this study arise from weaknesses from the different stakeholders. This is in agreement with Saunders (1997) who argues that some elements of the project strategy may not be effectively carried out due to lack of awareness or a lack of resources or because of resistance by those expected to implement them. The problem is also compounded in part by the extent to which people have been involved in the formulation and selection of the strategy in the first place. These challenges point to a faulty communication mechanism which will in the final analysis affect the level of success in project implementation.

The findings further agree with Meredith and Mantel (2012) who equally contend that everyone concerned with the project should be appropriately tied into the project reporting system, including the different levels of management, with appropriate depths of detail varying with the different levels. The frequency of reporting should be great enough to allow control to be exerted during or before the period in which the task is scheduled for completion.

Shortcomings resulting from key stakeholders namely PPDA, Contracts Committee and Accounting Officer appear from ranking number 17 out of the 39, suggesting that these may actually have less to contribute to the existing underperformance. One of the basic principles of the public procurement system mentioned in Sections 44 to 47 of the PPDA Act 2003 is to ensure that all procurements and disposals are conducted in a manner that promotes transparency, accountability, fairness, competition and value for money while ensuring confidentiality. These are what PPDA seeks to ensure and should be supported to achieve. Thus, some practitioners may blame PPDA yet they themselves are hindering this, may be due to lack of awareness or unethical behaviour, among others. These PPDA targets are in line with Bauld and McGuinness (2006) who note that the key principles underpinning public procurement are economy, value for money, ethical standards, competition, transparency and accountability.

In line with the above, it was noted that as per the respondents' perceptions the top-ranked shortcomings were unethical bidders who also declare false information, lack of confidentiality and multiple audits, which are all related to ethical and integrity issues.

In Part C of the questionnaire, the respondents were asked an open-ended question to recommend ways in which the procurement shortcomings could be addressed. Some respondents further gave additional remarks on the procurement shortcomings. One practitioner recommended the need to build capacity within procurement units to understand procurement; improving the contract management function by engaging competent contract managers who understand the procurement law; and that sufficient time should be allocated in developing statement of requirements, terms of reference and specifications. Others recommended building capacity of local firms to perform to standard requirements through improved re-training and government action in collaboration with professional bodies such as UIPE to improve the quality of the existing workforce; Procurement entities need to be strengthened with skilled professionals in project management and implementation; Legal departments should be empowered to clear procurements on behalf of Solicitor General; and that PPDA should give special accreditation to procuring civil works. Practitioners also recommended continuous review of procedures and regulations to suit new trends in construction and procurement options; service providers who sabotage government programmes through administrative reviews should be blacklisted or suspended upon loss of claim in the review; continuous audits; mass sensitization of officers and service providers; and stringent regulations.

Other remarks by respondents included that the accounting officer's role is of minimal impact because he/she has to rely on officers who he/she may not be in a position to discipline; work overload on the part of Contracts Committees whose members have other roles; planning and funding agencies work independent of each other hence the clash of priorities; and that procurement entities do not operate holistically which renders the whole supply chain without expected value to the end users. A respondent complained of rigid PPDA rules while another, on the contrary, stated that PPDA procurement guidelines are in accordance with best international practices.

In line with Kumaraswamy and Chan (1998) who studied causes of construction delays in Hong Kong, found differences in perceptions as to causes of delays by different groups of participants in building and civil engineering works, and suggested that biases of different industry groups might direct blame for delays to other groups; it was thus important to substantiate these survey findings by looking at real-life occurrences in case study projects.

The percentages of occurrences in the 35 projects reviewed are summarized in Table 2 to aid their discussion.

Occurrences	Percentage (%)
Significant increase in BOQ Quantities or Inaccurate Estimates	60
Design changes or inadequacies	48.6
Scope Changes	45.7
Claims reported	37.1
PAP Land compensation not finished in time	25.7
Inaccuracies in Bid documents or Inadequacies	25.7
Variation of prices or VO	25.7
Long Procurement Period	22.9
Contract Management inefficiencies or Queries at Implementation	20
Client decision-making delays	20
Shortage of funding after tender or design	17.1
Delayed contract starts after signing	17.1
Long time lapse between Design and Construction	17.1
Procurement in line with PPDA regulations	14.3
Contractual disagreements or disputes	14.3
Relocation of utilities not finished in time	14.3
Delayed No-objection from donor	11.4
Procurement Process Queries	11.4
Project external factor delays	11.4
Same Design and Supervision Consultant	11.4
Administrative review procurement delays	8.6
Long time taken to handle variations blamed on CC	8.6
Multiple Audits	8.6
Delayed Payment to Contractor	8.6
Supervision Consultant not procured in time	8.6
Design not done before construction	5.7
Delayed PPDA clearance	5.7
Poor record keeping at PDU	5.7
Direct Procurement after PPDA waiver	5.7
Delayed SG clearance	2.9
Retrospective Approval during Procurement, Sequence not right	2.9
Delayed Communication	2.9
Queried Direct Procurement	2.9

Table 1: Percentages of Occurrences Identified In Sampled Road Projects

the most prevalent occurrences from the case study projects in order were; significant increase in BOQ quantities or inaccurate estimates, design changes or inadequacies, scope changes, claims reported, PAP land compensation not finished in time, inaccuracies in bid documents or inadequacies, variation of prices or VO, long procurement period, contract management inefficiencies or queries at implementation and client decision delays.

