

# Assessment of the Challenges and Effects of Delays in Compulsory Land Acquisition on the Performance of Road Construction Projects in Uganda

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**Abstract**— The roads construction projects in Uganda are experiencing delays which are partly due to challenges in land acquisition. The purpose of this study was to assess the challenges and effects of delays in land acquisition on the performance of Uganda's roads construction projects, a case of Mbale-Bumbobi-Bubulo-Lwakhakha. Eighteen (18) land acquisition processes, twenty-nine (29) challenges and eighteen (18) feasible strategies were identified through comprehensive literature reviews drawn from land acquisition practices in various countries. Data was collected using questionnaire surveys, structured interviews and focused discussion guides, across the target respondents regarding the challenges and effects of delays in land acquisition on the performance of roads construction projects in Uganda. Mixed method research design was used, and data was analysed using SPSS and Relative Importance Index (RII) was used to compute the magnitudes of the variables under consideration. The various processes were evaluated, and the least significant processes were recommended for merging or removal. The RII for the various challenges in the land acquisition processes were obtained and the top three most significant challenges identified were; (1) delayed compensation awards, (2) injurious affections and other damages and (3) access difficulties for some families. The RII for the various strategies in mitigating the challenges in land acquisition so as to enhance the performance of road construction projects in Uganda in order of importance were: (1) the need for regular involvement and dialoguing with the stakeholders and the affected persons, (2) a proper definition of what constitute fair and adequate compensation and (3) dialoguing with the affected persons to allow civil works progress especially on undeveloped land portions respectively. Adoption of strategies; regular involvement and dialoguing with the affected persons/stakeholders (RII=0.971), proper definition and assessment of fair and adequate compensation (RII=0.953), dialogue with affected persons to allow construction progress (RII=0.908), massive sensitization on the need for compulsory land acquisition (RII=0.881) and prompt payment of compensation awards by tagging timeline (RII=0.873) with higher RII values above the Mean RII value of 0.762 would positively impact on the performance of road construction projects as land would be availed to the contractors to commence civil works and thereby avoiding claims of idle machines and time extension costs during the construction process resulting from site blockages by the unpaid affected persons.

**Index Terms**— Challenges, Compulsory Land Acquisition, Effects, Construction, Project Affected Persons, Projects and Relative Importance Index

## 1 INTRODUCTION

Globally, the availability of Land as a natural resource is the most important factor in the construction industry. Public infrastructure developments require the right of way to be cleared from any encumbrances for works to commence and as a result, several countries such as China, Ghana, Kenya, etc. are all undertaking compulsory land acquisition as a way of supplying construction sites for the infrastructural development under the confines of their legal systems [1]. Compulsory acquisition is the power of government to acquire private rights in land without the willing consent of its owner or occupant in order to benefit society [2]. In Uganda, compulsory land acquisition which is chiefly guided by the Land Acquisition Act 1965, has been necessitated by the Government's need to provide adequate infrastructures such as roads, railways etc. and safeguard of the country's natural resources such as water bodies, forest reserves and game reserves etc. The government and local governments

are mandated under article 237 (2) to acquire and hold land in public trust for public benefit which should conform to the provisions under article 26 of the Constitution (Protection from deprivation from property) but these need for government land acquisition has its effects on the social and economic lives of the poor society who are sometimes deprived off their rights and thus needs critical considerations [3].

Several attempts in various land acquisition laws and practice in various countries have emphasized compensation to affected persons for their loss, yet still, their dissatisfaction has persisted [4] making it very challenging for the government to fulfil its mandate while requiring land with compulsory land acquisition synonymously looked at as a "legal" grabbing of land [5] and consequently, estimated completion dates in the contracts have been extended which lead to more costs incurred in terms of contractual claims for example the completion of Entebbe Express Way was deferred to May, 2018 from the initially scheduled target of

2017 with about UGX.359 Billion lost due to contract claims and the upgrade of Kanoni-Villa Maria-Sembabule road which commenced on 9<sup>th</sup> September 2014 with original completion scheduled for 12<sup>th</sup> September 2017 was later revised to 12<sup>th</sup> September 2019, with contract time elapsed at 98.3% and land acquisition delays cited as a major cause.

Currently, the Uganda National Roads Authority as an agency of the government is mandated to acquire land for the construction of the national roads networks within the country but the process has been taken with mixed feelings and hence causing delays in the overall process of securing right of way and supplying of land to the contractors for execution of civil works with similar challenges exhibited along Mbale-Bumbobi-Bubulo-Lwakhakha road project. Therefore, the purpose of this study was to assess the various challenges and effects of land acquisition delays and develop feasible strategies that can facilitate a faster land acquisition for road construction projects and therefore, the study findings can be applied on all land acquisition projects to ensure faster land acquisition for road construction projects.

## 2 LITERATURE REVIEW

### 2.1 The need for compulsory land acquisition processes and delivery of construction projects

The history of the development of compulsory powers by public authorities has been the one of striving to achieve a fair balance between retaining safeguards for the individual whose land is required and on the other, the importance of not delaying schemes which are to serve a much needed public purpose (construction of roads, canals, highways, railways, bridges, airports, power transmission lines etc) while offering value for money to the tax payer [6].

### 2.2 Processes of compulsory land acquisition in developed and developing countries

Most countries articulate a need for some minimum process that guarantees certain procedural rights to the landowner. Several studies have highlighted the land acquisition processes [7], [8], [9], [10], [11], [12], [13], [14], [15] with majority countries setting out a broad right of due process in their constitutions (US, Malaysia, Taiwan, Korea and Singapore). However, some countries like Singapore have had their courts rendering such processes unnecessary by rewriting their statutes to not require compliance with the due process clause [16].

In land acquisition, any delay in either of the processes is likely to have an impact on the schedule for acquiring an unencumbered right of way which extends into the scheduled start time for the execution of civil works and thus delay in the start time for execution of civil works thus causes delay in the overall construction process. In Uganda, the law requires

prompt payment of fair and adequate compensation to the affected landowner before any public related construction or development can be commenced on such land. This implies a delay in undertaking and fulfilling the requirements of a laid down process causes delays in the execution of the project thereon.

### 2.3 Challenges in compulsory land acquisition processes

In Vietnam, a recent study indicated that much as there was loss of land, majority of the Hue people were able to reconstruct their livelihoods with better living conditions after acquisition [15]. Compulsory land acquisition has been faced with a mixed reaction with focus being drawn towards it amidst the need for infrastructure development as Pedlowski [5] highlights how challenging it is for the government to fulfil its mandate while requiring land for its various projects in which it synonymously looked at compulsory land acquisition as a "legal" grabbing of land. Furthermore, "Land grabbing" has become a catch phrase used to define a myriad of processes involving the massive acquisition of land, mainly in the developing world [17].

Massive infrastructural projects such as road constructions require land. In the case of Uganda, the need for land to implement government projects is on the rise due the national focus on improving both interior and cross border movement with the aim of facilitating effective, efficient and an accessible market economy. Compulsory acquisition of land requires striking a balance between the public need for land and on the opposite end providing security of tenure to ensure the protection of the rights of the private property owners. It has been established that, failure to effectively and efficiently handle compulsory acquisitions results into; reduced tenure security, reduced investments in the economy, weakened land markets, opportunities created for corruption and the abuse of power, delayed projects, inadequate compensation paid to owners and occupants [2].

