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FINANCING MODALITIES IN LAND ACQUISITION AND AGGREGATION PRACTICES FOR URBAN DEVELOPMENT PROJECTS IN TANZANIA

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ABSTRACT

Land acquisition and aggregation are essential for urban development projects and sustainable land use planning. To achieve this, it is important to have appropriate funding methods for land acquisition to avoid obstacles caused by displacement. There are various financing options for compulsory land acquisition and aggregation, but the ideal one depends on the specific land gap that needs to be filled. Choosing the right financing method is crucial to ensure the project's success and avoid negative impacts on the affected individuals and overall development goals. This research examines how different financing methods used in land acquisition and aggregation affect the success of urban development projects in Dar es Salaam city. Data from 11 land acquisition projects and 179 respondents based on a survey questionnaire were analysed to identify contributing factors to project success. The analysis was done through descriptive statistics and a binary logistic regression model. Findings suggest that equity and partner contribution financing, effectively bridge the funding gap for land acquisition and aggregation projects. Private entities often use them as they increase the likelihood of success, but such approaches need to be complemented with expropriation, whether through local or central government. By leveraging both these modalities, projects can be adequately funded and completed as planned.

Keywords: Land acquisition, Financing methods, Project success, Community

INTRODUCTION

Land acquisition is an important tool for urban development. It provides land for developmental purposes such as construction of roads, dams and irrigation canals, establishing manufacturing industries and urban development (Cernea, 2008). In Africa, the demand for land to develop public facilities and infrastructures that ensure safety and security, health and welfare, as well as social and economic enhancement of the community has been on the rise in major cities (Alemu, 2012). The concept of "public interest", though controversial, has often been used to justify Compulsory Land Acquisition (CLA) for projects across the globe. It is also called "aversion from private ownership titles" (Meckelburg and Wardana, 2024).

CLA is usually guided by laws whereby different countries have different legislations governing the process. In Tanzania, CLA is guided by legislation such as The Land Act of 1999, The Land Acquisition Act of 1967, Valuation and Valuers Registration Act, 2026 and the Urban Planning Act of 2007. These acts empower the President of the United Republic of Tanzania to compulsorily acquire land for public use or interest with fair and prompt compensation to the displaced population (Kombe, 2010; Kusiluka, et al, 2011). Likewise, privately implemented urban developments are implemented through land purchase and land assembly or pooling technique (Alemu, 2012). Pooling encompasses the accumulation of land from numerous owners for large-scale development or provision of public services such as roads and lots to accommodate public amenities such as hospitals, religious buildings and schools (Mittal, 2013; Wekwete, 2014).

Urban development may include creating new settlements, expanding existing infrastructures, environmental protection treatment facilities,

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physical infrastructure such as roads, water and electricity supply networks and industrial investments (Lamerdi, Nazmfar, and Masoumi, 2015). All these investments require a large amount of money for clearing the rights of people on the land to be acquired and for putting up the needed new infrastructural facilities. Therefore, efforts of embarking on significant sustainable urban development require guaranteeing appropriate financing modalities for land acquisition so that the resettlements do not become a constraint to much-needed urban development (Ding, 2007). In practice, there are a number of financing modalities available for both compulsory land acquisition and land aggregation practices including paying compensation to the project affected persons such as budgetary allocation, non-financial compensation, debt financing, equity financing, and voluntary contribution (Farrin et al, 2021). Budgetary allocation involves revenue generation at the local level, which may be accompanied by urban sprawl as local authorities prioritize land allocation for high-return investments while neglecting residential land uses (Yu & Zhou, 2024). Hence, the choice of a good financing modality is key to a successful land acquisition project Ndjovu, 2016; Cernea, 2008).

In Tanzania, land acquisition is mainly financed through budgeted funds from the government or through donor funding despite the availability of many other options that could yield better urban development outcomes (Ndjovu, 2016; Alananga et al, 2020). Literature, on the other hand, pays little attention on how different financing modalities adopted during land acquisition practices affect the level of urban development. The practical gap of selection of the financing modalities has prompted this study to answer the key question on how does financing modalities in land acquisition affect the intended urban development. This paper bridge the knowledge gap on how various means and procedures adopted by the government in financing land acquisition projects in Tanzania and how they affect the implementation of the project while revealing strengths and weaknesses embodied in available financing modalities for effective urban expansion and development projects.