It should be noted that only 3 out of the 35 (8.6%) sampled road projects used the design and build approach while the remaining 32 (91.4%) were all the traditional design-bid-build contracts.

Significant increase in BOQ quantities or inaccurate estimates, design changes or inadequacies, scope changes, claims reported, PAP land compensation not finished in time, inaccuracies in bid documents or inadequacies, variation of prices or VO all relate to deficiencies during planning.

Long procurement period, contract management inefficiencies or queries at implementation and client decision delays relate to coordination and communication weaknesses or deficiencies in monitoring and control. Poor monitoring and control cause poor workmanship and schedule creep which in turn lead to cost overruns.

The findings from these case study projects agree with Al-Momani (2000) who investigated causes of delay in 130 public projects in Jordan and found out that the main causes of delay were related to designer, user changes, weather, site conditions, late deliveries, economic conditions and increase in quantity. These are also in agreement with Kaliba et al., (2009) who concluded from their study that the major causes of delay in road construction projects in Zambia included changes in design drawings, changes in specifications, staffing problems, poor supervision, construction mistakes, poor coordination on site and delayed payments, financial deficiencies on the part of the client or contractor, contract modification and economic problems, among others.

Agaba (2009) also attributes delays in construction projects to poor designs and specifications, and problems associated with management and supervision. In their study, El-Razek et al. (2008) found that delayed payments, coordination difficulty and poor communication were important causes of delay in Egypt. Sambasivan and Soon (2007) established poor planning, poor site management, inadequate supervisory skills of the contractor, delayed payments, material shortage, labour supply and poor communication among the most important causes of delays in the Malaysian construction industry.

The findings of this research are in agreement with Apolot (2010) who performed an investigation into the causes of delay and cost overrun in Uganda's public-sector construction projects, taking the Civil Aviation Authority as a case study to validate findings from the survey. She found out that some of the most important causes of delays in construction projects included change of work scope, delayed payments, and poor monitoring and control. For improved project management, she recommended change from the traditional contract type to the design-build type and improved cash flow on the part of the client so as to reduce payment delays.

Change in scope appears as a major cause of delays among many scholars. There is therefore need to keep scope changes to a minimum. This finding is in agreement with PPDA (2009) in which it was reported that the audited projects experienced cost overruns due to change in work scope. Change in scope may be due to execution of incomplete designs which leads to variations (Alinaitwe, 2008). The other cause of change in scope is due to clients who may not be informed and therefore delay in making decisions on the designs.

Findings from this study also appear in Kikwasi (2012) who researched into the causes and effects of delays and disruptions in construction projects in Tanzania, obtaining views from clients, consulting firms, regulatory boards and construction firms. His findings revealed that the main causes of delays and disruptions included design changes, delays in payment to contractors, information delays, funding problems, poor project management, compensation issues and disagreement on valuation of work done. The study concludes that these put construction projects at great risk and have an effect on their performance. It recommended that adequate construction budget, timely issuing of information, finalization of design and project management skills should be the main focus of the parties in project procurement process.

Meanwhile, SaidaAbbass and Okibo (2014) sought to determine the extent to which the procurement process issues affect strategy implementation in road public corporations as per the Kenya's Vision 2030. From their findings, understanding of strategy implementation goals had a mean score of 4.53 and procurement need identification had a mean score of 4.43 on a Likert scale of 1 to 5 with 5 = strongly agree and 1 = strongly disagree. Their study focused on the general procurement system as the sole factor.

4.2. Performances of Major Road Projects

Of these, only 3 out of the 35 (8.6%) sampled road projects used the design and build approach while the remaining 32 (91.4%) were all the traditional design-bid-build contracts.

In terms of schedule performance, only 8.6% of the sampled road projects were completed within the original planned schedule. Meanwhile, 28.6% of the projects had a schedule creep of more than 100% of the planned schedule, 17.1% had a schedule creep of 50-<75% of the planned schedule, 17.1% had a schedule creep of 25-<50% of planned schedule, 11.4% had a schedule creep of 10-<25% of the planned schedule, 8.6% of the projects had a schedule creep of 75-<100% of the planned schedule, and 8.6% of the projects had a schedule creep of 0-<10% of the planned schedule. The average schedule creep or slippage was 50-<75% of the original planned schedule.

For cost performance, 37.1% of the sampled road projects had a cost overrun of 25-<50% of the original planned or budgeted cost, 31.4% had a cost overrun of 10-<25% of budgeted cost, 11.4% had a cost overrun of 0-<10% of budgeted cost, 5.7% had a cost overrun of 75-<100% of budgeted cost, 5.7% had a cost overrun of 50-<75% of budgeted cost, and 8.6% had a cost overrun of more than 100% of budgeted cost. The average cost overrun was 25-<50% of the budgeted cost.