A recent study in Ghana found that the farmers' involvement in the compensation process did not go beyond identification and measurement of their farms. With limited participation in the acquisition and compensation process, the farmers felt deprived of their entitlements and viewed the compensation as inadequate for their lost livelihoods and generational inheritance [18]. There were also claims by the affected community that their living conditions became worse-off after the acquisition with consequential challenges such as family disunity over the sharing of compensations awards, congestion, dust due to partial demolition of the habitable house, loss of business customers and profits, difficulty in renting new accommodation, 'other damages' specifically 'injurious affection' that must be compensated,

several complaints to the authorities responsible for paying compensation, access difficulties, insecurity for example demolition of the frontages and security walls of some houses rendered them open, inflation on cost of building materials, unduly delayed compensation payments and delay in undertaking the road construction as some affected persons prevented the demolishing team from pulling down their structures because their compensations were yet to be paid.

This in turn delayed the scheduled time for the road reconstruction, which also contributed to the late completion of the project, suggesting that, a good dialogue between the authorities and the affected individuals would have helped the affected persons to appreciate the process better. Notably, severe challenge of compensations paid in piece meal with the worst off being those expropriated when they had not been paid compensation at all were realized which negatively affected economic and social activities that were supported by the demolished properties and hence the livelihoods of the people [10].

The World Bank's Land Governance Assessment Framework found that, in Nigeria, "a large number of acquisitions occurs without prompt and adequate compensation, thus leaving those losing land worse off, with no mechanism for independent appeal even though the land is often not utilized for a public purpose" with such negative associated with corruption, limited capacity, and insufficient financing as well as Nigeria's weak legal framework. According to a recent study of compensation procedures established in national laws of 50 countries, Nigeria's compensation procedure lags many of the countries assessed because the Land Use Act mostly fails to adopt international standards on the valuation of compensation [13], [16].

In Delhi, much as the law provided people with the right to contest the valuation of their lands, it was extremely hard for ordinary landowners to challenge the state's estimates, ultimately allowing the administration to dispossess large sections of the population after paying a minimal compensation [19]. In Uganda, several identifiable gaps exist in the land acquisition guiding legal frameworks which negatively impacts on the execution of compulsory land acquisition principles and procedures. These challenges and gaps in the legal frameworks need to be objectively addressed to enhance faster acquisition of land for civil works and resultantly improving the performance of road construction projects in Uganda.

## 2.4 Land acquisition legal frameworks in Uganda

It is the policy of the Ugandan Government that persons affected by development projects in general and road right of way are adequately compensated for their structures, crops and loss of livelihood. There is in place an elaborate legal

framework to ensure compliance with these policy requirements.

### I. Constitution of Uganda, 1995

Article 237(1) of the Constitution vests all land of Uganda in the citizens of Uganda and can be held under four tenures; Customary, Leasehold, Mailo, and Freehold. In Uganda, government or local government can acquire land in public interest but such acquisition should be carried out in a manner that provides a prompt, fair and adequate compensation to the affected person prior to taking possession as provided under Article 237(1) (a) and Article 26 of the 1995 Constitution. Whereas Uganda seems to be grappling with the challenges of compulsory land acquisition, a recent study in over 50 countries recommended adoption of Uganda's legal framework amongst other countries which formally recognize community land rights regardless of whether those rights are registered during the compulsory acquisition process [16].

In Uganda, the law requires prompt, fair and adequate compensation prior to taking possession however; there is no clear definition of what is fair and adequate in the Constitution. Failure to objectively address this gap will always leave the affected persons claiming for low compensation, rejection of compensation awards, and denial of access to land for construction and thus causing delays in the overall construction progress.

### II. The Land Act (1998)

This address land holdings, management control and dispute resolution as the principal legislation on land tenure in Uganda. The Act states that all land in Uganda, whether alienated or not, is subject to all existing public rights of way which are reserved and vested in the Government on behalf of the public, and that all such rights of way are maintained by the public uninterrupted unless they are terminated or altered by the decision of the Minister in writing. Section 43 of The Land Act (1998) gives powers to the Government or Local Governments to acquire land for public interest which should conform to the provisions of Article 26 and Clause (2) of Article 237 of The Constitution.

Land acquisition in the public interest is also subject to Section 42 Sub-Section 7 Paragraph (b) of the Land Act 1998, where it is emphasized that "no person from whom land is to be acquired shall be required to vacate that land until he or she has received the compensation awarded to, or agreed to, by them". Since no clear definition is provided for what is fair and adequate and, in a situation, where the affected person has not agreed to the compensation awards, the construction works cannot commence until such an affected person is paid compensation. This causes general delays in the construction

project. In India, compensation award is categorised as Consent Award and General Award, with the later given to a person discontented with the compensation value. The discontented person can thus opt for litigation but first after receiving the disputed amount or the General Award which would give opportunity to the government to access the land [20]. This is a gap in the Ugandan legal framework as no amount is awarded to a discontented affected person apart from the compensation award and therefore access to land for construction works cannot be obtained as the law requires payment of award prior to accessing the land.

Whereas Section 78 of the Act gives valuation principles for compensation i.e. compensation at depreciated replacement costs for rural properties and market values for urban properties, with an additional disturbance allowance calculated at 15% or 30% of the sum awarded to that person depending on the time required for vacation, concerns over the fairness and adequacy of the compensation awards still suffices. An appropriate method for compensation assessment and award should be adopted for example; consideration of future incomes from the subject property should not be ignored. The current basis of compensating for rural properties based on the market values undermines fairness through ascertaining "equitable value" which considers the advantages and disadvantages both parties will gain from the transaction [21]. Section 41(6)(b) of the Land Act provides that no person from whom land is to be acquired shall be required to vacate until they receive full compensation and other kinds of assistance however, the meaning of "other kinds of assistance" are not explicit in Uganda's law. This leaves the affected persons in dilemma and claim for more compensation. These claims may lead to the affected person denying access to land for construction works.

The Land Act, 1998 had provided for land tribunals to resolve all land related issues. However, since their suspension in 2007, the High Court handles all land-related cases as provided for in the Land Acquisition Act. The Land Act also states that traditional authority mediators must retain their jurisdiction to deal with and settle land disputes. Potential gap exists in terms of accessibility and affordability by the project affected persons (PAPs) and potential of case delays if the High Court must handle land-related grievances.

### III. The Land Acquisition Act (1965)

The Land Acquisition Act (1965) makes provision for the compulsory acquisition of land for public purpose and for matters incidental thereto. It provides subject to Section 3 that the minister may declare by statutory instrument that land is needed for public purpose and specifies the requirements as stipulated in Section 3(2). Prior to issuance of notice to persons having interest in the land under section 5 by the

assessment officer, an inquiry and award for compensation shall be in line with section 6 of the Act. Although project affected persons are required to be identified and served notices as a process, there is no explicit provision for baseline information gathering and socio-economic surveys as part of a Resettlement Action Plan process. This most likely leads to failure to establish the most feasible resettlement strategies which leads to delays in resettlement plan implementations and eventual impact on the progress of construction projects.

Another potential gap is that there is no distinction made in the law based on gender, age, or ethnic origin during compensations. This could trigger family disputes and thus identifying the rightful beneficiary becomes a challenge. If the actual beneficiary cannot be identified, time is lost in waiting for the families to resolve their differences before compensation can be awarded and access granted to land. Furthermore, there is a gap in that the law is not open about land-based resettlement strategies and focuses more on cash-based compensations. As compensation money may not be available, peripheral lands form the acquired ones become more expensive suddenly. This makes the assessed and awarded claim insufficient and thus triggering claims for under valuation or low compensation awards and thus the affected persons may deny access to the land.

