

# INFRASTRUCTURE GOVERNANCE: THE “UNKNOWN EMERGING” AND “CONTEMPORARY REAL PUSHERS” OF SUCCESS IN SRI PROJECT DELIVERY

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## Abstract

The road to SRI delivery is traditionally, scholarly and practically known as being neither straight nor short partially due to paradigm shifts in stakeholder engagement causing many infrastructure projects to fail with varying degrees of success. Despite being an economic fulcrum, delivering SRI in modern times necessitates not only effective and efficient but also intentional and networked stakeholder mapping and engagement. Modern practice shows there are emerging and networked *unknown or believed to be known* stakeholders – “Contemporary real pushers” who determine the success levels of infrastructure projects even before gestation. With literature documenting technical, customers and funding teams as the leading stakeholders; if the viewpoint is widened, project stakeholders are more than just these few; and amongst those undocumented “*unknown or believed to be known*” are the “Contemporary real pushers”. This paper aimed to introduce the concept of *Unknown emerging / believed to be known* stakeholders and determine the “*Contemporary real pushers*” of SRI project success. “Contemporary Real pushers” as a qualitative investigation carried out in Kampala, were determined through a Delphi technique using semi-structured questionnaires, and observations involving contractors, consultants, funders and academics. In line with principles of data saturation, the population was stratified by profession - and then purposively sampled from the lists held at respective professional institutions to arrive at a sample of 15. It was discovered that the “*Unknown emerging stakeholders*” are; President, Project-brokers, Military contractors, Clergy, other politicians and social groups; while the “Contemporary real pushers” are; (1) The president, (2) Project-brokers and (3) Clergy.

**Keywords:** Contemporary Real Pushers, Stakeholders, Sustainable Infrastructure, Resilient Infrastructure, Construction Project Success.

## 1. INTRODUCTION

Infrastructure assets form any country’s development fundamentum (Abdullahi, *et al*, 2023; Nugraha *et al*, 2020; Prebanić *et. al*, 2023; Wang *et al*, 2020). Kenny, (2007) remarks that as a backbone of a healthy economy, “construction sector role in economic development is undeniable. Infrastructure aids commercial and business transactions, influences workers access to their jobs, improves access to public services, offers employment, reduces greenhouse gases, facilitates opportunity creation in besieged societies, links supply chains, promotes efficient import and export transactions, and governs rapid responses in emergency situations

(Beksultanova *et al*, 2021; Nugraha *et al*, 2020; Prebanić *et al*, 2023; World Bank, 2023). Unfit infrastructure can result into distressing losses of lives and properties and no country is exempted (Nugraha *et al*, 2020; Prebanić *et al*, 2023).

Nevertheless, several parameters impact the successful delivery and sustainability of resilient infrastructure projects (Aydın Dinçer, 2022) and in a practical world, stakeholder mapping and engagement is one of them. The paradigm shifts in stakeholder engagement over the years have shaped a new reality causing many infrastructure projects to fail with varying degrees of success. “The daily functioning of modern society is challenging, and traditional risk-based approaches to managing critical infrastructure are often criticized for their inability to address widely unknown and uncertain threats” (Ganin, 2016). Delivering SRI in modern times necessitates not only effective and efficient but also intentional and networked stakeholder mapping and engagement. Modern practice shows there are *unknown or believed to be known* emerging and networked stakeholders – “Contemporary real pushers” who determine the success and failure of infrastructure projects even before gestation. This paper introduces the concept of Unknown emerging / *believed to be known* stakeholders from an open view point and determines the “*Contemporary real pushers*” of SRI project success in order to identify and document those modern-day stakeholders whose participation determines infrastructure projects’ fate even before project gestation. The “Contemporary real pushers” are part of the main apparatus to unlocking successful and sustainable delivery of resilient infrastructure projects. In this era, understanding the “Contemporary Real pushers” will not only streamline stakeholder analysis and engagement, facilitate development of efficient and effective infrastructure governance framework, but will also improve SRI failure rates through improved buy-ins, increased resilience as this creates a practical platform for infrastructure to survive the industry storms.

The existing research has widely documented SRI stakeholders but with the changing times, technology, stakeholder needs and competition, the investigation of “Contemporary real pushers” amongst these stakeholders is a lesser-studied context that forms a good reflection. Seizing this opportunity is therefore undoubtedly important to match the modern-day infrastructure delivery requirements.

This paper is structured into the introduction to contemporary real pushers, brief review of prior work on stakeholder engagement, and in later sections describes the purpose, methods used, discusses the findings, paper limitations, implications, and originality.

## 1.1 Purpose

This purpose of this paper was to introduce the concept of Unknown emerging / *believed to be known* stakeholders from an open view point and determine the “*Contemporary real pushers*” of SRI project success. Understanding the “Contemporary real pushers” will not only streamline and enhance stakeholder participation, facilitate creation of efficient and effective infrastructure governance framework, but will also improve Sustainable resilient infrastructure failure rates through improved buy-ins, increased resilience as this concept creates a practical platform for infrastructure to survive the industry storms

## 2. LITERATURE REVIEW

### 2.1 Stakeholder theory

Stakeholders can be considered and discussed from a number of perspectives as to who and what are stakeholders in both an organization and an organization's projects. The context of Stakeholders and stakeholder engagement in this research was borrowed from the stakeholder theory by Edward Freeman. Freeman's stakeholder theory holds that a company's stakeholders include just about anyone affected by the company and its workings. Freeman, (1984) suggests that a company's stakeholders are "those groups without whose support the organization would cease to exist". These groups would include customers, employees, suppliers, political action groups, environmental groups, local communities, the media, financial institutions, governmental groups, and more. This view paints the corporate environment as an ecosystem of related groups, all of whom need to be considered and satisfied to keep the company healthy and successful in the long term. *With the levels of social networks, bribery, fraud, corruption fettering the world, the stakeholder theory becomes the logical framework to follow in an attempt to assess contemporary stakeholders in public infrastructure delivery processes.*

Freeman, (1984) describes how a healthy company never loses sight of everyone involved in its success. Stakeholder theory says that if it treats its employees badly, a company will eventually fail. If it forces its projects on communities to detrimental effects, the same would likely happen. "A company can't ignore any of its stakeholders and truly succeeds". Dr. Freeman, (1984), suggests that. "There might be short-term profits, but as stakeholders become dissatisfied, and feel let down, the company cannot survive."