BRIEF LITERATURE REVIEW

Land for Urban development

Urban development include creation of new settlements, expanding the existing infrastructures, environmental protections and industrial investments (Lamerdi et al, 2015). Land acquisition serves as the foundational stage for successful urban development by securing the necessary land to integrate both essential social infrastructure and key developmental projects. For instance, developers can incorporate minimum social facilities such as libraries, firehouses, and wastewater and sewage treatment plants (Attakora-Amaniampong, 2006; Alananga et al, 2020; Wekwete, 2014; Asian Development Bank, 2008) once the land has been acquired. This arrangement of obtaining land not only facilitates the establishment of such community amenities but also enables the construction of critical infrastructural developments ranging from road networks and dams to irrigation canals and manufacturing industries which are indispensable for urban growth (Cernea, 2008).

The acquisition of land for urban development may comprise as simple a process as getting land free of charge from the community or donor agent to complex steps involved in compulsory purchase by the government (Raghuram et al, 2009). Alternatively, land may be acquired through private market purchase. Private initiated urban development is often carried out on land acquired through land assembly or pooling technique (Alemu, 2012). Pooling involves the assemblage of land from contagious multiple owners for large scale development or public facilities such as roads and lots to accommodate public amenities while planning for a coherent larger-scale future development (Mittal, 2013; Farrin et al, 2021). It may involve incorporating existing land owners as partners in the future development of the land (Singh, 2011; Babatunde, et al, 2017).

On the other hand, land assembly is the assembly of multiple individually-owned parcels into one larger, singly-owned parcel (Brooks and Lutz, 2011). Both the private and public sectors can carry out land assembly. In private taking, the government is simply a middleman and it can be done be through open tendering (Bell, 2009). The

private land assembly would allow for social welfare because the landowners would not sell unless the assembly surplus exceeded the owners' valuations of their properties (Heller and Hills, 2008). Owners' valuation may include a sentimental attachment to the land or special adaptations to the particular site that generates producer or consumer surplus for the landowner. The estimates as provided by the European commission states that the cost for land acquisition only range between 0–30% of the total project cost. Land acquisition projects for Motorway per km being on the highest side, followed by public buildings (15,000m^2) and power station each one accounting for between 0-10% of the total project cost (Ministry of Finance, Planning and Economic Development (Uganda), 2015).

Financing modalities in compulsory land acquisition and aggregation practices

Availability of financial resources for urban development is one of the significant challenges facing urban authorities in developing countries. The demand for services has increased but many urban authorities fail to meet it due to resource constraints. A number of financing modalities as discussed below are available for land acquisition.

Budgetary allocation is applicable where the government uses budgetary allocation to assign funds from its budget for different purposes, such as acquiring land that is compulsory for public use (Wekwete, 2014). To cover the expenses associated with acquiring land, the government sets apart a portion of its budget. These expenses may include compensating landowners, administrative costs, legal fees, and necessary infrastructure development. The specific amount allocated for land acquisition depends on the government's priorities, available resources, and the scope of the project. This option can also be conducted with some public-private partnership (Kurdi and Syafitri, 2024; Appiagyei Nkyi, 2013). ***Debt financing*** is applicable when governments or authorized entities need to acquire land for public purposes, they may choose to utilize debt financing as a funding mechanism. This involves borrowing the necessary funds to cover the costs of compulsory land acquisition, in this regard land is commodified just like any other commodity in the marketplace (Baliga, 2024). ***Equity financing*** is relevant when an entity decides to use its own money to finance acquisition of land aggregation. This could be facilitated via voluntary contribution of money of land (Mugisha et al, 2023). Despite of the many options to fund land acquisition for local development initiatives, the choice of these methods has an impact on the acquisition process and the intended development.