It should be noted that most of the sampled road projects (28.6%) had a schedule creep of more than 100% of the planned schedule and in terms of cost, most of the reviewed projects (37.1%) had a cost overrun of 25-<50% of original planned or budgeted cost. Most of these effects must have resulted from the facts concerning procurement shortcomings that occurred in the projects, the leading ones being: significant increase in BOQ quantities or inaccurate estimates (60%), design changes or inadequacies (48.6%), scope changes (45.7%), claims (37.1%), PAP land compensation not finished in time (25.7%), inaccuracies or inadequacies in bid documents (25.7%), variation orders (25.7%), long procurement period (22.9%), contract management inefficiencies or queries during implementation (20%) and delays by the client in decision-making (20%), among others.

Design changes or inadequacies, variation of prices or variation orders (VO), scope changes and claims reported were found to have significant association with project performance.

These research findings are in agreement with Brown and Hyer (2010) who anchored their argument for monitoring and control on the fact that there are several phenomena which influence project execution and cause actual performance to depart from planned performance. These phenomena include: (i) Scope creep; which describes the tendency for a project to grow beyond its initial size. It is caused by the team members' enthusiasm; unanticipated issues discovered mid-project and redefinition or clarification of customer needs; (ii) Murphy's Law; which espouses the principle that what can go wrong will go wrong. This means that not all risks can be accurately anticipated; (iii) Pareto's law; which postulates that 80% of the project's problems and delays are caused by 20% of project activities. An effective project monitoring system should focus on activities that carry the highest risks for delay, cost overruns or performance challenges; and lastly, (iv) Escalation of Commitment Principle; which states that human beings tend to continue pursuing courses of action, even when all signals point to the fallacy of the strategy. Thus, a procurement project contract monitoring system can have a significant influence on people's decisions to escalate or de-escalate commitment. In a nutshell, Brown and Hyer (2010) suggest six principal pre-requisites for a sound project contract monitoring and control system which are: (i) Ability to identify metrics relevant to the project, that is, a balanced set of performance indicators; (ii) The system should be in-built into the project plan right from the point of project planning stage; (iii) Capacity to generate accurate information (iv) Capacity to generate timely information for timely decision making and corrective action; (v) Visibility to team members to enable every individual player or stakeholder to know what is being measured and have ready access to the information; (vi) Ability to provide a basis for problem discovery and solution; not a mere 'big brother is watching' kind of mechanism that strikes fear into the hearts of participants.

It was also observed that 54.3% of the sampled projects were donor-funded while 45.7% were GoU-funded. Also, donor-funded projects appeared to perform better than GoU-funded projects and the only project that was finished in time was funded by World Bank. This may point to better planning, monitoring and control measures embedded in the donor funding requirements.

Similar delays and cost overruns were observed by Apolot (2010) who reviewed 30 projects under the Civil Aviation Authority (CAA), and found out that 53% of the projects in the period of analysis had cost overruns and 40% had no change in contract cost; there was cost saving in 7% of the projects as projects were completed at costs below the initial contract cost; 84% of the cost overruns were caused by change in work scope; and the remainder of the cost overruns were mainly attributed to inflation. From the CAA projects, the most frequent cause of delays was change in work scope to which 46% of the delays were attributed; this was followed by delayed payments to which 21% of the delay causes were attributed; 15% of the delays were due to remote location of the projects; poor communication appeared as the fourth factor to which 6% of the delays were attributed; bad weather, land disputes, rework and disputes between the project parties were the least common at 3% each.

Mutava (2014), concerning policy support, notes that the ideal procurement system should factor in cost of maintenance, time and quality for it to be successful. From the results of her analyzed data, a big percentage advocated for review of the PPDA, therefore the government should review regulations and policies which impact on procurement to ensure they support emerging practical situations and challenges. She recommended that regulations on public procurement be expanded to cover all forms of procurement, including procurement for emergencies, not tied to some bureaucratic approvals through involving professional associations' in the drafting or revision of procurement laws, regulations and guidelines. The study recommended establishment of a feedback mechanism to monitor and evaluate the implementation of PPDA which will ensure that successes of public procurement are documented and shared, and the emerging challenges are identified, and appropriate measures taken to address them. This will enable the implementers of the act to constructively influence the implementation strategy. This is geared towards overcoming the challenges posed by PPDA and the effects of time, cost overruns and compromise of quality.

It is not uncommon to see a project failing to achieve its mission of creating a facility within the specified cost and time. Hardly few projects get completed in time and within original costs (Chitkara, 2009). The factors contributing to these overruns include the following:

(a) Inadequate project formulation: Poor field investigation, inadequate project information, bad cost estimates, lack of experience, inadequate project analyses and poor investment decisions; (b) Poor planning for implementation: Inadequate time plan, inadequate resource plan, inadequate equipment supply plan, inter-linking not anticipated, poor organization and poor cost planning; (c) Lack of proper contract planning and management: Improper pre-contract actions and poor post award contract management; and (d) Lack of proper project management during execution: Inefficient and ineffective working, delays, changes in scope of work, law and location; (e) Failures can be due to unforeseen natural calamities like earthquakes, floods and natural disasters; and (f) Failures can also result from deliberate attempts made by manipulators during the feasibility stage by incorporating inaccurate time and cost estimates with a view to secure business or start a project. These in-built intentional inaccuracies can lead to unrealistic objectives and thus create problems during the implementation stage.