### 2.2 Stakeholder engagement and participation

#### 2.2.1 Stakeholders in infrastructure projects

Ekung *et al*, (2014), and Smith, (2000) refer to Stakeholder as a comprehensive term and pluralistic in its application both in practice and research. With little discrepancy, Sintayehu *et al*, (2015) and Ekung *et al*, (2014), concur that irrespective of the field and industry of application, the term refers to people that can affect or be affected by a project. Smith, (2000) in his article "Stakeholder analysis a pivotal practice of successful projects" supplements the former with a more specific and articulate definition as "individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion". All these viewpoints are in line with Dr. Freeman, (1984).

Project stakeholders usually include the project manager, the customer, team members within the performing organization, and the project sponsor. However, there are more than just these few (Scott, 2000). However, Scott, (2000) believes that if the perspective is expanded to include those that can make a claim—any claim—on our attention or resources now and in the future, the list can become quite large. There are those that can become "winners" or "losers" as a result of our project or participate as intermediaries in the execution of our project or development of the project's product. These stakeholders can have their own objectives and

views, which may differ and conflict with others stakeholders. Just like Baker, (2012), who argues that “a forgotten stakeholder often rears his or her head at the most inopportune time, wreaking all sorts of havoc in the project”, Scott, (2000) also indicates that “forgetting to meet the needs of just one influential and powerful stakeholder at a critical time can possibly ruin a project”. Focus of this research is entirely in line with Dr. Freeman, (1984), Baker, (2012) and Scott, (2000) approach of anyone who can make a claim – any claim on infrastructure projects now and in the future.

### **2.2.2 Stakeholder engagement**

Stakeholder engagement is the process by which a society involves people who may be affected by the decisions it makes or can influence the implementation of its decisions (Omar Muhammad, 2013). In agreement with Muhammad (2013), is Kivits (2013) in his attempt to distinguish between stakeholder engagement and stakeholders’ management. It is suggested that, stakeholder engagement concerns how the firm relates with the stakeholders (Greenwood, 2007) in stimulating benefits and developments (Ihugba & Osuji, 2011). Stakeholders’ management on the other hand involves a business gesture for the benefit of the stakeholders without their inputs.

With an understanding of the above concepts, the aforementioned themes are further discussed by objective in the subsequent sections.

### **2.2.3 Classification of stakeholders**

By extension to the aforementioned, Kumar, (2002) labels any individuals, groups of people, institutions or firms that may have a significant interest in the success or failure of a project (either as implementers, facilitators, beneficiaries or adversaries) as stakeholders. Olander, (2010); Aaltonen & Kujala (2010); Chinyio & Akintoye (2008) and Winch, (2010) have categorized stakeholders based on their characteristics and dispositions towards the project (Rathenam et al, 2017). Waghmare & Bhalerao (2016); Prabhu 2016 and Winch 2010 in particular, classified construction project stakeholders into two categories according to their relationship with the client:

- a) Internal stakeholders which are those who have legal contracts binding with the client, and
- b) External stakeholders which are those who although have direct interest in the project but not necessarily having direct contracts with the client.

Winch (2010), further broke down the two groups (1) Internal stakeholders as those grouped around the client on the demand side and those on the supply side, while (2) External stakeholders are subdivided into private and public actors. El-Gohary, Osman & El-Diraby, (2006) define project stakeholders as clusters or entities, individuals who have stake in, or expectation of, the project’s performance including clients, project managers, designers, subcontractors, suppliers, funders, users and the community at large who have power and are affected by the development directly and indirectly (Zanjirchi & Moradi,(2012).

*Unlike the other scholars and researchers, Colonnelli, (2018) attempted to define stakeholders by designation / establishment and particularly in construction industry. The following categories of **Main stakeholders, other stakeholders and Additional stakeholders** are consequently suggested in her article titled “Construction and public procurement in Uganda”*

#### **a) Main stakeholders in public procurement**

Colonnelli, et al, (2018) indicate that the process of procuring government contracts involves several agencies, units within agencies, and a number of specific public officials. In this section, we list the main stakeholders, their functions, and how they are organized.

**PDEs:** All procurement and disposal activities are carried out by procurement and disposal entities, or PDEs. According to Colonnelli et al, (2018), a PDE refers to a ministry or department of the government, a local government, or any other body established by the government or intended to carry out public functions such as a public university or a public hospital. Each PDE is composed of an Accounting officer, a contracts committee, a procurement and disposal unit (PDU), a user department, and an evaluation committee, which must act independently and not interfere unduly in the operations of others. Next, is a discussion on these other stakeholders.

#### **b) Other stakeholders:**

##### ***Accounting officer***

The accounting officer is the person with the overall responsibility for procurement and disposal within the PDE, although s/he is not involved in detailed procurement or disposal work or in making official contract allocation decisions. S/he appoints members of the contracts committee and staff in the PDU. Before the procurement process starts, the accounting officer commits funds to specific contracts; s/he undertakes assessments of market prices and the unit costs for each construction project and s/he advertises bid opportunities.

Additionally, s/he authorizes payments to providers, signs contracts, communicates decisions to successful bidders, and ensures that contracts are implemented in accordance with the award. In emergency situations, the accounting officer can sign contracts without the approval of the contracts committee. S/he is also in charge of investigating complaints from bidders and of submitting the procurement plans to the Secretary of Treasury and to PPDA at the beginning of each fiscal year. In sum, accounting officers hold a considerable share of power in the procurement process.

##### **Contracts Committee:**

The Contracts Committee consists of up to five members: a chairperson, a secretary, and a maximum of three other members (including a lawyer). Neither the Accounting Officer nor a member of the PDU may be members of the Contracts Committee. Its main responsibility is to ensure that procurement and disposal activities are conducted in compliance with the Act and additional regulations. This is done by approving or rejecting recommendations from the PDU.

Specifically, the Contracts Committee has the power to authorize the choice of procurement and disposal procedures, evaluate the contract documentation through various evaluation reports, and make amendment to awarded contracts. Finally, and importantly, it approves the Evaluation Committee.

#### **Procurement and Disposal Unit (PDU):**

The PDU manages all procurement and disposal activities of the PDE (except adjudication of awards), working in conjunction with the user department and seeking approval of the Contracts Committee where appropriate.

In particular, the PDU plans the procurement and disposal activities of the PDE, recommends the procedures to follow, prepares statements of requirements, prepares and issues the bid documents and the contract documents, and maintains a list of providers in archive records. In addition, it recommends the members of the Evaluation Committee. Its size and structure and the number and grades of staff are determined by the procurement workload of the PDE.