A theoretical Perspective on land financing modalities

The Pecking Order Theory of Capital Structure explains the hierarchical approach to financing, prioritizing internal funds, debt, and new equity due to information asymmetry (Myers, 2003). Issuing equity signals overvaluation, potentially weakening investor confidence, whereas debt issuance suggests profitability, encouraging firms to prioritize it over equity. Applying this framework to land acquisition, financing options are ranked as budgetary allocation, Non-Financial Compensation (NFC), debt, and equity, reflecting concerns over affordability, governance, and sustainability. Budgetary allocation remains the primary financing mechanism, particularly for projects serving the public interest (Sarzin & Raich, 2012). However, financial constraints tied to domestic tax revenues often cause delays, necessitating alternative financing approaches to reduce dependence on inconsistent government budgets. NFC offers a viable alternative where affected landowners receive property rights they can use or transfer instead of financial compensation (Spaans et al., 2010). Governments create new property rights as compensation, serving both as a restitution mechanism and a spatial planning tool. NFC can be categorized into single-purpose NFC, which compensates landowners, and multi-purpose NFC which integrates compensation with broader urban development objectives. This method mitigates financial mismanagement among recipients and ensures sustainable urban development, making it particularly suitable where direct financial compensation is impractical.

Debt financing is another mechanism for land acquisition, but it is often constrained by lenders' reluctance to finance raw land due to its non-income-generating nature and legal complexities. Alternative debt instruments such as purchase

money mortgages, option financing, rolling options, and subdivision trusts are more common in developed economies. Additionally, benefit-sharing mechanisms, including direct revenue transfers, revolving development funds, equity sharing, and special taxes, provide further financing options (Cernea, 2008). In some cases, land is secured through voluntary community contributions, either in cash or land (Komu, 2014; Mugisha et al., 2023). These strategies emphasize the necessity for innovative and sustainable financing approaches in land acquisition and resettlement.

THE CONCEPTUAL FRAMEWORK

Figure 1 presents a schematic representation of the key concepts and their interrelationships as examined in this study. The framework highlights on the role of financing modalities in facilitating urban development, emphasizing the impact of different funding sources on effective project implementation. The study first explores the nature of urban land development projects in Tanzania and the interconnections between various types of development within the same urban setting. Understanding these relationships is crucial for fostering a coherent and sustainable urban system. Secondly, financing modalities are analyzed to determine their effectiveness in supporting land acquisition and urban development, particularly in the context of financial constraints faced by cities in the Global South.

The reliance on budgetary allocations as a primary funding source for land acquisition has been widely observed, but challenges such as delays and inadequate resources limit its effectiveness. To address this, alternative financing mechanisms, such as equity and loans, are increasingly being explored. The Tanzanian government, recognizing the need for diversified financing, has reinstated the Land Development Revolving Fund, allocating 15.4 billion shillings in 2024, alongside 1 billion shillings to support planning, surveying, and titling at the local government level (Wizara ya Ardhi Nyumba na Maendeleo ya Makazi, 2024). While this fund is structured as a loan, past experiences indicate mixed results in repayment and project execution. As of May 15, 2024, 23.7 billion shillings had been repaid by 55 councils, with 13 councils achieving full repayment, 42 making partial repayments, and two councils failing to recover their loans entirely. Furthermore, voluntary contributions remain an additional, though unreliable financing source. Given these challenges, public-private partnerships (PPPs) offer new opportunities for financing urban land acquisition and development. However, the effectiveness of each financing approach requires in-depth examination to ensure that land development projects contribute to public infrastructure, private investments, environmental sustainability, and social infrastructure, as depicted in Figure 1.

Ultimately, ensuring sustainable urban development requires a balanced and well-structured financing approach that supports efficient land acquisition and planning activities while mitigating financial risks. Acquisition of land through voluntary contributions whether cash or land has not been intensively studied though suggested as a common approach for religious and education functions. In CLA projects, Project Affected Persons (PAPs) may be entitled to land donation from their peer provided the conditions set under the Resettlement Policy Framework (MLHHSD, 2020).