### IV. The Roads Act (1964)

The Roads Act of 1964 is a critical piece of legislation with respect to the Road Development Projects. It defines a road reserve as that area bounded by imaginary lines parallel to and not more than fifty feet (50ft) distant from the centre line of any road and declared to be a road reserve. The Act is, however, silent on whether such land is "taken" for the state, but states that no person shall erect any building or plant, trees or permanent crops within a road reserve. It also allows the roads authorities to dig and take materials from the road reserve for the construction and maintenance of roads approved by the District Commissioner (DC) or Chief Administrative Officer (CAO) without payment to any person. The Minister or, with the consent of the Minister, a District Commissioner (Chief Administrative Officer in the Current Government) in relation to any road within or passing through any Government town or an Administrator in respect of any area not being in a government town may, by order prescribe the line in which buildings shall be erected in such town or area, or prescribe the distance from the centre of the road, within which no building shall be erected in such town or area.

The existing gap is that the reserve is only limited to fifty feet (30meters) and therefore further expansions of the road will likely require a fresh need for land acquisition amidst the acquisition challenges which eventually cause delays in the

construction process. Furthermore, the Act does not justify why other reserves are up to 50meters such as the designed Atiak-Laropi and Acholibur-Musingo Roads amongst others.

#### **V. National Environment Management Act 2019 and National Environment (Wetlands; Riverbanks and Lakeshores Management) Regulations (3/2000)**

The provisions of the National Environment Management Act 2019 and the National Environment (Wetlands; Riverbanks and Lakeshores Management) Regulations, 2000 is very eminent in the process of land acquisition especially for the construction of Roads sections and Bridges that fall within the reserve banks. The Act provides for procedures that must be followed to obtain land and environmental clearance prior to construction works. These procedures are time consuming and thus impact negatively on the project timeline and cost [22]. As provided in Sec. 3, this regulation applies to the management of all wetlands in Uganda with the objectives specified under Sec.4. The implication of Sec. 3 towards the management of wetlands empowers the Government to hold wetlands in trust for the people, therefore making all wetlands and the recommended zones and riverbanks public land. This in an ideal manner would ensure that projects within reserves such as construction ferry landings and bridges shouldn't suffer from the challenges of land acquisition; however, in the real sense predominant owners (doctrine of discovery) have always claimed ownership of such lands. This makes it hard for construction works to progress until acquisitions are completed.

#### **2.5 Construction project performance measurement**

Traditional project management emphasises that for a project to be successful, it must be completed within schedule time, budgeted cost and with good quality output. While some writers consider time, cost and quality as predominant criteria, others suggest that success is something more

complex [23]. The UK working groups on Key Performance Indicators (KPIs) have identified ten parameters for benchmarking projects, in order to achieve a good performance... and these consist of seven project performance indicators: construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product and client satisfaction with the service; and three company performance indicators, namely: safety, profitability and productivity [24]. This study focussed on construction cost and time as major performance measure in assessment of the challenges and effects of delays in land acquisition on the performance road projects.

### **3 METHODOLOGY**

#### **3.1 Study area**

The study was conducted along the first 10km of Mbale-Bubulo-Bumbobi-Lwakhakha), an African Development Bank (AfDB) funded National roads network construction project in Uganda. This was because the project is on-going and due to the reported high rates and volumes of land acquisition challenges being experienced therein.

#### **3.2 Study population and sample size selection**

The study population was restricted to respondents directly attached and affected by the selected projects within the geographical location of Uganda. The affected persons were only limited to those within the first 10Km section of the overall 44Km road stretch since similar challenges were highly likely to be encountered in the other sections. A total study population of 464 project stakeholders was established for the identified target respondents with a sample size representative of 210 project stakeholders, determined based on the Krejcie and Morgan's sample size determination table [25]. The study registered a 91% of response rate. Table 1 summarizes the details of the study population, sample size and response rate of the study.

TABLE 1  
STUDY POPULATION AND SAMPLE SIZE DETERMINATION

Target respondents	Study population, N	Sample size, (s)	Response rate
Project Managers	5	5	3
Contractors (Engineers)	5	5	3
Project Consultants	5	5	4
Local leaders	20	19	14
Project Land Acquisition Officers	50	44	35
Project Affected Persons (PAPs) within the first 10Km section	379	132	132
<b>Total</b>	<b>464</b>	<b>210</b>	<b>191</b>

Source: Primary data

### 3.3 Data analysis

Data analysis was done using Statistic Package for Social Science (SPSS 25.0) where the scores given to each factor by the respondents were entered and consequently the responses from the 167 questionnaires were subjected to statistical analysis. The contribution of each of the factors to overall road construction project performance was examined and the ranking of the qualities in terms of their significance as perceived by the respondents was done by use of Relative Importance Index (RII). Researches notably Muhwezi, et al. [26] and Gündüz, et al. [27] amongst others highlighted the relevance and use of RII in analysis of data. RII applicably helped in determining the level of significance of the assessed factors to establish which one had the least or the highest significance through rankings. Accordingly, RII was computed using equation (1).

$$RII = \frac{\sum_{i=1}^5 W_i}{A * N}, \quad (1)$$

Where:

$W_i$  = total sum of each factor from very low to very high);  
A = highest weight in this study (5 = Strongly agree); and  
N = total number of respondents for each variable (167 in this case); and  
RII values fall within 0 to 1 ( $0 \leq RII \leq 1$ ).

The Mean RII for the processes and factors assessed were computed to give a benchmark value for significance comparison between the assessed processes and factors using equation (2) and the results of the analysis are presented in Figures 1 to 3.

$$\text{Mean RII} = \frac{\sum_{i=1}^n RII}{n}, \quad (2)$$

Where n = total number of processes or factors evaluated.

## 4 RESULTS

This section presents the results under four broad themes: compulsory land acquisition processes, land acquisition challenges, identified gaps in the guiding legal framework on compulsory land acquisition, and the strategies for addressing the compulsory land acquisition challenges from the context of an emerging economy like Uganda.

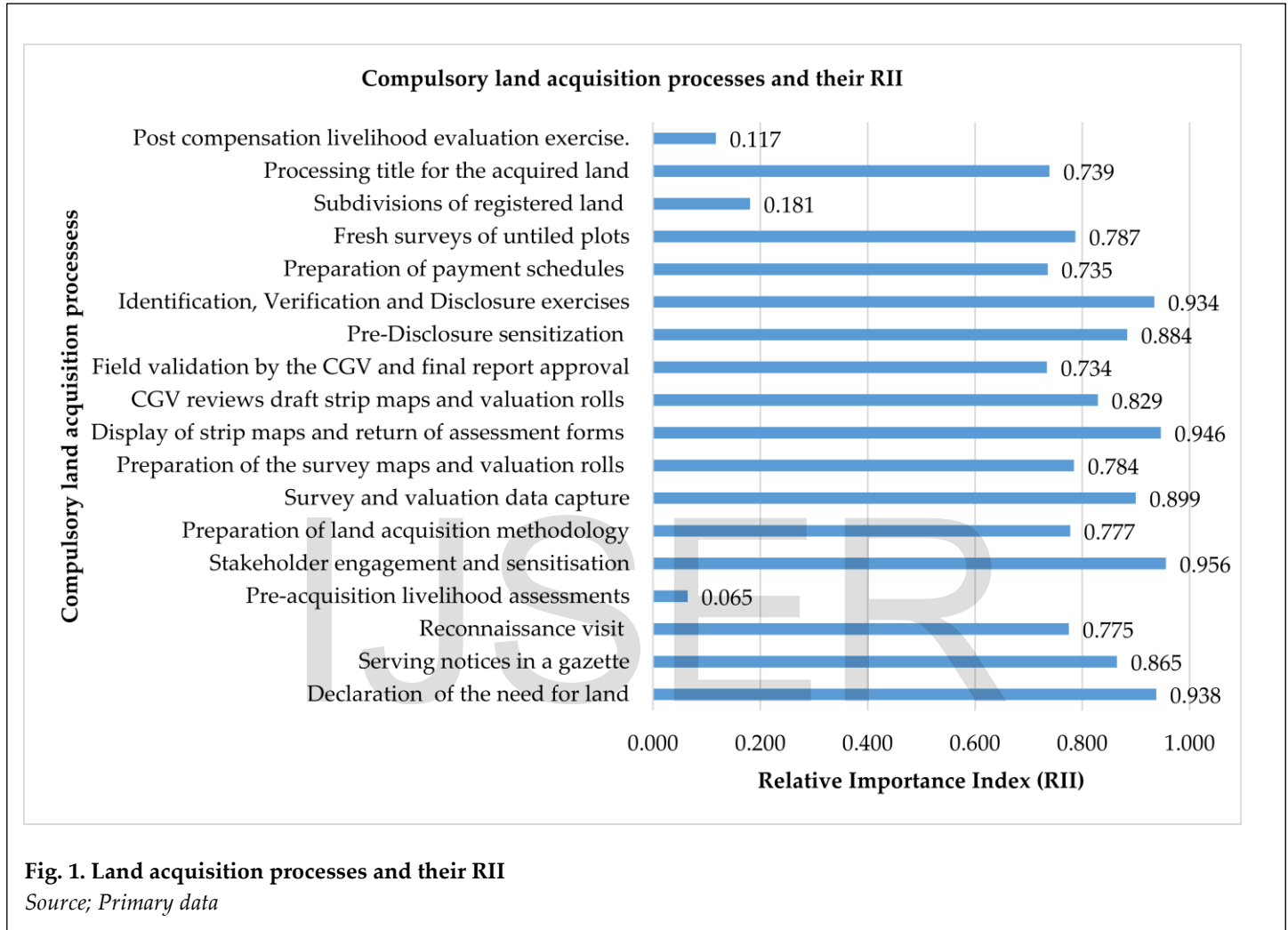
### 4.1 Compulsory land acquisition processes