#### **User Department:**

The User Department works under the PDU. Its responsibilities include the preparation of the annual procurement plan, providing technical inputs to the procurement process, and managing contracts once placed.

#### **Evaluation Committee:**

Members of the Evaluation Committee conduct all evaluations. The members are recommended by the PDU and approved by the Contracts Committee. The committee has a minimum of three members, and must include at least a person representing the User Department and a member of the PDU. Some members may be external, if the required level of skills and seniority are not available within the PDE.

#### **c) Additional stakeholders**

Colonnelli, et al, (2018) posit that regulatory bodies fall in this category. Listed in this category is the Association of Contractors, Inspectorate of Government, Public procurement and Disposal of public Assets Unit, the Tax Authorities, Bureau of standards, and numerous Professional regulatory bodies.

Despite the various interpretations of stakeholders available, one common factor that researchers agree with is that “the level of influence they can wield on a project, the comprehension and effective management of stakeholders’ demands on the project decision making process” is critical to project success (Aaltonen, 2010).

Consequently, empirical studies have admitted to the challenges and conflicts that have risen from the project’s external stakeholder environment in construction projects. The majority of the research has focused on the complex make-up of the project itself, ignoring the external stakeholder context of the projects (Aaltonen, 2010).

Thus, due to paradigm shifts in stakeholder engagement, many infrastructure projects fail with varying degrees of success. Modern practice shows there are emerging and networked *unknown or believed to be known* stakeholders – “Contemporary real pushers” who determine the success and failure of infrastructure projects even before gestation. With literature documenting technical, customers and funding teams as the leading stakeholders; if the viewpoint is widened, project stakeholders are more than just these few; and amongst those undocumented “*unknown or believed to be known*” are the “Contemporary real pushers”. This paper therefore introduces the concept of Unknown emerging / *believed to be known* stakeholders and determine the “*Contemporary real pushers*” of SRI project success.

### 3. METHODOLOGY

“The unknown emerging” and “Contemporary Real pushers” as a qualitative investigation were determined through a Delphi technique using semi-structured interviews, and observations involving resilient infrastructure construction stakeholders like contractors, consultants and academics to evaluate the concept with a significant level of inter-rater- concordance. Inter rater concordance in qualitative research is a measure of consistence or repeatability of codes by multiple respondents.

The online semi structured tool was administered in two modes; first as self-administered to determine the *known stakeholders* and corresponding practices, and secondly a combination of online and tele-conversations and social media were used so as to clarify matters with an intention of unearthing the *Unknown / believed to be known* or otherwise emerging stakeholders. In order to determine the *Contemporary real pushers*, these were further classified by the frequency of mention on a 3-factor scale of their;

- a) Level of influence in SRI project delivery.
- b) Level of interest in the SRI project success.
- c) Ability to discover an upcoming project before inception, negotiate, and to recommend projects.

The results were coded and analyzed using both NVivo and cross tabulations.

The study was carried out in Kampala at Engineering, Architectural, Quantity surveying and contracting offices; Ministry of works offices, Uganda national roads authority offices, road fund offices, and external funding agencies for this research data saturation would guide sampling, rather than looking for theoretical sufficiency and therefore, a sample of 15 was deemed sufficient for a study of this magnitude.

The population was stratified by profession - and then purposively sampled from the lists held at respective professional institutions. Due to the nature and content of this research, researcher’s experience and professional partnerships built over the years played a big role in determining respondents by establishments and purpose. From this population, 30 semi structured questionnaires were issued and the first 15 responses formed the sample using an adaptive strategy.

By characterization, these were participants with technical know-how i.e. SRI procurement and construction technocrats (consultants, contractors and academicians), public infrastructure agency staff, and technocrats in infrastructure funding agency. These participants were both genders registered with professional bodies at the time of data collection. This is so because it's a means of identifying lawful practitioners, the process is inexpensive and quick, and contact details are public information there. Other participants were identified by employment.

## 4. DATA ANALYSIS

### 4.1 Results and discussion

15 interviews were conducted with 15 highly experienced construction professionals using interview guides thus realizing 100% response. These professionals represented the whole industry i.e. both private practitioners and public servants in contracting and consulting firms; Government agencies, funding agencies and academicians. Below is the geographical sample profile and thereafter a participant profile under which pseudo names were allocated to coded participants for ethical reasons.

#### 4.1.1 Geographical sample profile

As indicated above, the geographical sample area of this research is Kampala – Uganda which is further discussed demographically in this section. Kampala formerly known as the present-day Old Kampala hill, on whose summit Fort Lugard was located, and the initial headquarters of the British colonial authorities; is the current Capital and biggest city in Uganda. Kampala is geographically defined by the nuclear Kampala city and extended Kampala metropolitan. Kampala's metropolitan area comprises of Kampala District itself and bordering districts of Wakiso District, Mukono District, Mpigi District, Buikwe District and Luweero District (UBOS, 2024). Having been a hunting ground for the Kabaka (The King of Buganda) before the British construction of Fort Lugard, it had several animal specials of antelopes, especially the Impala. After Kabaka's allocation of the hill to the British, the Baganda then renamed it the "*Kasozi K'empala*" literally translating into a hill of antelopes. It later became Kampala as a short form of Kasozi (hill) Ka (of) Impala or mpala the prural of empala thus K'empala or Kampala (Myetymology.com, 2024).







**Plate 1: Kampala – 360° aerial view (Source: Author, 2024)**



**Plate 02: Kampala City (Source: Author, 2024)**

Kampala city with its five divisions of Kampala Central Division, Kawempe Division, Makindye Division, Nakawa Division, and Rubaga Division is seated on 7-hills and occupies a total area of 189 km<sup>2</sup> (73 square miles), distributed as; 176 km<sup>2</sup> (68 square miles) as land and 13 km<sup>2</sup> (5.0 square miles) is covered by water. Kampala city being regularly ranked as East Africa's best city to live in and as the economic engine of Uganda is occupied by a rapidly growing population of 4,050,826 and of diverse culture, backgrounds and origin (both from within and neighbouring states) (Macro trends, 2024; Muhindo, 2019; UBOS, 2024).