Generally, the main causes of such failures can be attributed to cost estimation failure and management failure as detailed hereunder:

Cost estimation failure: Cost estimation is a continuous process. It calls for financial commitments at various levels by various agencies involved in the project. The client, basing on his judgement on the feasibility cost estimates, accepts engineering costs and signals the start of the engineering phase of the project. During this phase, his professional team or the consultants develop the design, the specifications and the drawings which lead to the formulation of bills of quantities

(BOQ). The BOQ contains work quantity estimates and also indicates the approximate cost. At this stage, the client may review the cost commitments prior to giving the go-ahead for the tendering action.

Management failure: A project environment comprises various interrelated constituents such as resources, tasks and technology, along with the people working against time under stress and strain; all of these combines together to achieve the common project objectives. The problems of management are so complex that they defy simple solutions. Some of these are beyond the management's control but some can be avoided. The following causes of project failure can be attributed to management failure:

Planning failure: This is due to unclear objectives and targets, unworkable plans, top management's failure to back up the plans, failure to identify critical items, lack of understanding of operating procedures and policy directions, reluctance to make timely decisions, and ignorance of appropriate planning tools and techniques.

Organisation failure: This is due to incorrect organizational structures resulting in conflicts, confusion of responsibility, inadequate delegation of authority at various levels, higher management interference, lack of stress on accountability and a tendency of people escaping responsibility by passing on the buck.

Resource failure: It is due to an improper choice of the project manager, inexperienced staff, and failure to procure and position resources as per the planned schedules.

Directional failure: This can be attributed to a lack of team spirit, internal conflicts, poor human resource management and labour strikes.

Controlling failure: It is due to unclear targets, inadequate information flow, incompetence in adopting appropriate monitoring techniques and an absence of timely corrective measures.

Coordination failure: This can be attributed to a breakdown of communication at various levels, lack of day-to-day decisions to fill procedural gaps, and an absence of cooperation and esprit de corps.

Other failures: These may be due to faulty procurement of machinery and materials, bad workmanship, poor performance of subcontractors, accidents, unforeseen bad weather and a failure to adapt to local conditions.

Traditionally, clients of construction work have relied on consulting firms to design and supervise their construction needs, and indeed the system has generally worked satisfactorily. However, in recent years, large projects such as power stations, airports, oil refineries and similar complex utilities have proved difficult to manage in total, i.e. from conception through to commissioning and handover. One of the reasons for this has been the inability of clients to adequately define their needs at the outset (Harris & McCaffer, 1995). As a result, whole contracts have been let before designs and control procedures were complete, and all parties concerned, including the different tiers of managers in the client's own organization, have been able to provide excuses for mistakes and inefficiencies. In this traditional approach, clients either directly or indirectly through agents placed orders for the construction phase of a project in the standard form of contract.

Different forms of contractual arrangement have been tried to improve the situation including design and build. To a greater or lesser extent, some success has been achieved in producing projects nearer to the intended costs, time, quality and function. A key factor in this respect has probably been the establishment by clients, who are in many cases large concerns themselves, of a project management structure. In design and build, the contracting firm plays a much more important role in advising the client on the suitability of the design for efficient construction; in preparing with the designer, specific phases of the work for letting as subcontracts, and providing detailed coordination of design work and subcontractors. The whole project covering design and construction is taken as a single contract. Three or four highly experienced contractors are usually invited to submit proposals. Competition is usually introduced at the design stage through the price offered for the finished product including commissioning, operation and maintenance if necessary.

From literature concerning neighbouring East African countries; researches by Barasa (2014), SaidaAbbass and Okibo (2014), Mutava (2014) and Kikwasi (2013), as well as the respective Auditor General Reports, it was noted that the same procurement and project performance challenges are experienced in Uganda, Kenya and Tanzania. It was noted that the procurement procedures of countries within the East African region were also generally similar.

In summary, according to practitioners' perceptions the highest-ranking shortcomings in order were: unethical bidders, lack of confidentiality, multiple overlapping audits, poor performing providers, delays in obtaining Solicitor General's clearance, integrity of the procurement system and process, malicious unsuccessful bidders and delays in getting no-objection from donors, among others. That most of these top-ranked shortcomings are related to ethical and integrity issues is not surprising, in line with Uganda's CPI ranking by Transparency International (2015). The ranking based on percentage occurrences in case study projects is slightly different from that from practitioners' perceptions, in agreement with Kumaraswamy and Chan (1998) who found differences in perceptions of practitioners. From the case study projects reviewed, the most prevalent occurrences in order were: significant increase in BOQ quantities or inaccurate estimates, design changes or inadequacies, scope changes, claims reported, delayed PAP compensations and inaccuracies or inadequacies in bid documents among others. Design changes or inadequacies, variation of prices or VO, scope changes and claims reported were found to have significant association with project performance. The findings of this research are consistent with those of previous studies such as Apolot (2010), Alinaitwe (2008), Kikwasi (2013), Saida Abbass and Okibo (2014), and Barasa (2014).