The study evaluated 18 land acquisition processes using RII and the summary of the findings is presented in Fig. 1. The findings revealed that were pre-acquisition and resettlement livelihood assessments ( $RII = 0.065$ ); post compensation and resettlement livelihood evaluation exercise ( $RII = 0.117$ ); and subdivisions of registered land ( $RII = 0.181$ ) were not significant in the land acquisition processes since they returned RII values below the mean average RII of 0.719 of the overall processes. Whilst stakeholder engagement and sensitization ( $RII = 0.956$ ); display of strip maps and return of assessment forms ( $RII = 0.946$ ); declaration of the need for the land ( $0.938$ ); identification, verification and disclosure exercises ( $RII = 0.934$ ); and survey and valuation data capture ( $RII = 0.899$ ) yielded high RII values. This means that they are critical success factors in compulsory land acquisition processes and campaigns from Ugandan context.

The findings further revealed that the existing legal framework for compulsory land acquisition, particularly with respect to prior and effective compensation of land owners

before takeover of the land by Government implementing agency was adequate enough. This explains the reason why the citizens with the support of civil societies and non-governmental organization dealing on citizen land rights have of recent taken on a massive country-wide campaign of

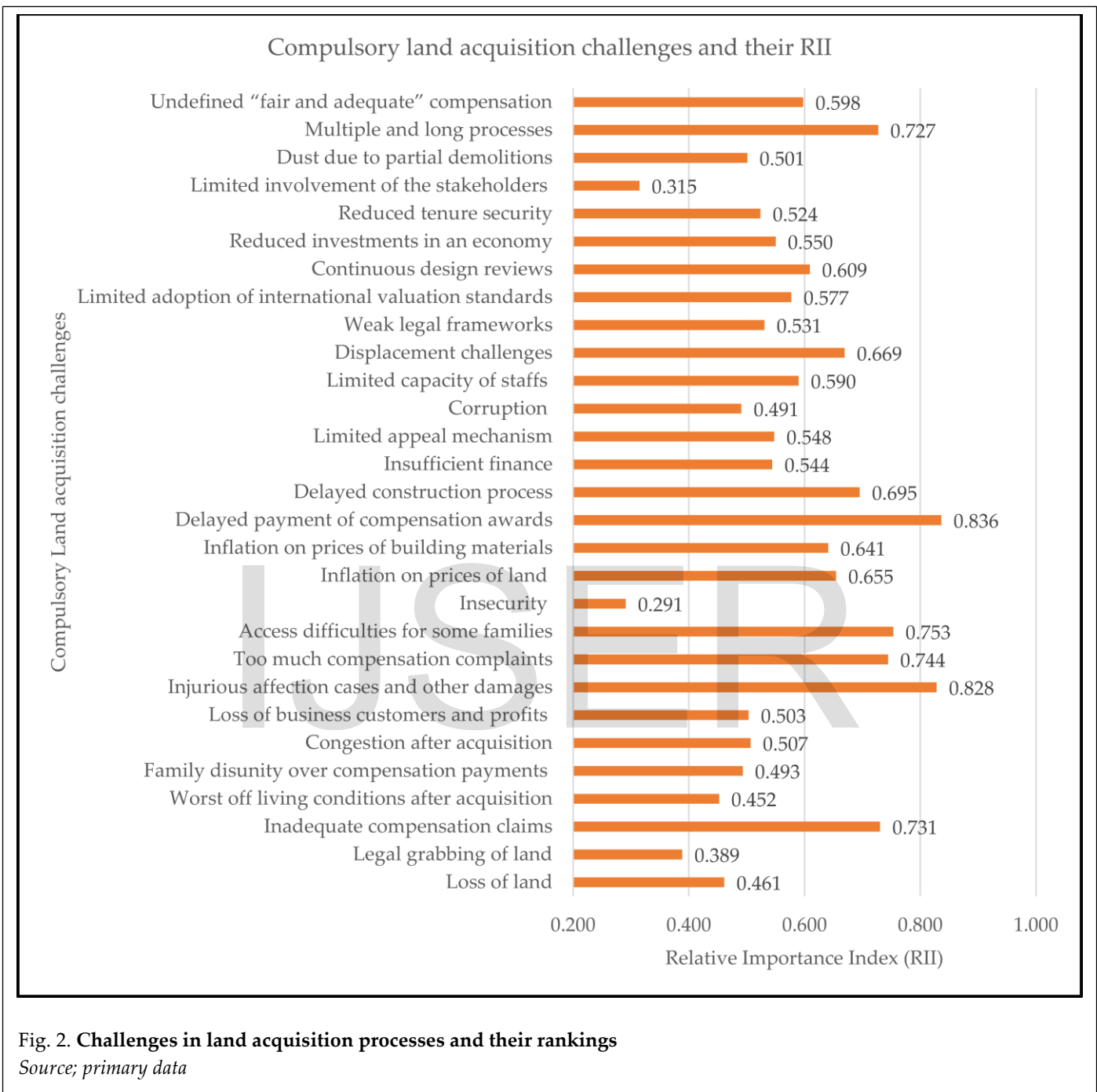
resisting the Government's proposal of taking possession of the land prior to effective compensation in the event of a disagreement on the compensation value that has been proposed in the new amendment of the law.



#### 4.2 Challenges in land acquisition processes

The study examined a total of 29 challenges associated with land acquisition processes in Uganda drawn from the reviewed literature and gauged to the Ugandan context. This was meant to determine their individual and aggregate impact to delays in the land processes. The summary of the findings presented in Fig. 2 reveal that: delayed compensation awards (RII = 0.836); injurious affection cases and other damages (RII = 0.828); and access difficulties for families (RII = 0.753) presented the highest land acquisition challenges in

Uganda. From the findings, it can be observed that insecurity (RII = 0.291); limited involvement of the stakeholders (RII = 0.315); and legal grabbing of land (RII = 0.389) offered limited challenges to compulsory land acquisition. This could probably be explained in the perspective of individual actions rather than government led initiatives, although the results associated with limited stakeholder participation seemed to contradict the findings on the ingredients for successful compulsory land acquisition processes that observed it as a critical success factor.