Economically, Kampala is heavily industrialized, second to Jinja City although efforts to relocate Kampala business and industrial park from Kampala to Namanve in Mukono District are ongoing in order to reduce traffic in the Capital Kampala. Major businesses that maintain their headquarters in the city center include; The Ugandan Parliament, all Ministries, all Public Universities, The Central Bank, all of the 25 commercial banks licensed in Uganda, the main referral hospital, all telecom companies' headquarters, all the professional regulatory bodies; all the 15 conglomerates – including the New Vision Group, the leading news media conglomerate and majority owned by the government; and the *Daily Monitor* publication, a member of the Kenya-based Nation Media Group. Air Uganda, Crown Beverages Limited, the sole Pepsi-Cola franchise bottler in the country, is situated in Nakawa, a division of Kampala (Visit Kampala, 2024). Kampala is served by Entebbe International Airport, which is the largest airport in Uganda, the bus service, the 14- passenger taxis system and boda boda (local motor bicycle system ) ; all operating on 2100Km road network 30% of which is pave and 70% unpaved (KCCA, 2023).

**Table I: Participants' profile**

Code	Pseudo name	Gender	Age group	Organization's age	Line of employment	Profession	Line of practice	Experience in infrastructure	Country/ Origin
1	RIGAIN	Male	35 - 44	16 - 20	Industry (private)	Engineering	Private Contractor	15 - 20	Uganda
2	RIGRAY	Male	45 - 54	Nov-15	Industry (private)	Project planning & management	Private Consultant	15 - 20	Uganda
3	RIGTUK	Male	45 - 54	Nov-15	Industry (private)	Architecture	Private Consultant	Oct-15	Uganda
4	RIGJESS	Male	45 - 54	Nov-15	Industry (private)	Architecture	Private Consultant	Oct-15	Uganda
5	RIGJOSY	Male	35 - 44	Over 20	Industry (private)	Quantity Surveying /Cost Eng.	Private Contractor	15 - 20	Uganda
6	RIGKITA	Male	35 - 44	Nov-15	Industry (private)	Engineering	Private Consultant	Oct-15	Uganda
7	RIGNAK	Female	35 - 44	Less than 6	Industry (private)	Project planning & management	Private Consultant	Oct-15	Uganda
8	RIGEMA	Male	25 - 34	06-Oct	Industry (private)	Quantity Surveying /Cost Eng.	Private Consultant	Oct-15	Uganda
9	RIGGAM	Male	35 - 44	Over 20	Funding Agency	Infrastructure Auditing	Funding Agency	Oct-15	Uganda
10	RIGKIBS	Male	35 - 44	Over 20	Public Agency	Quantity Surveying / Cost Eng	Public university / College	15 - 20	Uganda
11	RIGLUB	Male	35 - 44	Nov-15	Industry (private)	Quantity Surveying /Cost Eng.	Private Contractor	Oct-15	Uganda
12	RIGALB	Male	45 - 54	16 - 20	Public Agency	Procurement	Public infrastructure agency	Oct-15	Uganda
13	RIGJOX	Male	35 - 44	Over 20	Industry (private)	Quantity Surveying /Cost Eng.	Private Contractor	15 - 20	Uganda
14	RIGSEM	Male	35 - 44	Over 20	Public Agency	Quantity Surveying /Cost Eng.	Public university / College	Oct-15	Uganda
15	RIGBUD	Male	45 - 54	Less than 6	Public Agency	Quantity Surveying /Cost Eng.	Public infrastructure agency	15 - 20	Uganda

#### 4.1.2 Response rate

From table I, 15 out of targeted 15 response rate was realized, of which the majority (7) were quantity surveyors / cost Engineers, 2 responses from Architects, 2 from Engineers and 2 from project managers and planners were registered. Others were procurement specialists and infrastructure auditors (1) each. This rate of return is attributed to the fact that, this being a mixed study, responses were adaptively registered on first in basis until the target of 15 was reached.

#### 4.1.3 Line of employment

Regarding line of employment, majority responses came from industry employees (10), respondents employed with public agencies were (4), and others from funding agencies (1). By practice as shown in table I, the majority (6) were consultants, (4) were private contractors in practice, (2) practice with public infrastructure agencies, others are practicing under public universities (2) and funding agencies (1).

#### 4.1.4 Organizations' age

The findings looked at the organizations' age in years. The majority (5) being in service for 11-15years, (5) second ranking as over 20years, (2) for both 16-20 and less than 6 years, while the (1) has been in existence for 6-10 years. These findings indicate that information was obtained from respondents who have been around the industry for a long time and therefore in possession of rich infrastructure information

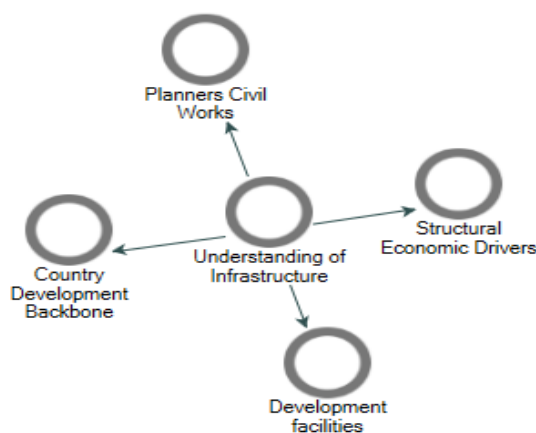
#### 4.1.5 Gender

By gender, the majority 93.3% were males with 6.7% registering as female practitioners. Of these no respondent below 25years of age participated in this research, with the majority 60% occupying the 35 – 44 years age bracket, 33.3% falling in the 45 – 54 age group and the 6.3% falling in the youthful 25 – 34 years age bracket. This being a behavioral related study, it was always necessary to understand the gender and how they interact with infrastructure. Majority being males may be attributed to the nature of the industry which is male dominated as a stereotype (Business leader, 2022; The Guardian, 2015; The Herald, 2021,).

#### 4.1.6 Respondents' experience with public infrastructure

Findings show that, 0% was registered for respondents who have interacted with public infrastructure for over 20years, with majority respondents 53.3% having a 10-15years of experience in delivering public infrastructure, 33.3% with 15-20years while 6.7% was registered for both 5-10 years and less than 5years categories.

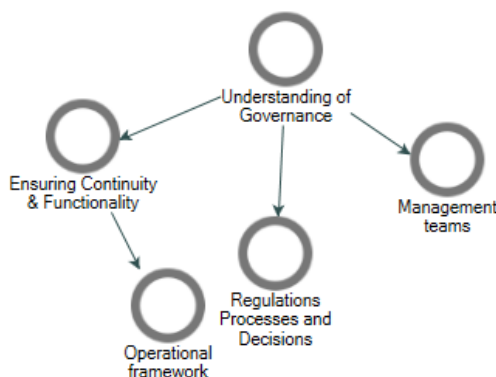
From table I above, it is evident that respondents had a homogeneous understanding of infrastructure and majority have vast experience of 10 – 20 years in public infrastructure.