5. Conclusions

The highest ranking shortcomings in order were; unethical bidders who also declare false information, lack of confidentiality, multiple overlapping audits, the audits are based on procedures rather than impact, poor performing providers, delays in obtaining Solicitor General's clearance, integrity of the procurement system and process, malicious

unsuccessful bidders, delays at getting no-objection from donors, anonymous allegations, inadequate specifications, understaffing and high procurement workload.

From the case study projects reviewed, the most prevalent occurrences in order were; significant increase in BOQ quantities (inaccurate estimates), design changes or inadequacies, scope changes, claims reported, PAP land compensation not finished in time, inaccuracies in bid documents or inadequacies, variation of prices or VO, long procurement period, contract management inefficiencies or queries at implementation and delays by the client in decision-making. A single project could experience multiple procurement-related shortcomings hampering its cost and time performance.

In terms of schedule performance, only 8.6% of the sampled projects were completed within the original planned schedule. The average schedule creep or slippage was 50-75% of the original planned schedule. For cost performance, only 11.4% of the projects had a cost overrun of 0-10% of budgeted cost and 8.6% had a cost overrun of more than 100% of budgeted cost. The average cost overrun was 25-50% of the budgeted cost. Design changes or inadequacies, variation of prices or variation orders (VO), scope changes and claims reported were found to have significant association with project performance. Also, donor-funded projects appeared to perform better than GoU-funded projects and the only project that was finished in time was funded by World Bank. This may point to better planning, monitoring and control measures embedded in the donor funding requirements.

In general, basing on the results of this research which showed that most of the highest ranked shortcomings from this study arose from the PDE level, it can be deduced that it is the procurement entities that need to be strengthened with skilled and ethical professionals in project management and implementation. Even with the current PPDA procurement guidelines, improved project performance resulting from better procurement practices can be achieved once the challenges or weaknesses arising from the PDE are addressed. This is especially in line with addressing the staffing challenges by increasing on staff numbers and skills, knowledge or competencies, as well as addressing ethical or integrity-related shortcomings. PPDA Procurement guidelines are in accordance with international best practices and generally universal basic procurement principles.

6. References

- i. ADB (2008). African Development Bank Group: Rules and Procedures for Procurement of Goods and Works
- ii. Agaba, E. (2009). Poor Planning Delaying Government Projects (Business News Pullout). The New Vision. Thursday 16 2 2009, Vol. 24. Pp 6
- iii. Aiyetan, O.A, Smallwood, J.J, and Shakantu, W (2008). Influences on construction project delivery time performance. In the proceedings of Third Built Environment conference, Cape Town, South Africa
- iv. Alinaitwe, H. M., (2008). An Assessment of Clients' Performance in Having an Efficient Building Process in Uganda: Journal of Civil Engineering and Management, Vol 14(2), 73-79
- v. Alison Cole (2007). Procurement definition. Retrieved from Ezine Articles, http://ezinearticles.com/expert/Alison_Cole/44834
- vi. Al-Momani, A. H. (2000). Construction Delay: A Quantitative Analysis. International Journal of Project Management, 18(1), 51-59.
- vii. Apolot, R (2010). An Investigation into the Causes of Delay and Cost Overrun in Uganda's Public-Sector Construction Projects. Second International Conference on Advances in Engineering and Technology. Kampala, Uganda
- viii. Ashworth, A and Hogg, K (2007). Willis's Practice and Procedure for Quantity Surveyor. Blackwell Publishing Ltd, Oxford, UK
- ix. Atkinson, W (2003). "New buying tools present different ethical challenges", Purchasing, Vol. 132 No. 4, pp. 27 - 30.
- x. Ayman A.E., Othman, M. and Caroline T. W (2005). Analysis of factors that drive brief development in construction, Engineering Construction and Architectural Management, Vol.12(1), Pp. 69-87
- xi. Babatunde S.O, Opawole A, and Ujaddhughe I.C (2010). An Appraisal of Project Procurement Methods in the Nigerian Construction Industry. Civil Engineering Dimension. Vol 12(2)
- xii. Baloi, D & Price, ADF (2003). Modelling Global Risk Factors affecting Construction Cost Performance. International Journal of Project Management, 21. Pp 261-269
- xiii. Barasa, HW (2014). Procurement Practices Affecting Effective Public Projects Implementation in Kenya: A Case Study of Kenya Civil Aviation Authority. European Journal of Business and Management. ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online). Vol 6, No 6, 2014
- xiv. Basheka, B.C, and Tumutegyereize, M (2010). Measuring the Performance of Contractors in Government Construction Projects in Developing Countries: Uganda's Context: Proceedings of the 19th Annual IPSEERA Conference. Lappeenranta, Finland
- xv. Bauld, S and McGuinness, K (2006). Value for Money. Summit, 9(1), 20-21
- xvi. Belew, A.K (2014). Stakeholder Management in Procurement of Infrastructure Projects. A Case of Uganda National Roads Authority. In: National Development Policy Forum (Date: 21st February 2014). National Planning Authority in partnership with Advocates for Development and Environment. Serena Hotel - Kampala, Uganda
- xvii. Booth, D., and Golooba-Mutebi, F (2009). The Political Economy of Roads Reform in Uganda: Aiding Economic Growth in Africa. Working paper 307. Results of ODI Research presented in preliminary form for discussion and critical comment