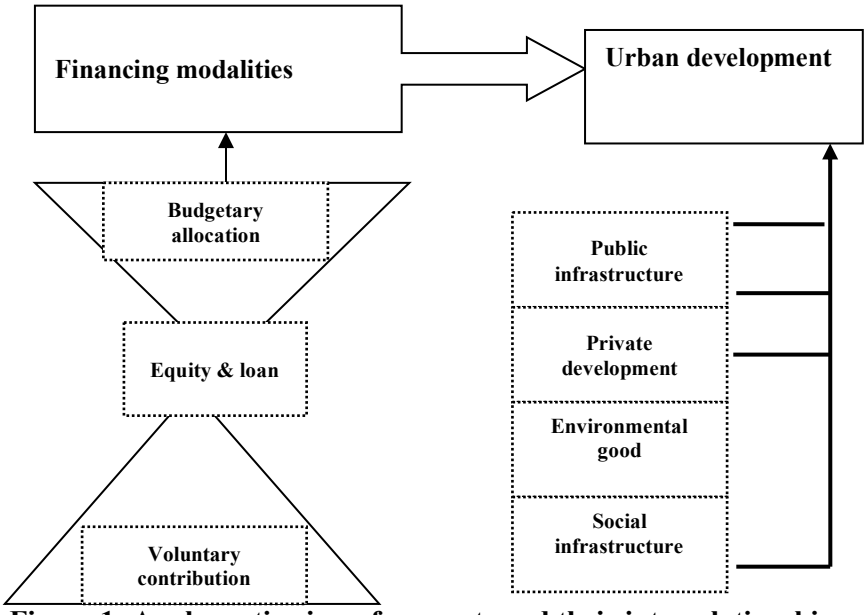

Figure 1: A schematic view of concepts and their interrelationships

RESEARCH METHODOLOGY

A combination of qualitative and quantitative methods has been used in this study. The primary data was collected through questionnaires and interviews from 179 respondents. The objective was to compare survey data with interviews and secondary data, which is why both methods were employed. Data was collected at the project level, pertaining to financing modalities in land acquisition and aggregation practices carried out between 1995 and 2015 in the Dar es Salaam city. Information was gathered on the different financing modalities for each project and the analysis of data was conducted in two phases. The initial phase included descriptive statistics to clarify the patterns and trends in financing methods and urban development. This was followed by logistic regression models to determine the factors contributing to the success of financing methods for land acquisition and aggregation projects in urban development. Binomial logistic regression models were utilized to forecast the sufficiency of financing obtained through various method.

The questionnaire was created with an introductory section that gathered personal information about the respondents and the location of the land acquisition and aggregation project. The first part of the questionnaire focused on the type of land acquisition and aggregation initiatives, while the second part focused on how the land acquisition and aggregation was being done. The third section gathered information on financing options based on institutional priorities. Table 1. describes the key variables used in collecting survey data, while Table 2 describes measurements of variables in regression models.

Table 1: Description of the core variables in the questionnaire

S/N	Questionnaire item	Description
A	**Type of Urban Development (PAP)**	
A.1	**Private**	Project intending to provide residential/commercial for individual consumption
A.2	**Public**	Project intending to provide public goods other than schools for common consumption
A.3	**Religious**	Project intending to provide religious facilities
A.4	**School**	Project intending to provide educational facilities

B	**Acquiring Authorities (Ltype)**	
B.1	Ministry of lands	The project was initiated and implemented directly by the MLHHSD
B.2	Local government	The project was initiated and implemented directly by a LGA
B.3	State agency	The project was initiated and implemented directly by a State Agency
B.4	Privately	The project was initiated and implemented directly by an individual or private firm/company
B.5	Community	The project was initiated and implemented directly by community-based organisation
B.6	Religious institutions	The project was initiated and implemented directly by a religious institution
B.7	Other authorities	The project was initiated and implemented directly by other authorities
C	**Financing Modalities (LFMode)**	
C.1	Government budget	The funding mechanisms for the project was through government budget
C.2	Own funds/equity	The funding mechanisms for the project was through own saving or equity
C.3	Domestic debt	The funding mechanisms for the project was through domestically borrowed money
C.4	Foreign debt	The funding mechanisms for the project was through externally borrowed money
C.5	Foreign grants	The funding mechanisms for the project was through foreign grants
C.6	Partners contributions	The funding mechanisms for the project was through partners' contributions
C.7	General public contributions	The funding mechanisms for the project was through voluntary public contributions
C.8	Other sources	The funding mechanisms for the project was through other sources