**Plate 01: Respondent’s understanding of infrastructure**

100% responses on understanding infrastructure indicated consistence, with majority defining it as development facilities network, planners’ civil works, structural economic drivers, countries’ backbones. For example, one of the respondents stated that “*Broadly, the amenities that improve social and economic wellbeing of people, including health facilities, schools, transport networks, power networks, telecom networks, water and sewerage networks / systems, etc*”. This is in line with (Torrison, 2009), (Cheng *et al.*, 2016), (Oyebode, 2018), (Oyedele, 2016), (Frank, 2003) (Fulmer, 2009), (Lewis, 2008) (Jackson, 2015), (Sullivan, 2003); all who mutually describe infrastructure as a physical network of interrelated social or government capital investment systems or structures such as roads, railways, airports, sewerage, water sources, electrical power, and other “utilities that together have a common purpose of providing services requisite to boosting and sustaining societal living conditions. Beyond the scope of this research, other responses went ahead to specify non- physical infrastructure which included National Human Resource Infrastructure, Governance and Control Systems' Infrastructure among others.

**4.1.7 Understanding of governance**



**Plate 02: Respondents understanding of governance**

Participants exhibited a good understanding of Governance that they classified Infrastructure Governance into three major categories namely; Management of teams; Regulations processes and decisions; and ensuring continuity and functionality. For example, one respondent indicated that *“It mainly involves coming up with policy rules and Regulations, processes and interactions with the technical teams at specific and different levels of organizations in order to come up with decision making and easy monitoring in an attempt to serve the public”*. This reflects all the three elements as summarized in the graphical illustration.

Another respondent didn’t depart from the former and indicated that Infrastructure Governance is *“A systems of rules, processes, practices and structures designed to ensure that the key aspects in infrastructure procurement and delivery like Quality, Right Price, timing, environmental impact, community acceptability -compensations are well addressed”*.

From these, it can be summarized that Governance is “the structure and processes for decision making, accountability, control and behavior; and Infrastructure Governance as being the operational framework / system of regulations, processes, practices and structures designed to ensure that the key aspects in infrastructure procurement and delivery like Quality, Right Price, timing, environmental impact, community acceptability -compensations are well addressed. Infrastructure governance involves teams or people, decision making, processes and standards or regulations, and as shown in one of the responses this process in Uganda is governed by PPDA.

#### 4.1.8 Understanding of Infrastructure Governance process

In order to further ascertain that research respondents understood infrastructure governance, they were required to Describe the step-by-step governance process in public infrastructure delivery. The collected data indicates that only 2 out of 15 didn’t have a clear understanding of the process, which the researcher attributes to their professional practice. The other 13 all had a concrete understanding of the process and their understanding may be categorized into three items i.e. Procedural uncertainty, whole life cycle processes and Needs assessment as illustrated below.

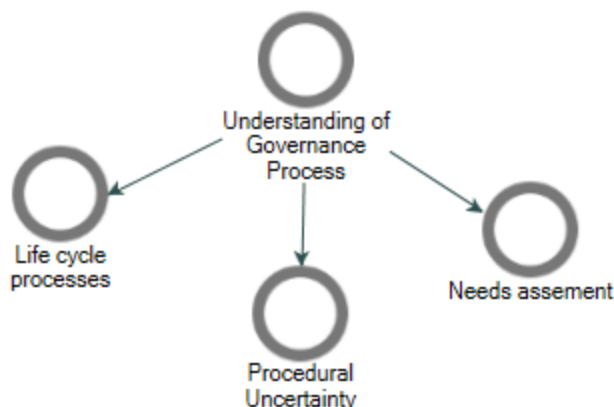


Plate 03: Infra-Governance processes (source: Author, 2023)

For example, respondents 4,5, 6, and 7 pronounced Infrastructure Governance processes under life cycle stages to include; Planning, selection of service providers, construction phase, review or operation and maintenance (**see Plate.04 below**). While respondent 1 was in agreement with these other respondents on the life cycle approach, they offered a breakdown which is more operational than any other response and the processes included; (1) Need identified (2) Put in workplans of responsible parastatal/ministry. (3) Funding sourced (4) Budget made (5) Procurement of consultant (6) Procurement of contractor (7) Project approval (8) Project construction Supervision. (9) Completion and commissioning (10) Defects liability period. (11) Full management by government team/body (**See Plate. 05. below**)

Reference 4 - 0.43% Coverage

1) planning, 2) selection of service providers, 3) construction processes, 4) construction product hand-over	
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Reference 5 - 0.30% Coverage

Planning, selection of the service provider, construction phase, operation	
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Reference 6 - 0.22% Coverage

1. Appraisal; 2. Planning; 3. Implementation; 4. Review	
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Reference 7 - 0.45% Coverage

Conception, initiation, design, contractor acquisition, implementation and supervision, operation and maintenance	
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**Plate 04: sample responses (source: Primary data)**

Reference 1 - 1.33% Coverage

1. Need identified. 2. Put in workplans of responsible parastatal/ministry. 3. Funding sourced. 4. Budget made. 5. Procurement of consultant 6. Procurement of contractor. 7. Project approval 8. Project construction Supervision. 9. Completion and commissioning 10. Defects liability period. 11. Full management by government team/body	
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**Plate 05: Sample responses (source: Primary data)**

#### 4.1.8.1 Respondents' experience with public infrastructure

Findings show that, 0% was registered for respondents who have interacted with public infrastructure for over 20years, with majority respondents 53.3% having a 10-15years of experience in delivering public infrastructure, 33.3% with 15-20years while 6.7% was registered for both 5-10 years and less than 5years categories.

From table I, it is evident that respondents had a homogeneous understanding of infrastructure and majority have vast experience of 10 – 20 years in public infrastructure.

#### 4.2 Identifying the Unknown emerging or believed to be known stakeholders and Contemporary Real Pushers

This paper focused on determining the *unknown emerging* stakeholders or otherwise those that practitioners believe they know and consequently the *Contemporary real pushers*. Therefore, respondents were required to give their opinions on *emerging stakeholders* to consequently be able to determine the *contemporary real pushers*. For this research, a semi-structured tool was issued to respondents for self administering, and later after their first response, tele-discussion and online discussions including social media followed. The first set of collected data generated the *Knowns* while the second set resulted into the *Unknowns or the believed to be known* stakeholders. Results were cross tabulated (*see table II below*) and consequently imported to and analysed using NVivo (*see Plate. 07 – 10*).