- xviii. Bogus S.M, Migliaccio G.C, and Jin, R (2013). Study of the Relationship between Procurement Duration and Project Performance in Design-Build Projects: Comparison between Water/Wastewater and Transportation Sectors. *Journal of Management in Engineering*. Vol 29(4), 382-391
- xix. Brown, B. and Hyer, N (2010). *Managing Projects: A Team-Based Approach*. International Edition. McGraw-Hill, Singapore
- xx. Chan, WM and Kumaraswamy, MM (1997). A comparative study of causes of time overruns in Hong Kong construction projects. *International Journal of Project Management*
- xxi. Chandra, P (2006). *Projects: Planning, Analysis, Review*. 6th Edition
- xxii. Chitkara, K.K (2009). *Construction Project Management: Planning, Scheduling and Controlling*. Tata McGraw-Hill Publishing Company Limited. New Delhi
- xxiii. Cohen, M.W and Palmer, G.R (2004). *Project Risk Identification and Management*. AACE International Transactions
- xxiv. Dada, M.O (2013). Client and Contractor Organisations' Assessment of Design-Bid Procurement Practice in Nigeria. *Civil Engineering Dimension*. Vol 15(1), 1-10
- xxv. Daniel, W.H., (2006). *Construction Management*. USA, John Wiley & sons Inc.
- xxvi. Doloi, H (2010). Empirical Analysis of Traditional Contracting and Relationship Agreements for Procuring Partners in Construction Projects. *Journal of Management in Engineering*. Vol 29(3), 224-235
- xxvii. Elenbaas, B (2000). "Staging a Project – Are You Setting Your Project Up for Success?", *Proceedings of the Project Management Institute Annual Seminars & Symposiums*, September 7 – 16, 2000, Houston, TX.
- xxviii. European Commission (2014). *Procurement and Grants for European Union External Actions: A Practical Guide*
- xxix. El-Razek MEA, Bassoioni HA and Mobarak AM (2008). Causes of Delay in building construction projects in Egypt. *Journal of Construction Engineering and Management*. Vol 134, Issue 11, p831
- xxx. FIDIC (2011). *FIDIC Procurement Procedures Guide*, 1st Edition. Product code: FP-SE-P-AA-1P ISBN13: 978-2-88432-062-5
- xxxi. Frese, R (2003). *Project Success and Failures: What causes success, What is failure, and How can you improve your odds for success*
- xxxii. Government of Kenya (2007). *Supplies Practitioners Management Act*
- xxxiii. Government of the Republic of Uganda (2000). *Public Finance (Procurement) Regulations*
- xxxiv. Greiling, D. (2006). Performance Measurement: A Remedy for Increasing the Efficiency of Public Services? *International Journal of Productivity and Performance Management*, Vol 55, No. 6, pp. 448-465
- xxxv. Gurung M.B., Joshi SR and Ahmad F (2001). "Sustainable management of Beekeeping in Jumla district of Nepal: The role of farmer-led institutions" Paper presented at the International Symposium On Mountain Agriculture in The HKH Region, 21 - 24 May 2001, Kathmandu, Nepal.
- xxxvi. Harris, F and McCaffer, R (1995). *Modern Construction Management*. 4th Edition. Published by Blackwell Science. University Press, Cambridge
- xxxvii. Hassan, O (2012). Strategy Implementation Challenges. *Journal of Management*. Vol 33, 21-25
- xxxviii. Hatush, Z., and Skitmore, M (1998). Contractor selection using multi-criteria utility theory. *Build. Environ.*, 33(2-3), 105-115
- xxxix. Kaliba C, Muya M and Mumba K (2009). Cost Escallation and Schedule Delay in Road Construction Projects in Zambia. *International Journal of Project Management*, Vol 27, Issue 5, pp 522-531
- xl. Kikwasi, GJ (2012). Causes and Effects of Delays and Disruptions in Construction Projects in Tanzania. *Australasian Journal of Construction Economics and Building*. Conference Series, 1 (2) 52-59
- xli. Kinoti, JT (2013). E-procurement Adoption by Government Parastatals in Kenya: The Supplier Perspective. A management research project submitted in partial fulfillment of the requirements for award of the degree of Master of Business Administration, School of Business, University of Nairobi
- xlii. Kirungu, E (2011). Factors influencing Implementation of Donor Funded Projects: A Case Study of Financial and Legal Sector Technical Assistance Projects. Retrieved from Jomo Kenyatta University Agriculture and Technology, Department of Entrepreneurship and Procurement
- xliii. Kothari, C. (2004). *Research Methodology: Methods and Techniques* (2nd ed.). London, Pitman Publishers
- xliv. Kumaraswamy, MM and Chan, WM (1998). What contributes to construction delays? *Journal of Construction Management & Economics*, pg 17-29
- xlv. Kumaraswamy, M. M. and Dissanayaka, S. M (2001). Developing a decision support system for building project procurement. *Building and Environment*, 36(3), 337-349.
- xlvi. Likert, R (1932). A Technique for Measuring Attitudes, *Archives of Psychology* 140, 1 – 55
- xlvii. Lim, E. C., Alum, J (1995). Construction productivity: issues encountered by contractors in Singapore. *International Journal of Project Management*, 13(1)
- xlviii. Love P.E.D, Edwards D.J, Irani Z, and Sharif A (2012). Participatory Action Research Approach to Public Sector Procurement Selection. *Journal of Construction Engineering and Management*. Vol 138(3), 311-322
- xlix. Luyimbazi, D (2014). Effect of Procurement Procedures and Project Implementation on Resource Absorption. Experiences of the Road Sector in Uganda. In: National Development Policy Forum (Date: 21st February 2014). National Planning Authority in partnership with Advocates for Development and Environment. Serena Hotel - Kampala, Uganda