The success model responds to Adequacy of Land Acquisition Fund (ALAF). Similar funding modality, acquisition approach, number of affected people and purpose of land acquisition or aggregation were included in the model as summarised in Table 1. The model for the fund gap that was implemented is provided in equation 1.

$$P(ALAF)_i = \beta_0 + \beta_1 LFMod + \beta_2 PAPs + \beta_3 Ltype_i + \varepsilon_i \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Where:

$P(ALAF)_i$ is the Probability for obtaining Adequate Land Acquisition Fund for project i
$Ltype_i$ denote the type of land acquiring authority (Item B in table 1)
$LFMod$ denote the land financing mode (Item C in table 1)
$PAPs$ denote the Project Affected People (Item D in Table 2)
ε_i denote the random error terms for each observation i
$\beta_0 - \beta_3$ denote the parameters of the model to be estimated

INTERPRETATION OF RESULTS

The relative indices computed for ALAF have a direct interpretation. A log transformation of ALAF ln(ALAF) leads to a value that range between some negative and positive values which are separated by 0. If ln(ALAF) =0, the observed financing modality has an average adoption level. A positive ln(ALAF) provide an indication that the observed financing modality has an above average adoption level while a negative ln(ALAF) provide an indication that the financing modality has a below average adoption level.

Table 2: Measurement of variables in the regression models

S/N	Categorical Variables	Abbreviation	Measurement
A: Project Purpose			
A.1	Project purpose -private	Private (1)	Dummy variable {1 =Yes, 0 = otherwise}
A.2	Project purpose-physical infrastructure	Phyinfra (1)	Dummy variable {1 =Yes, 0 = otherwise}
A.3	Project purpose -religious	Relig (1)	Dummy variable {1 =Yes, 0 = otherwise}
A.4	Project purpose -Social infrastructure	Socinfra (1)	Dummy variable {1 =Yes, 0 = otherwise}
B: Project Financing Modality (LFMode)			
B.1	Projects funded by government budget	Pfundgovbudget(1)	Dummy variable {1 =Yes, 0 = otherwise}
B.2	Projects funded by own funds/equity	Pfundequity(1)	Dummy variable {1 =Yes, 0 = otherwise}
B.3	Projects funded by domestic debt	Pfundddebt(1)	Dummy variable {1 =Yes, 0 = otherwise}
B.4	Projects funded by foreign debt	Pfundfdebt(1)	Dummy variable {1 =Yes, 0 = otherwise}
B.5	Projects funded through partners contributions	Pfundpartcont(1)	Dummy variable {1 =Yes, 0 = otherwise}
B.6	Projects funded by foreign grants	Pfundfgrant(1)	Dummy variable {1 =Yes, 0 = otherwise}
B.7	Projects funded by general public contributions	Pfundpubcont(1)	Dummy variable {1 =Yes, 0 = otherwise}
C: Land Acquisition/Aggregation Modality (LAMode			
C.1	Projects that adopted CLA	PadoptCLA(1)	Dummy variable {1 =Yes, 0 = otherwise}
C.2	Projects that adopted Government supported Market Purchase (GMP)	PadoptGMP(1)	Dummy variable {1 =Yes, 0 = otherwise}
C.3	Projects that adopted individually supported Market Purchase (IMP)	PadoptIMP(1)	Dummy variable {1 =Yes, 0 = otherwise}
C.4	Projects that adopted One time Market Purchase (OMP)	PadoptOMP(1)	Dummy variable {1 =Yes, 0 = otherwise}
C.5	Projects that adopted Voluntary Contributions of Cash (VCC)	PadoptVCC(1)	Dummy variable {1 =Yes, 0 = otherwise}
C.6	Projects that adopted Voluntary Contribution of Land (VCL)	PadoptVCL(1)	Dummy variable {1 =Yes, 0 = otherwise}
D: Project Affected People (PAPs)			
D.1	Projects that affected ordinary residents	PAPord (1)	Dummy variable {1 =Yes, 0 = otherwise}
D.2	Projects that affected private firm	PAPfirm (1)	Dummy variable {1 =Yes, 0 = otherwise}
D.3	Projects that affected religious institutions	PAPrelig (1)	Dummy variable {1 =Yes, 0 = otherwise}
D.4	Projects that affected the government	PAPgov (1)	Dummy variable {1 =Yes, 0 = otherwise}