Table II shows a semi-structured tool was administered in a 2-stage exercise whereby the first issuance aimed to ascertain whether respondents would ably generate the *Unknown emerging* or lean towards the *known stakeholders* while the second issuance which was administered through self, tele-conversations and social media aimed to determine the *Unknown emerging or believed to be known* stakeholders (*See Plate. 07 below*).

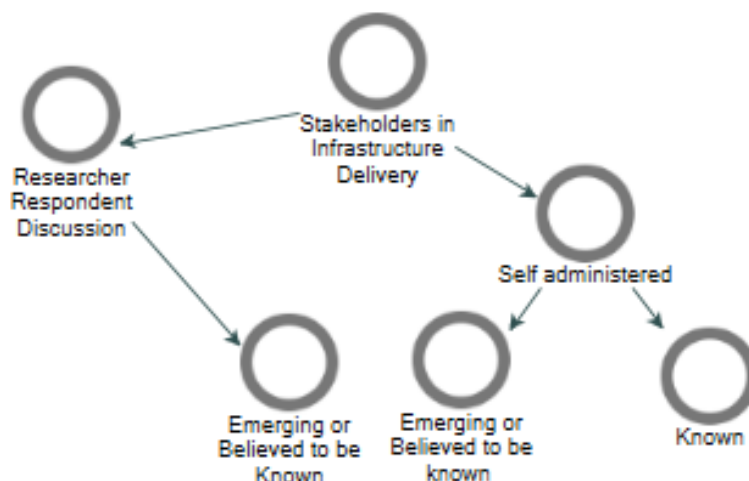


Plate 07: Emerging stakeholders in infrastructure procurement

From table II, 15 out of 15 responses were registered from respondents who indicated the “Known” stakeholders and the “Unknown emerging or believed to be known” as emerging stakeholders. Plate 07 shows that mixed results were registered from the self-administered exercise with majority 15 out of 15 indicating the usual known stakeholders and only 3 of the possible 15 indicating scattered elements of “Unknown emerging or believed to be known” stakeholders. For example, below are two of the participants’ responses;

4.	<p><u>1. President</u> <u>2. Ministers</u> <u>3. Members of Parliament</u> <u>4. Religious Leaders</u> <u>5. National Government Agencies</u> <u>6. Local Government Agencies</u> <u>7. Government Departments</u> <u>8. Users and community Representatives</u></p>	<p><b>Political leaders – President and Ministers</b></p> <p><b>Community representatives (Political class)</b></p>
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**Plate 08: Sample response (Source; Primary data, 2024)**

2.	<p>Community beneficiaries, government agencies, private contractors and consultants, funders / donors, <b>President</b> <b>Local enforcement teams</b></p>	<p><b>Usual known teams</b></p>
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**Plate 09: Sample response 2 (Source; Primary data, 2024)**

By extension, below is an extract of responses of those who suggested the usual known stakeholders under self-administered stage.

5.	<p><u>The client or project owner</u> <u>2. The funders</u> <u>3. The technical teams in design and supervision</u> <u>4. The technical teams in execution</u> <u>5. The users</u></p>	<p><b>Usual known team</b></p>
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**Plate 10: Sample response 3 (Source; Primary data, 2024)**

With mixed and scattered responses, it was not only evidence that practitioners were leaning against what is Known already but also a justification for the second stage of this investigation to ascertain what is “Unknown emerging” yet “Believed to be known”. Basing on what the respondents had submitted, they were then engaged through self, tele-conversations and social media to determine if new information would emerge. Below is a cross tabulation of their responses (See table II and table III).



**Table II: Stakeholders in public infrastructure procurement / delivery**

Respondents	Stakeholders (Self-administered to verify knowns & unknowns)	Remarks	Stakeholders (Self & Researcher administered) -Ranked on influence, interest and ability to discover / recommend projects (on a score 1-5)	Emerging key stakeholders (Unknown or believed to be known)
1. RIGAIN	1. Central government, The line ministries or parastatals, The public, Users of facility, Private sector.	Usual known teams	1. President 5, Project brokers 5, Religious leaders 4, Client 5, Project Manager 4, Military Contractors & Subcontractors 4	1. President (5) 2. Brokers (5) 3. Religious leaders (5) 4. Military contractors & subcontractors (4)
2. RIGRAY	Community beneficiaries, government agencies, private contractors and consultants, funders / donors, <b>President, Local enforcement teams</b>	Usual known teams	1. President, Local enforcement teams, Project brokers, Religious leaders, Community beneficiaries, Government agencies, funders / donors	1. President (didn't rank) 2. Project brokers (didn't rank) 3. Religious leaders (didn't rank)
3. RIGTUK	These range from Project Affected Persons (PAPs), Planners, direct and indirect beneficiaries,	Usual known teams	1. The President (5), Project brokers (4), Implementing Agencies (4), Funder (3), Project Manager (4), Military Contractors & subcontractors (4), Religious leaders (3)	1. The President (5) 2. Project brokers (4) 3. Religious leaders (3) 4. Military contractors & Subcontractors (4)
4. RIGJESS	All government entities, the public sector, funding agencies and professional bodies.	Usual known teams	I would prefer that you provide a list from where to make a choice.  1. President 5, Funder 4, Implementation agencies 5, Project Manager 4, Client 5, Project brokers 4, Religious leaders 4, Military Contractors & Subcontractors 4, Local authority enforcement teams 3, Other regulatory bodies	1. President 5 2. Project brokers 4 3. Religious leaders 4 4. Military contractors & Subcontractors (4)
5. RIGJOSY	1. The client or project owner, 2. The funders, 3. The technical teams in design and supervision, 4. The technical teams in execution, 5. The users	Usual known team	1. The President (5), Project brokers (5), Implementing Agencies (4), Funder (3), Project Manager (4), Military Contractors & subcontractors (4), Religious leaders (3)	1. The President (5) 2. Project brokers (5) 3. Religious leaders (3) 4. Military Contractors & Subcontractors (4)