- I. Luu, D. T., Ng, S. T., and Chen, S. E. (2005). "Formulating procurement selection criteria through case-based reasoning approach." *ASCE J. Comput. Civil Eng.*, 19(3), 269-276.
- ii. Lysons, K and Farrington, B (2006). *Supply Management*, (7th Ed). London, Pearson Education Limited
- iii. Malala, A (2011). Effect of Procurement on Performance of Constituency Development Fund Projects in Kenya. Case Study of Kikuyu Constituency. Retrieved from Jomo Kenyatta University of Agriculture and Technology. Department of Entrepreneurship and Procurement
- iiii. Meredith, J and Mantel, S (2012). *Projects Management: A Management Approach*. (8th Ed). John Wiley & Sons Inc, Singapore
- liv. Migliaccio G.C, Gibson G.E, and O'Connor J.T (2009). Procurement of Design-Build Services: Two-Phase Selection for Highway Projects. *Journal of Management in Engineering*. Vol 25(1), 29-39
- lv. Ministry of Finance (2006). Legal Notice No.3 of 2005: Public Procurement and Disposal Regulations 2006. Nairobi, Kenya. Government Printer
- lvi. Ministry of Finance, Planning and Economic Development (2011). *Absorptive Capacity Constraints: The Causes and Implications for Budget Execution*. The Republic of Uganda
- lvii. Ministry of Finance, Planning and Economic Development (2013). *Budget Monitoring Report, Third Quarter, Financial Year 2012/2013*. The Republic of Uganda
- lviii. Ministry of Finance, Planning and Economic Development. *Budget Speeches: Financial Years 2011/12, 2012/13, 2013/14 and 2014/15*. The Republic of Uganda
- lix. Moraa, E.N (2011). *Factors Affecting Implementation of Projects: A Case Study of Ministry of Roads*. Nairobi, Kenya
- lx. Mutava, C (2014). Impact of Public Procurement Procedures on Maintenance Works: Case of the Ministry of Housing, National Social Security Fund and Kenyatta National Hospital. FIG Congress 2014. Engaging the Challenges – Enhancing the Relevance. Kuala Lumpur, Malaysia, 16-21 June 2014
- lxi. National Audit Office, Tanzania (2010). *Performance Audit Report on Road Works*. The Ministry of Infrastructure Development and Tanzania National Roads Agency's Performance in Controlling Road Construction Time, Cost and Quality. A report of the controller and Auditor General of the United Republic of Tanzania, March 2010
- lxii. Naoum, S. (2000). An overview into the concept of partnering. *International Journal of Project Management*, 21(1), 71-76
- lxiii. Noulmanee A, Wachirathamrojn J, Tantichattanont P and Sittivijan P (1999). Internal causes of delays in highway construction projects in Thailand.
- lxiv. Nunnally J. C (1978). *Psychometric theory* (2nd ed.), McGraw-Hill: New York
- lxv. Ofori, G (2005). *Construction in Developing Countries: A Research Agenda*. Paper presented for the International Council for Research and Innovation in Building and Construction
- lxvi. Ogunlana, S.O (2010). Sustaining the 20: 2020 vision through construction: A stakeholder participatory approach. Distinguished lecture series of the school of postgraduate studies. University of Lagos, February 10, 2010
- lxvii. Ogunsanmi, O.E. and Bamisele A (1997). Factors Affecting the Selection of Project Procurement Methods, *Builder Magazine*, Vol.12, No.1 April/May 1997, pp. 11-16.
- lxviii. Ojo, S.O (2009). Benchmarking the performance of construction procurement methods against selection criteria in Nigeria. *Civil Engineering Dimension*, 11(2), 106-112
- lxix. Oladipo, J (2008). Project Planning and Implementation at the Local Government Level: Lessons of Experience, *European Journal of Social Sciences – Volume 6, Number 4* (2008)
- lxx. Otieno, D (2010). Strategic Management Practices in Public Sector Organisations. *Journal of Management*. Vol 32, 10-15
- lxxi. Ott, L and Longnecker, M (2001). *An Introduction to Statistical Methods and Data Analysis*. 5th ed. Pacific Grove, Calif: Duxbury
- lxxii. Phillip, N. (2010). Strategic Planning challenges in public sector organizations. *Journal of Management* Vol.34, 28-32.
- lxxiii. PPDA (2003). Government of the Republic of Uganda. *Public Procurement and Disposal of Public Assets (PPDA) Act*
- lxxiv. PPDA (2014). *Amendments. Thresholds for Different Works Procurement Methods*
- lxxv. PPDA (2009). *Contract Audit Report on the construction of sampled seed secondary schools by Ministry of Education and Sports*
- lxxvi. PPDA (2005). Ministry of Finance. Kenya Gazette Supplement Acts 2005. (26th October, 2005): *Public Procurement & Disposal Act 2005*. Nairobi, Kenya. Government Printer
- lxxvii. Reynold, J. and Santos, A. (1999). Cronbach's Alpha: A Tool for Assessing the Reliability of Scales. *The Journal of Extension*, 37(7): 36 – 35
- lxxviii. Rutere (2009). Implementation of CDF Projects in North Imenti Constituency, as cited in: Barasa, HW (2014). *Procurement Practices Affecting Effective Public Projects Implementation in Kenya: A Case Study of Kenya Civil Aviation Authority*. *European Journal of Business and Management*. ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online). Vol 6, No 6, 2014
- lxxix. Rwelamila, P. D., and Meyer, C. (1999). "Appropriate or default project procurement systems." *Cost Eng.*, 41(9), 40-44.