There is, however, no hard and fast rule for the interpretation of logistic regression results. While the left-hand side is in the familiar probability scale, the right-hand side is a non-linear function of the predictors, and there is no simple way to express the effect on the probability of increasing a predictor by one unit while holding the other variables

constant. Logistic slope coefficients can be interpreted as the effect of a unit of change in the X variable on the predicted logits with the other variables in the model held constant. That is, how a one-unit change in X affects the log of the odds when the other variables in the model are held constant. Therefore, odds ratios in logistic regression can be interpreted as the effect of a one-unit change in X in the predicted odds ratio with the other variables in the model held constant, as shown mathematically in equation 2.

$$P(ALAF)_i = \frac{Odd(if\ the\ corresponding\ financing\ amount\ was\ adequate)}{Odd(if\ the\ corresponding\ financing\ amount\ was\ not\ adequate)}$$

$$= \frac{\Pr(event|X+1)/(1-\Pr(event|X+1)}{\Pr(event|X)/(1-\Pr(event|X)} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (2)$$

Where;

The Odd define the ratio of having obtained adequate funding for land acquisition against not having obtained the requisite financial resources.

$\Pr(event|X+1)$ measure the probability for funding adequacy based on responses from the questionnaire for a specific project as estimated from the given indicators (X; in Table 2)

$(1-\Pr(event|X+1)$ refers to the probability of a project failing to obtain adequate financial resources (X; in Table 2)

$\Pr(event|X)$ the overall probability of obtaining adequate fund across project (Success average) (X; in Table 2)

$1-\Pr(event|X)$ the overall probability of not obtaining adequate funds across project (Failure average) (X; in Table 2)

The analysis of relative indices is presented in terms of comparison tables coupled with Cross Tabulation in the results and discussion section. Logistic regression results are also provided through relevant Tables and graphical presentations to visualize the relationship between funding modalities and success in getting the project function. The significance tests are also provided based on Wald statistics for logistic regression results. It should also be noted that logistic regression models are evaluated based on their ability to predict; thus, even where the explanatory powers are less significant, the classification ability exceeding 75% is often considered adequate. Classification Tables are, therefore, part of the presentation of logistic regression results.

RESULTS AND DISCUSSION

Description of the projects

The survey was able to reach 179 respondents involved in land acquisition and aggregation practices, one representing each entity. In terms of the types of land acquisition and aggregation projects in Dar es Salaam Figure 2 presents various purposes for land acquisition projects ranging from industrial expansion, physical and social infrastructures, private facilities and religious activities. A notable percent of 52% has been observed for religious expansion through land aggregation from individual holders with industrial expansion the least encountered in the survey.