6. RIGKITA	Government agencies, private organizations, contractors, funders and users/beneficiaries	Usual known teams	1. Religious leaders (5), President (5), Project Managers (5), Local Authority enforcement teams (5), Project brokers (3), Users & community representatives (3), Military Contractor & subcontractors (3), Implementing Agencies / Authorities (5), Funders (5), Manufacturers (3), Bankers (3), Insurance (3), Client (5), Local Government leaders (unranked), Politicians (unranked)	1. Religious leaders (5), 2. President (5) 3. Project brokers (3) 4. Local Government leaders (unranked) 5. Politicians (unranked) 6. Military contractors & subcontractors (3)
7. RIGNAK	Project developers, 2. Financiers, 3. Consultants 4. Contractors	Usual teams	1. Funders (5), President (5), Project managers (5), Project brokers (5), Implementing agencies / Authority (5), Bankers (unranked), Manufacturers (unranked), End users (unranked)	1. President (5) 2. Project brokers (5) 3. Religious leaders (5)
8. RIGEMA	The Society directly affected by a project, the beneficiaries of the project, the executive/State, the Funders of the project, for huge projects- other neighboring countries, direct suppliers interested in bidding for the project, other service providers and suppliers like bankers, insurance society, environmental protection groups and many more	Usual known teams, and many more not defined State (10), Society (4), General Public/ Beneficiaries (1), Neighbor Countries (6)- where applicable, Contractors (7), Funding agency (8), Other potential service providers (2), Pressure groups- EPG (4)	1. President (unranked), User community(unranked), Funder (unranked), Military Contractors & subcontractors (unranked), Project brokers (unranked), Implementing agencies / authorities, Religious leaders (unranked)	1. President (unranked) 2. Project brokers (Unranked) 3. Religious leaders (unranked) 4. Military contractors & subcontractors (unranked)
9. RIGGAM	The beneficiaries, the implementing agency, the funder, Government	Usual known teams B - 5, G - 4, F - 3, IA - 3	1. President (5), Religious leaders (4), Implementing agencies (5), Project brokers (4), Funders (5), Military Contractors (2), Politicians (unranked), Foreign Investors / speculators (unranked)	1. President (5) 2. Religious leaders (4) 3. Project brokers (4) 4. Politicians (unranked) 5. Military contractors & subcontractors (2)
10. RIGKIBS	1. President 2. Ministers 3. Members of Parliament 4. Religious Leaders 5. National Government Agencies 6.	Political leaders – President and Ministers, Community	1. President (5), Project brokers (5), Project managers (4), Funders (4), Religious Leaders (4)	1. President (5) 2. Project brokers (5) 3. Religious Leaders (4)

	Local Government Agencies 7. Government Departments 8. Users and community Representatives	representatives (Political class), Religious leaders, Usual known teams	2. Implementing agencies (5), Elected officials / Politicians (unranked), NGOs (unranked), International organizations (unranked), Academic and research institutions (unranked)	4. Elected officials / Politicians (unranked)
11. RIGLUB	Government, Donor Agencies and the Public	Usual known teams	1. Local Politicians (3), Members of Parliament (3), President (5), Project brokers (5), Project managers (4), Donor Agencies (4), Religious Leaders (5), Implementing agencies (5)	1. Local Politicians (3) 2. Members of Parliament (3) 3. President (5) 4. Project brokers (5) 5. Religious Leaders (5)
12. RIGALB	Representatives of the public procuring entity, the Contractors, the Consultants or Project Manager, the Funding agency, Other external stakeholders such as social affairs groups, etc.	Social affairs groups  Usual known stakeholders	I would prefer that you provide a list from where to make a choice.  1. President 5, Funder 4, Implementation agencies 5, Project Manager 4, Client 5, Project brokers 4 2. Religious leaders 4, Military Contractors & Subcontractors 4, Local authority enforcement teams 3, Other regulatory bodies	1. President 5 2. Project brokers 4 3. Religious leaders 4 4. Social affairs groups (unranked) 5. Military contractors & subcontractors (4)
13. RIGJOX	National Government Local Government, Government departments Contractors Subcontractors Project management team	Usual known teams	1. President (5), Client (5), Funders (5), Users and community representatives (4), Implementing Agencies (4), Project Brokers (5), Politicians (unranked), Social groups (unranked), Religious leaders (4)	1. President (5) 2. Project Brokers (5) 3. Religious leaders (4) 4. Politicians (unranked) 5. Social groups (unranked)
14. RIGSEM	1- Government 2- Communities and the general public 3- Manufacturers 3- Academia 4- Local Governments 5- Regulatory Agencies 6- Funding Agencies 7- Contractors and business 8- Professionals	Usual known teams	1. Funders (5), President (5), Project managers (5), Project brokers (5), Implementing agencies / Authority (5), Bankers (unranked), Manufacturers (unranked), End users (unranked), Professional bodies (unranked), Religious leaders (4)	1. President (5) 2. Project brokers (5) 3. Religious leaders (4)
15. RIGBUD	Government agencies, Community beneficiaries, private contractors and consultants, funders / donors, Local enforcement teams, President	Usual known teams	1. President, Local enforcement teams, Project brokers, Religious leaders, Community beneficiaries, Government agencies, funders / donors	4. President (didn't rank) 5. Project brokers (didn't rank) 6. Religious leaders (didn't rank)

Table III: Score rating the Emerging stakeholders

Respondents	Emerging key stakeholders																													
	President					Project Brokers					Military contractors & subcontractors					Religious Leaders (clergy)					Other politicians					Social groups (Alumni, Networks, etc)				
	Scores																													
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
RIGAIN				x						x				x						x										
RIGRAY																														
RIGTUK				x					x					x					x											
RIGJESS				x					x					x					x											
RIGJOSY				x						x				x					x											
RIGKITA				x					x					x																
RIGNAK				x						x																				
RIGEMA																														
RIGGAM				x						x				x						x										
RIGKIBS				x						x										x										
RIGLUB				x						x										x										
RIGALB				x						x				x						x										
RIGJOX				x						x										x										
RIGSEM				x						x										x										
RIGBUD																														
<b>Key</b>																														
	Not mentioned not scored																													
	Mentioned but not scored																													
x	Rating																													

#### 4.2.1 The “Unknown emerging or believed to be known” stakeholders

From table II and with reference to Plate 07, The President, Project brokers, Military contractors & subcontractors, Religious leaders (Clergy), Other politicians and Social groups in that order emerged as the *Unknown emerging or believed to be known stakeholders*. For example, below is one of the participants’ responses;

4.	<p><u>1. President 2. Ministers 3. Members of Parliament 4. Religious Leaders 5. National Government Agencies 6. Local Government Agencies 7. Government Departments 8. Users and community Representatives</u></p>	<p>Political leaders – President and Ministers  Community representatives (Political class)</p>
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Plate 11: Sample response (Source; Primary data, 2024)

It is also worth noting that the second exercise also didn’t go without mixed results, several respondents still submitted the *Known* stakeholders as part of Unknown emerging stakeholders (see *Plate.12*).