#### 4.3 Gaps in compulsory land acquisition guiding legal framework

The study also sought to identify gaps in the legal and regulatory framework governing compulsory land acquisition in Uganda. The findings presented in Table 2 reveal a total of 12 key gaps that the respondents envisaged are critical and require attention so as to help improve the existing legal

framework. The identified gaps range from unclear definition of what constitute prompt, fair and adequate compensation, issues associated with compensation awards to discontented affected families, limited and/or no provision to cater for inflation particularly with respect to delayed compensation as a result of undue bureaucratic procedures that stretches for long periods after the completion of the valuation process.



Others include limited provision of the road reserve width in the Roads Act that provides for only a 50 feet corridor, which has proved to be inadequate in the current circumstances of increased vehicular traffic and associated road infrastructure that are required to enhance road user safety. This has

increased the compensation costs because of the developments along the road corridor that has to be demolished to pave way for further expansion of the road over and above the gazette 50 feet requirement.

TABLE 2  
GAPS IN COMPULSORY LAND ACQUISITION GUIDING LEGAL FRAMEWORKS IN UGANDA

S/No	Identified gaps in the legal frameworks guiding compulsory land acquisition in Uganda
1	No clear definition of prompt, fair and adequate compensation
2	The discontented affected person is not awarded any compensation until disputes resolved
3	No clarity on the meaning and extent of "other kind of relocation assistance"
4	No court related subsidy provided for the aggrieved project affected persons
5	No separate special court created to handle cases of compulsory land acquisition
6	No distinction made in the law based on gender, age and or ethnic origin during compensation which triggers family disputes
7	There is no obvious provision for baseline information gathering and socio-economic surveys
8	The law is more focused on cash-based compensation and thus ignores land-based resettlement
9	No provision to cater for inflation on prices on peripheral land and building materials
10	The Roads Act only limits the extent of road reserve to fifty feet hampering the future requirement for roads expansion
11	There is no provision to cater for interest of persons who have predominantly occupied the reserve lands
12	Unconsolidated laws

Source; primary data

#### 4.4 Strategies for addressing compulsory land acquisition challenges

The study evaluated a total of 18 strategies as presented in Fig. 3 and drawn from previous interventions proposed several nations and examined their feasibility to Uganda's context. The findings reveal that the top feasible strategies in the Ugandan context in order of relevance include: regular involvement with the affected persons/stakeholders (RII =

0.971); followed by definition of fair and adequate compensation (RII = 0.953); and dialoguing with the affected persons (RII = 0.908) respectively. Findings also revealed that the least feasible strategies include: amendment of the legal framework (RII = 0.408); adoption of international standards on valuation (RII = 0.599); and physical resettlement of affected persons (RII = 0.657) respectively.

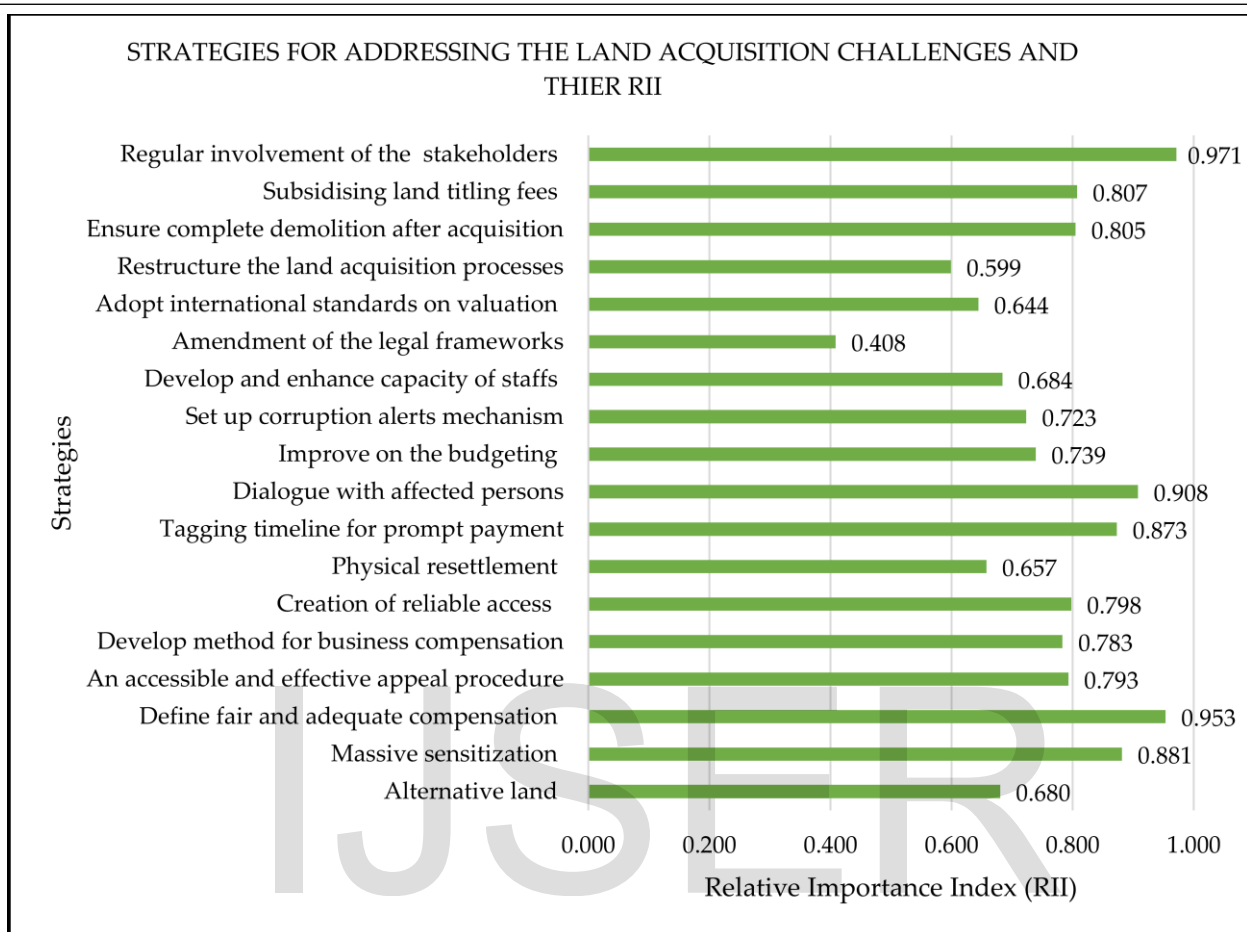


Fig. 3. Strategies for addressing the land acquisition challenges and their RII  
Source; primary data

## 5 DISCUSSIONS

### 5.1 Compulsory land acquisition processes in Uganda

A total of 18 land acquisition processes were evaluated by their relevancies in the overall land acquisition processes and from the study, the responses were coded and analysed and the RII computed. The study revealed that, Pre-acquisition and resettlement livelihood assessments, Subdivisions of registered land and Post compensation and resettlement livelihood evaluation exercise were not relevant in the land acquisition processes as their RII fell way below the mean average RII of 0.719 of the overall processes.

The study in establishing the extent of process implementation also revealed that, little had been done regarding pre-acquisition and post compensation livelihood

evaluation studies to enable understanding as to whether the affected persons by the road construction projected has been left worse off or with a better state of living as required by the legal frameworks. The limited involvement in sub-divisions of registered land could be due to the limited number of titled land parcels in the country.