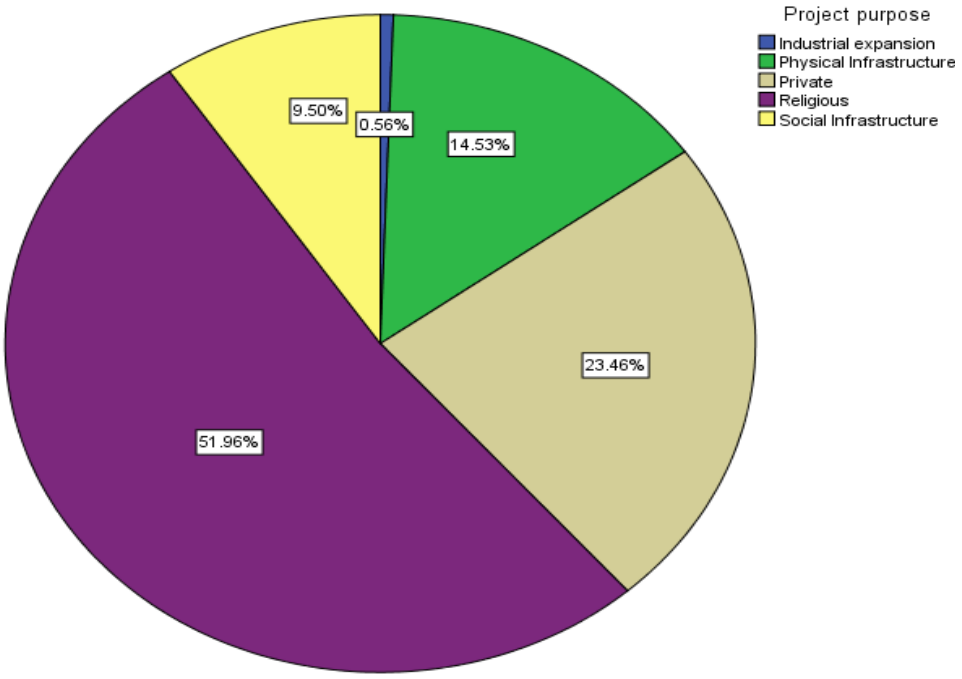

Figure 2: Type of land acquisition and aggregation projects

The practice of land-based project financing in Tanzania

Table 3 suggests that the available financing modalities include through Government budget, domestic debt, through partners' contributions funding through the general public and some used a mixed of these methods. Majority of respondents fund acquisition projects through other means. In this case for example it was through followers' contribution (33% of the respondents), mostly for religious activities, where 83% of projects were for religious purposes. The least encountered funding modality is through public contribution (3% of respondents use this mode) which is mostly also used for religious activities.

Table 3: Land based project finance and development types in Tanzania

		Project purpose					Total	Total (%)
		Industrial expansion (%)	Physical Infrastructure (%)	Private (%)	Religious (%)	Social Infrastructure (%)		
Financing Modality	Budget	5	85	10	0	0	20	12
	Debt	0	0	83	17	0	6	4
	Equity	0	6	56	19	19	48	29
	Mixed	0	8	8	83	0	24	15
	Others	0	2	2	85	11	53	33
	Part. Contr.	0	0	0	86	14	7	4
	Pub. Contr.	0	0	0	100	0	5	3
Total		**1**	**14**	**23**	**53**	**10**	**163**	

In terms of private land project finance, Table 3 suggests that they are primarily through debt financing, where 83% of respondents use this modality; the least modality used is the public contribution, which scores 0%. In most cases, private land-based projects in Tanzania are done by religious institutions that acquire lands through land pooling or aggregation practices. Public land-based finance refers to financing physical and social infrastructure. Regarding

public land project finance, Table 3 also suggests that financing is primarily through budget, with 85% of respondents confirming that. The least encountered is through debt, which scores 0%. Most of the public land-based projects in Tanzania are for physical infrastructure provision, such as urban land acquisition and development.

Financing modalities and urban development

Results revealed that, financing modalities used also detect the method and purpose of land acquisition. Table 4 suggests that most projects (36%) financed through followers' contributions were developments for religious activities, followed by equity for private undertakings (32%). The physical infrastructure was funded through the budget. Table 4 further responds to combinations of funding approaches the responding organisations utilised. For example, combining budget and equity or participant contributions (PC) was possible. Thus, the number of options increased to 14.

Table 4: The relationship between financing modalities and development type

		Project purpose					Total	% of Total
		Industrial expansion (%)	Physical Infrastructure (%)	Private (%)	Religious (%)	Social Infrastructure (%)		
Financing Modality	**Budget**	5	85	10	0	0	**20**	**13**
	Budget and Equity	0	100	0	0	0	**1**	**1**
	Budget and PC	0	0	0	100	0	**1**	**1**
	Budget, Equity	0	100	0	0	0	**1**	**1**
	Debt	0	0	83	17	0	**6**	**4**
	Debt, Grant and PC	0	0	0	100	0	**2**	**1**
	Equity	0	6	56	19	19	**48**	**32**
	Equity and Debt	0	0	100	0	0	**1**	**1**
	Equity and Others	0	0	50	50	0	**2**	**1**
	Others	0	2	2	85	11	**53**	**36**
	PC	0	0	0	86	14	**7**	**5**
	PC	0	0	0	100	0	**1**	**1**
	PC	0	0	0	100	0	**1**	**1**
	PC	0	0	0	100	**0**	**5**	**3**

** PC – denotes Participants Contributions

Adequacy of funds

Result shows important determinants of the fund gap through a logistic regression model based on the explanation variables in Table 6, with the dependent variable being a dummy on whether the fund gap was observed or not at the time of completing the project. To validate the model, Table 5 provides some model fit information in which the pseudo-R^2 suggests that the Nagelkerke R^2 is around 51% while the Hosmer Lemeshow test provides an insignificant statistic suggesting that the model fits well with the data and can therefore be interpreted. Furthermore, the classification matrix in Table 6 suggests that the model correctly classifies around 75-79% of cases, which is also acceptable for interpretation.