5.	<p>The client or project owner 2. The funders 3. The technical teams in design and supervision 4. The technical teams in execution 5. The users</p>	<p>Usual known team</p>	<p>1. The President (2) 2. Project brokers 3. <u>Implementing Agencies (4)</u> 4. Funder (3) 5. <u>Project Management</u> 6. Military Contractors &amp; subcontractors 7. Religious leaders</p>
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Plate 12: Sample response (Source; Primary data, 2024)

#### 4.2.2 Contemporary real pushers

To determine “*Contemporary real pushers*”, the *Unknown emerging* stakeholders were further recorded with corresponding scores and frequencies as cross tabulated in table III. These scores were based on (1) The level of influence, (2) The level of interest, and (3) The ability to discover, negotiate and recommend a project in the industry. The best ranked three *Unknown emerging* stakeholders i.e The President, Project brokers and Religious leaders emerged as the “Contemporary Real Pushers” of SRI projects delivery. Below is a featuristic tabulation of influence on SRI project delivery as per the respondents.

**Table IV: Contemporary Real Pushers and how they influence SRI projects**

Source	Contemporary Real pushers of success	Contemporary stakeholder project inputs
Primary data, Lit review	✓ President	<ul style="list-style-type: none"> <li>✓ The president influences national infrastructure policies.</li> <li>✓ Presidential priorities through national vision always determine budget allocation.</li> <li>✓ The president negotiates and approves infrastructure funding.</li> <li>✓ By authority and through agencies the President directs and makes recommendations on contractual awards and terms for mega public infrastructure projects.</li> <li>✓ The President through implementation agencies negotiates the partner MoUs.</li> </ul>
	✓ Project brokers	<ul style="list-style-type: none"> <li>✓ Brokers play an intermediary role</li> <li>✓ They discover projects before gestation</li> <li>✓ In complex projects involving a myriad of stakeholders, Brokers will navigate all the complexities to the right parties execute the project.</li> <li>✓ They negotiate terms between parties</li> <li>✓ In this error of globalization, brokers tend to link opportunities at the international stage thus ensuring a good fit to both investors and Government.</li> </ul>
	✓ Religious leaders	<ul style="list-style-type: none"> <li>✓ Religious institutions normally own land and buildings of cultural and historic attachments and therefore infrastructure projects which might potentially affect these projects will require clearance from religious leaders.</li> <li>✓ Religious leaders influence Infrastructure projects by the strong community network.</li> <li>✓ Religious leaders through religious institutions sometimes fund or otherwise secure funding of public interest e.g Educational, Health and skilling facilities.</li> <li>✓ In the current era, Religious leaders potentially recommend contract awards for some infrastructure projects especially those in their area of jurisdiction e.g Schools, Health facilities,</li> </ul>

Source: (Author's construct)

Whereas these Contemporary real pushers have been determined, they may not directly and easily fit on the Mendelow's stakeholder power - interest matrix grid as some stakeholders may have low power, low interest and still have high influence in line with (Eriksen-Coats, 2018).

### 4.3 Originality value

The investigation of "Contemporary Real pushers" is a lesser / no-studied context. Therefore, this research has identified and or introduced "Contemporary Real pushers" as a new concept and another category of stakeholders that make things happen. This classification is uniquely defined by its tendency to force a puzzle on the Mendelow stakeholder analysis power - interest grid in addition to adventurous elements before SRI project inception and the proactiveness during SRI project implementation. In line with the latest trends, "Contemporary Real pushers" are neither internal nor external stakeholders as classified in previous research. Independent of the ordinary project leadership, these findings on "Contemporary Real pushers" will provide

valuable insights to project stakeholders, particularly owners, contractors and project managers to assess which stakeholders have a greater impact that they should be onboard for SRI performance.

#### **4.4 Research limitations**

As with other investigations, “Contemporary Real pushers” comes with potential limiting factors. (1) Being qualitative in nature, “Contemporary Real pushers” misses the benefit of numbers as it relied more on data saturation than sufficiency. In the future, this may be validated with a quantitative methodology to ascertain if there are any points of departure. (2) “Contemporary Real pushers” was also discussed in light of Ugandan perspective and so its global application is a matter for future assessment. (3) “Contemporary Real pushers” as a cross sectional study might not address future issues that come with SRI development trends. Infrastructure projects management rapidly changes and just like Contemporary Real pushers never existed decades back, this investigation does not guarantee its reliability in 20 years to come. This may be confirmed with a longitudinal approach.

#### **4.5 Practical implications**

These findings have suggested “Contemporary Real pushers” as the third category of stakeholders independent of what previous research has categorized into direct (internal) and indirect (external) stakeholders, who by default determine the success and failure of sustainable resilient infrastructure delivery. This means that infrastructure projects are bound to fail if their contemporary real pushers are not mapped, engaged and involved throughout the process.

#### **4.6 Social implications**

This investigation focused on “Contemporary Real pushers” of SRI success. Stakeholders always identify with SRI projects delivery, and despite huge global and regional investments, infrastructure has remained a challenge - leave alone sustainability and resilience. Frustrating SRI projects as a result of unmet stakeholder interests is not uncommon and therefore, proper conceptualization of who “Contemporary Real pushers” are amongst the SRI project stakeholders can alter the outcomes. On a time-quality-cost scale, failure rates will improve, investment cost and Government debt can go down following a lowered turnaround time thus improved general service delivery. “Contemporary Real pushers” can also change the contractors’ business acquisition trajectory as well as smoothen the delivery process. Lastly, projects brokerage may be legitimately documented either as a profession or as a service with corresponding codes of ethics.

#### **Acknowledgement**

If I have seen further, it is by standing on the shoulders of Giants (Newton, 1765). Associate Prof. Kwasi Gyau Baffour, your supervisory guidance was deep.

Makerere University, the only source of financial support towards this issue is invaluable.

My house; Sophie, Reynold, Rain and Rex; only you know too well the turbulence that surrounded this “Contemporary Real pushers” issue.

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