### 5.2 Challenges in compulsory land acquisition in Uganda

A total of 29 challenges in land acquisition processes were established and evaluated to determine which challenges have the greatest impact on the delays in the land acquisition processes. The challenges were coded, analysed and the RII for each computed, with delayed compensation awards the topmost ranked and thus a major challenge causing delays in

land acquisition processes with a RII of 0.881 while insecurity ranked lowest with a RII of 0.307.

The study established that, delayed payment of compensation awards (RII=0.881), injurious affection cases and other damages (RII=0.873), access difficulties for some families (RII=0.794), too much compensation complaints (RII=0.784) and inadequate compensation claims were the top five most significant challenges that causes delays in compulsory land acquisition and therefore affecting the performance of road construction projects in Uganda. The least significant challenges affecting the performance of road construction projects include insecurity concerns (RII=0.307), delayed construction process (RII=0.332), conceptualising compulsory land acquisition as a legal grabbing of land (RII=0.410), worst off leaving condition after acquisition (RII=0.477) and loss of land by the affected persons (RII=0.486). The higher the RII value, the more significant the challenge and therefore the more effect it has on the performance of road construction projects.

The findings of this study are in close agreement with [28] in Tanzania which established that, inadequate compensations, non-adherence to the laws, unfavourable resettlement practices, use of force by governments and acquiring authorities in making PAPs accept compensation, and lack of PAPs' involvement in the acquisition processes were the most critical sources of discontent, all these challenges delays land acquisition and therefore negatively impact on the performance of road construction projects as the contractor cannot be given access to commence civil works.

Based on the interviews conducted, much as 96% of the respondents indicated that the land acquisition delays affect the performance of roads construction projects, 100% responses indicate that the challenges in the land acquisition processes can be overcome. This therefore recognises that the challenges faced can be addressed and the land acquisition processes fastened to avail land to the contractor on time to execute civil works.



Fig. 4. Section of road where the contractor was blocked from working work at chainage 1+970-2+200  
*Source; primary data*

### 5.3 Compulsory land acquisition guiding legal frameworks in Uganda

The various land acquisition guiding legal frameworks in Uganda were reviewed and notably, several gaps such as unclear definition of prompt, fair and adequate compensation amongst others existed that need to be addressed. Further,

interviews were conducted using the structured interview guides and whereas about 84% indicated their awareness of the processes of land acquisition, about 96% responded that the processes are in line with the set legal frameworks and therefore showing no need to review the legal frameworks. The respondents feared that review of the legal frameworks

would cause tenure insecurity and corruption tendencies amongst other concerns, “the legal frameworks are satisfactory but it is the implementation which is a problem, so if reviewed we fear to lose our rights to land”, one of the local leaders asserted.

While the constitution of the Republic of Uganda guarantees the ownership of land and reaffirms that land belongs to the people, there is however need to ensure that any government intervention on compulsory land acquisition should be based on robust legal framework that protects the rights of the land owners and their livelihoods. The avail legal regime supporting the acquisition process should enhance the livelihoods of the PAPs and avoid making them more deplorable with the new infrastructure developed than they were before the development of the road infrastructure. The attempts by the government of Uganda to review the existing land acquisition legal framework to give government an upper hand in the compensation process has caused resentment among the citizens and viewed as a land grabbing strategy. This position is consistent with the findings of a study conducted in Ghana by Asamoah [3], who observed that the cumulative effect of the exercise of compulsory acquisition powers over the years has been increasing resentment against the state, especially among the rural communities where insecurity of tenure is high.

#### **5.4 Feasible solutions to the challenges in compulsory land acquisition in Uganda**

A total of 18 strategies to address the land acquisition challenges drawn from literatures worldwide were assessed to evaluate the most feasible one and from the study, the coded responses were analysed and the RII of the various strategies computed. The strategy with the highest RII of 0.971 i.e. Regular involvement and dialoguing with the affected persons/stakeholders has been evaluated as the most feasible one with the least ranked being “the need to amend the legal frameworks to allow for construction works in the event of discontent by the affected persons” with a RII of 0.408.

Furthermore, interviews were conducted using the structured interview guides among the local leaders, project engineers, consultants and project managers and resultantly, the top five key strategic approaches to addressing the land acquisition challenges summarised were; regular engagement and dialoguing with the affected persons (RII=0.971), proper definition and assessment of fair and adequate compensation (RII=0.953), dialogue with affected persons to allow

construction progress (RII=0.908), massive sensitization on the need for compulsory land acquisition (RII=0.881) and ensuring prompt payment of compensation awards by tagging timeline (RII=0.873). The least significant feasible strategies in addressing the land acquisition challenges were; amendment of the legal frameworks to allow for construction works in the event of discontent by the affected persons (RII=0.408), the need to restructure the land acquisition processes (RII=0.599) and the need for adoption of international standards on valuation for compensation (RII=0.644). The higher the RII value, the more feasible the strategy is in addressing the challenges in compulsory land acquisition and therefore different stakeholders in the land acquisition process should adopt them to ensure that the performance of road construction projects in Uganda is enhanced through timely project completion and reduced cost such as in claims for idle machines.

An analysis was carried out to establish the relationship between the land acquisition process implementation, the land acquisition challenges, the feasible strategies and the road construction project performance as shown in Fig. 8. The study revealed that, the land acquisition process implementations, land acquisition challenges and the various feasible strategies affects the performance of road construction projects as reflected by the positive gradient of linear equations and  $R^2$  values of 0.951, 0.948 and 0.923 for the processes, challenges and feasible strategies respectively as shown in the Figures 5 to 8. The high  $R^2$  values showed that there is a very strong relationship between the land acquisition processes implementation, land acquisition challenges, feasible strategies and the road construction project performance.

#### **5.5 Effect of compulsory land acquisition processes on the performance of road construction projects**

The study evaluated the effect of compulsory land acquisition processes on the performance of road construction projects in Uganda. The findings of the study reveal a positive correlation between land acquisition process and construction performance as shown in Fig. 5. The observations of Fig. 5 shows that addressing the critical aspects of the acquisition processes enhances construction project performance, and vice versa, and this resonates with the findings of Rao, et al. [4] who contends that successful implementation of infrastructure projects are premised on ameliorating the bottlenecks in the compulsory land acquisition processes.

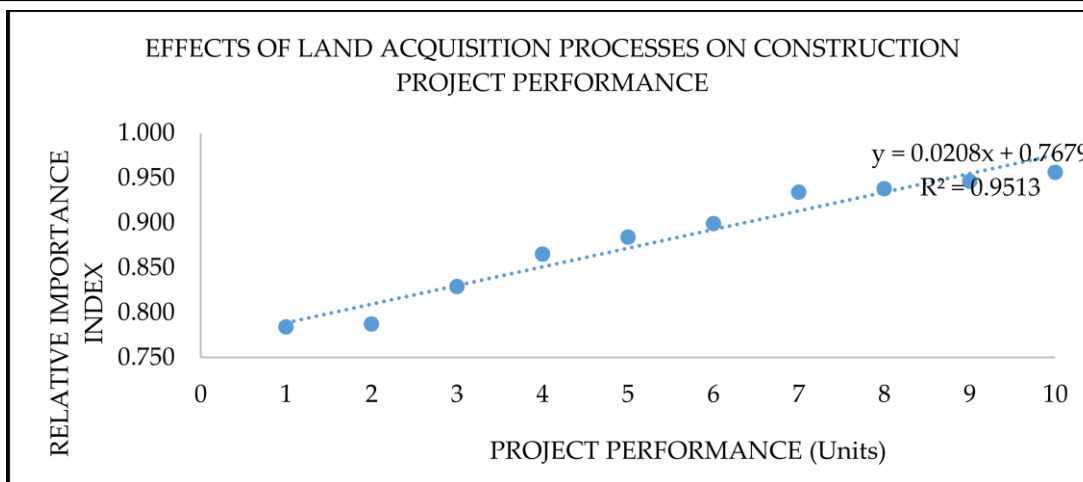


Fig. 5. Effects of land acquisition process on construction project performance  
Source; Primary data

### 5.6 Effect of compulsory land acquisition challenges on the performance of road construction projects

The study evaluated the effect of compulsory land acquisition challenges on the performance of road construction projects in Uganda. The study revealed a positive correlation and observed that the more the critical challenges are addressed, the better the road construction performance as shown in Fig. 6. Critical challenges like prompt, adequate and acceptable

compensation enables faster relocation and resettlement of the PAPs, hence permitting early release of the land for infrastructure development on a timely basis. This timely approach is advocated for by the IVSC [21], that observes that consideration must be given to the relevant and appropriate while ensuring that the economic principles of price equilibrium, anticipation of benefits or substitution are adhered to, based on market, income and cost approaches.