- lxxx. Rwelamila, P.D., Talukhaba, A.A and Ngowi, A.B (1999). Tracing the African Project Failure Syndrome: The Significance of 'Ubuntu.' *Engineering, Construction and Architectural Management*, 6(4): 335-346
- lxxxi. Ross, J. (1999). Project Alliancing in Australia-Background, Principles and Practice. *Proceedings of the Industry Summit on Relationship Contracting in Construction*
- lxxxii. SaidaAbass, S and Okibo, BW (2014). Assessment on the Effect of Procurement Process on Strategy Implementation in Road Public Corporations as per the Kenya's Vision 2030. *International Journal of Academic Research in Business and Social Sciences*. January 2014, Vol 4, No.1, ISSN 2222-6990
- lxxxiii. Sambasivan, M and Soon Y.W (2007). Causes and effects of delays in Malaysian construction industry. *International Journal of Project Management* 25(2007) 517-526
- lxxxiv. Saunders, M (1997). *Strategic Purchasing and Supply Chain Management* (2nd Ed). London, Prentice Hall
- lxxxv. Skitmore, M. and Smyth, H. (2007). Pricing Construction Work: A Marketing Viewpoint. *Construction Management Econ.*, 25(6), 619-630
- lxxxvi. Ssebanakitta, P. W (2009). Report on National Roads Construction and Maintenance Programmes. A paper presented at the Joint Transport Sector Review, 20th – 22nd October
- lxxxvii. Transparency International (2015). *Global Corruption Report*
- lxxxviii. Transparency International (2005). *Global Corruption Report*. Special focus on Corruption in Construction and Post-conflict Reconstruction
- lxxxix. te Velde, D.W (2008a). 'Economic Policy Scenarios for Addressing Growth Constraints in Uganda'. Background Note 1. DFID-funded Project on Political Incentives and Growth. London: ODI
- xc. te Velde, D.W (2008b). 'Analysing the Effects of Growth Policy Scenarios in Uganda'. Background Note 4. DFID-funded Project on Political Incentives and Growth. London: ODI
- xc. Uganda National Commission for UNESCO (2013). *Uganda and UNESCO. Annual Information Magazine 2012/2013*. [Online]. Available at: <http://natcomreport.com/> [Accessed: 29th August 2014].
- xcii. Uganda National Roads Authority (2014). *The Roads Magazine*. July – Issue 30, UNRA@6years Edition
- xciii. Wambugu, (2008). Implementation of CDF Projects in Dagoretti Constituency, as cited in: Barasa, HW (2014). Procurement Practices Affecting Effective Public Projects Implementation in Kenya: A Case Study of Kenya Civil Aviation Authority. *European Journal of Business and Management*. ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online). Vol 6, No 6, 2014
- xciv. Wixom, B (2001). An Empirical Investigation of the Factors Affecting Data Warehouse Success. *MIS Quarterly*, Vol 25, No.1, pp 17-41
- xcv. World Bank (1984). *The Construction Industry Issues and Strategies in Developing Countries*. World Bank, Washington, D.C. USA.
- xcvi. World Bank (2010). *Public Expenditure Review: Strengthening the Impact of the Roads Budget in Uganda*
- xcvii. Zou, PXW, Zhang G and Wang J (2006). Identifying key risks in construction projects: Life cycle and stakeholder perspectives