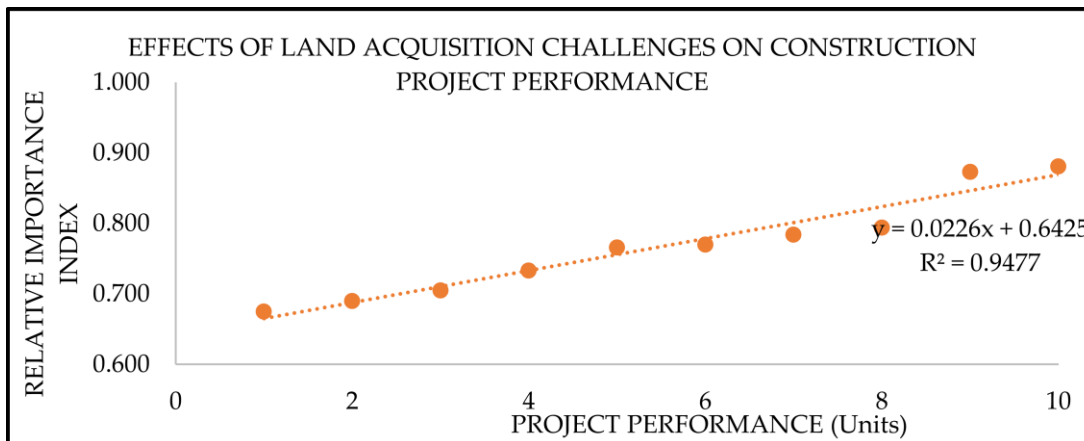


Fig. 6. Effects of land acquisition challenges on construction project performance  
Source; Primary data

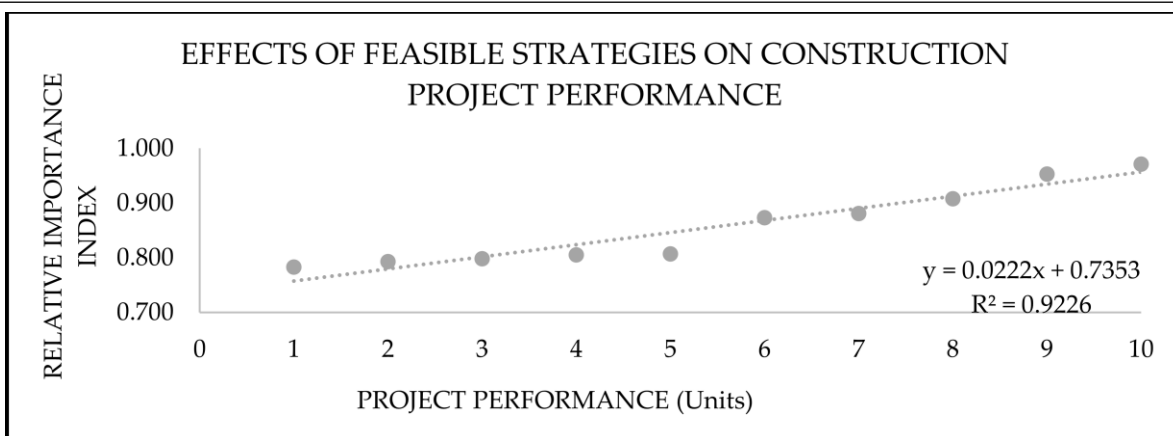


Fig. 7. Effects of land acquisition feasible solutions to challenges on construction project performance  
Source; Primary data

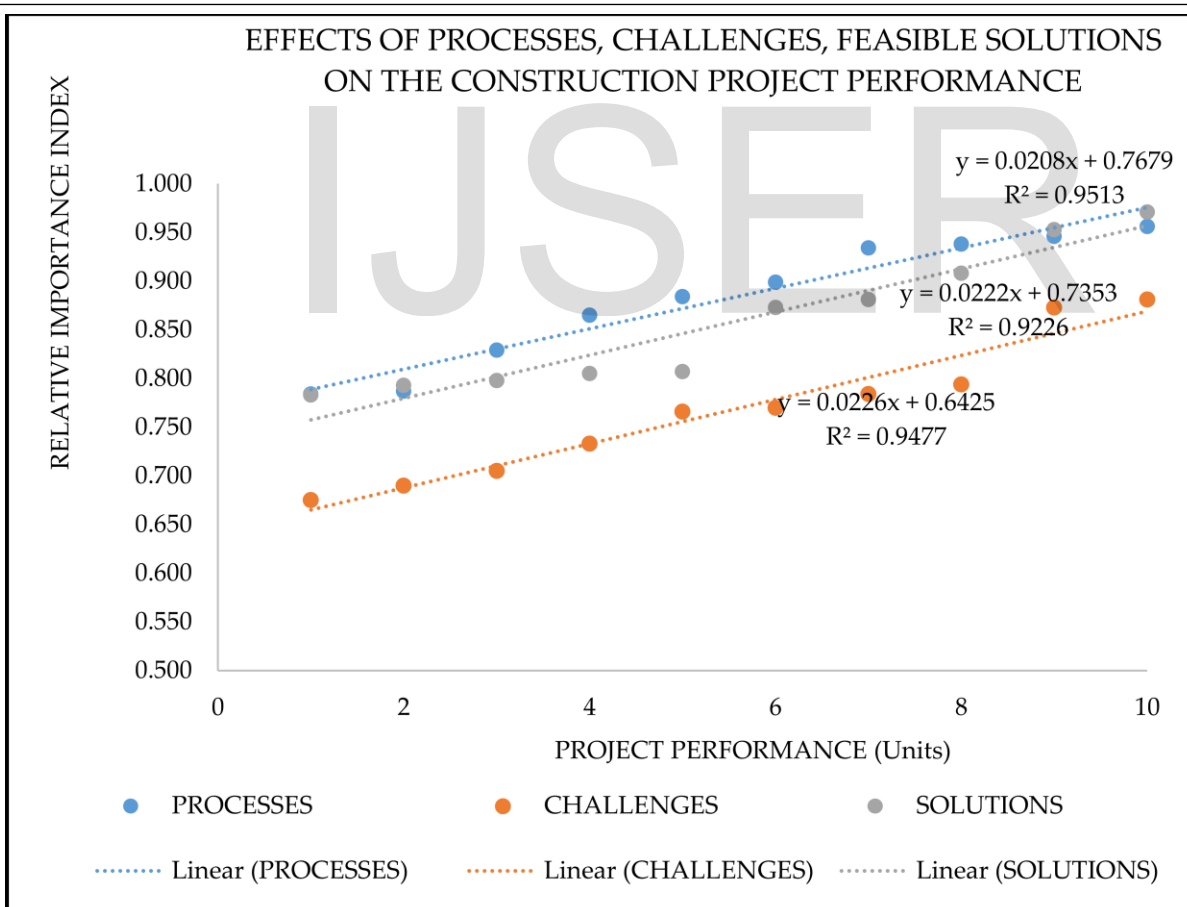


Fig. 8. Effects of land acquisition processes, challenges, feasible solutions to challenges on construction project performance  
Source; Primary data

### 5.7 Regression analysis

An analysis to determine the source of variations was carried out at 95% confidence level and the analysis reveal that, there is a very high statistical variation significance within the variables since the p-value is much below 0.05 as shown in the ANOVA output Tables 3 & 4. Additionally, since F

calculated (Value=25.34) is greater than the F critical (value = 2.866), it shows that the overall regression model was significant. Conversely, if the significance value of F (4.348E-07) was larger than 0.05 then the independent variables would not explain the variation in the dependent variable.

TABLE 3  
ANOVA FOR SOURCE OF VARIATION

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	174.4096694	3	58.13655646	25.34366902	5.43844E-09	2.866265551
Within Groups	82.58141433	36	2.293928176			
Total	256.9910837	39				

Source; Primary data

TABLE 4  
ANOVA FOR SIGNIFICANCE

	df	SS	MS	F	Significance F
Regression	3	82.01817832	27.33939277	340.4503469	4.34802E-07
Residual	6	0.481821676	0.080303613		
Total	9	82.5			

Source; Primary data

A regression model for the statistical significance comparison between the land acquisition processes, the challenges and feasible solution was developed and presented using the multiple comparisons in Table 5. The findings indicate that

the land acquisition challenges are insignificant in the overall regression model since the p-value is greater than the recommended 0.05.

TABLE 5  
TWO-WAY ANOVA REGRESSION MODEL

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-33.732119	1.463229026	-23.0532052	4.36632E-07	-37.31251145	-30.15172656
PROCESSES	23.34927883	3.896012709	5.993121834	0.000970357	13.81607916	32.8824785
CHALLENGES	9.720424242	5.327454904	1.824590619	0.117868271	-3.315388298	22.75623678
SOLUTIONS	13.0387865	4.504701546	2.894483988	0.02753192	2.016178897	24.06139409

Source; Primary data

From the above regression findings, the substitution of the regression formula;  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$  becomes,  
 $Y = -33.732 + 23.349X_1 + 9.720X_2 + 13.039X_3 + \epsilon$  (3)

Where; Y is the dependent variable (performance of road construction projects),  $X_1$  is the land acquisition processes,  $X_2$



is land acquisition challenges,  $X_3$  is solutions to the land acquisition challenges and  $\varepsilon$  is the error term.

Based on the above equation, when we take all the independent variables factors constant at zero, the performance of road construction projects will be -33.732. The data summary also shows that, for every unit increase in each of the independent variables, there's an expected 12.876 increase in the performance of road construction projects. The land acquisition processes has the highest influence on the performance with a coefficient of 23.349 followed by challenges with a coefficient of 9.720 and finally Solutions with coefficient of 13.924 implying that more focus should be given to the faster implementation of the highly relevant land

acquisition processes (Fig. 1.) for a more enhanced road construction project performance.

### 5.8 Correlation Analysis

A 2-Tailed correlation analysis at 0.01 significance level was carried out between the land acquisition processes, challenges, the feasible solutions and the construction project performance as presented in Table 6. The study established that, there exist a very strong positive connection between the land acquisition processes, challenges and feasible solutions thus indicating that, there exist challenges in the land acquisition processes implementation that can be solved to enhance performance of the road construction projects.

TABLE 6  
CORRELATION ANALYSIS

		PERFORMANCE	PROCESSES	CHALLENGES	SOLUTIONS
PERFORMANCE	Pearson Correlation	1			
PROCESSES	Pearson Correlation	0.975359341	1		
CHALLENGES	Pearson Correlation	0.973511964	0.926049678	1	
SOLUTIONS	Pearson Correlation	0.960525818	0.892960821	0.953499132	1
Correlation is significant at the 0.01 level (2-Tailed).					

Source; primary data

## 6 CONCLUSIONS

Traditional project management practice emphasises addressing three major constraints to project success; cost, time and quality. Land acquisition delays which has time and cost implications on road construction project is one of the major factors causing delays in the overall construction projects and whereas delays in land acquisition processes are inevitable, measures can be put to minimise them when the challenges are evaluated for their level of significance and feasible solutions in addressing the challenges analysed for the their level of positive impact in curbing the challenges to enable progress of road construction projects.

The general objective of the study was to assess the challenges and effects of delays in compulsory land acquisition on the performance of road construction projects in Uganda. Using Mbale-Bumbobi-Bubulo-Lwakhakha Road as a case study area, four objectives were investigated based on field data collected and the relevant literatures reviewed. The study generally established that delays in compulsory land acquisition, which is one of the causes of cost claims by the contractors negatively impacts on the construction time

and cost that is, the more the delays in handing over land to the contractor, the more time the construction processes are deferred with consequential claims by the project contractors for idle machine due to non-performance of civil works. The claimable amounts per day due to land acquisition challenges work delays averages 30% of 0.05% of the total accepted contract sum.

### 6.1 Conclusions on compulsory land acquisition processes

From the study findings, the following conclusions can be drawn regarding the land acquisition processes in Uganda.

- There is great awareness of the public about the processes of land acquisition for road construction projects in Uganda.
- The land acquisition processes are in line with the set legal frameworks and therefore no need to review.
- The land acquisition processes are too long and therefore, implementations of the overall processes take time and thus delays in land acquisition and civil works for road construction projects.



- Some of the land acquisition processes are insignificant for example pre-acquisition and resettlement livelihood assessments, subdivisions of registered land and post compensation and resettlement livelihood evaluation exercise.

## 6.2 Conclusions on compulsory land acquisition legal frameworks

From the study findings, the following conclusions can be drawn regarding the land acquisition legal framework in Uganda.

- There are significant loopholes in the legal framework that need to be clearly resolved for example a clear definition of what constitute prompt, fair and adequate compensation and this has resulted into baseless claims of undervaluation claims causing delays in compulsory land acquisition.
- The land acquisition legal framework is not consolidated, with so many Acts in place influencing the land acquisition procedures.
- There is no amount whatsoever awarded to a discontented person to enable relocation as court takes effect to enable access to land by the contractor for civil works.
- There are no special established cost-effective court procedures to handle cases of discontented project affected persons which causes delays in litigations and thus delaying access to land by the contractors.

## 6.3 Conclusions on challenges in compulsory land acquisition

From the study findings, the following conclusions can be drawn regarding the land acquisition challenges in Uganda.

- There are various challenges experienced in the land acquisition processes which causes delays.
- The various challenges have different levels of significance based on the RII computed and therefore, challenges with higher RII are more significant in causing land acquisition delays and thus affecting the performance of road construction projects in Uganda.
- The land acquisition challenges can be minimised, and land availed to the contractor for civil works and this enhances the performance of road construction projects in Uganda.

## 6.4 Conclusion on feasible solutions to land acquisition challenges

From the study findings, the following conclusions can be drawn regarding the feasible solutions to land acquisition challenges in Uganda.

- There are various mitigation measures that can be adopted to address the challenges in the land acquisition processes.
- The various mitigation measures have different levels of significance based on the RII computed and therefore, feasible solutions with higher RII are more significant in addressing land acquisition challenges to enhance the performance of road construction projects in Uganda.

## 7 GENERAL RECOMMENDATIONS

From the study findings and conclusions, the land acquisition processes should not be reviewed but rather timely implemented, more focus should be on addressing the most severe and highly ranked challenges through adoption of the highly ranked feasible strategies and these would greatly enhance the performance of the road construction projects through reduced project cost and time.

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