Table 5: Model fit information for the adequacy of funds

	Model Summary			Hosmer and Lemeshow Test		
Step	-2 Log likelihood	Cox and Snell R^2	Nagelkerke R^2	Chi-square	df	Sig
1	99.219a	.371	.51	2.639	8	.955
14	108.438a	.319	.44	1.526	6	.958

Table 7 provide the regression model results for the fund gap determinants. The fund gap model has 10 variables in the final model. In terms of the purpose of the project, religious purpose projects are likely to yield higher or less likelihood for bridging the fund. Therefore, religious projects are not likely to be successful in bridging both the land and fund gap.

Table 6: Classification table for adequacy of funds

	Observed		Predicted		
			The project had enough funds		Percentage Correct
			No	Yes	
Step 1	The project had enough funds	No	61	12	83.6
		Yes	12	31	72.1
	Overall Percentage				79.3
Step 14	The project had enough funds	No	54	19	74.0
		Yes	9	34	79.1
	Overall Percentage				75.9

Funding modalities for land acquisition projects exhibit varying degrees of reliability, with government budgets and public contributions proving particularly problematic. The reliance on government budgets often results in project funding failures, delays in compensation payments, and inadequate financial resources, corroborating Cernea's (2008) assertion that government-funded resettlement programs frequently face financial constraints. Similarly, public contributions are deemed unreliable for financing land acquisition projects. Government-funded projects have encountered numerous objections from affected communities due to insufficient compensation and limited stakeholder involvement, leading to an increase in court cases. Komu (2014) reported that compensation disputes in Tanzania rose from approximately 11,256 cases in 2011 to over 43,000 in 2016, with 19% originating from Dar es Salaam. Moreover, the slow resolution of compensation complaints exacerbates the problem. In response, the Ministry of Land, Housing, and Human Settlements aimed to approve 54,000 valuation reports in 2023/24, of which 34,000 were for compensation. By May 15, 2024, 57,285 valuation reports had been approved, including 34,974 for compensation, yet 91 new compensation complaints were still filed and addressed (Wizara ya Ardhi Nyumba na Maendeleo ya Makazi, 2024).

The challenges associated with land acquisition financing align with findings from previous studies, which indicate that few developing countries have effective policies, procedures, and financing arrangements to achieve successful project outcomes (Kusiluka et al., 2011; Ndjovu, 2016; Cernea, 2008). These shortcomings lead to delays, failure to meet project objectives, and increased resistance from affected communities. Consequently, sustainable urban development efforts must prioritize robust financing mechanisms to ensure that land acquisition and resettlement processes do not hinder the growing demand for urban land. As Ding (2007), suggests, securing adequate funding and implementing sound policies are essential for minimizing the adverse effects of land acquisition on displaced populations and ensuring smooth project execution.

Furthermore, Table 7 suggests that equity and partner contribution financing modalities contribute positively towards bridging the fund gap with equity making the highest contribution. The approaches are in most cases applied by private entities that can provide a direct connection between land acquisition or aggregation processes and funding requirements. As a result, the funding gap is likely to be minimised. With the re-introduction of the Land Development Revolving Fund (Wizara ya Ardhi Nyumba na Maendeleo ya Makazi , 2024) in the form of loan to facilitate CLA and planning

activities, the central government is moving away from direct funding CLA.

Table 7: Logistic model results for adequacy of funds

		B	S.E.	Wald	Df	Sig.	Exp (B)	% Change
Step 14[a]	Relig (1)	-2.284	.863	7.005	1	.008	.102	9%
	Pfundbudget(1)	-21.748	17220	.000	1	.999	.000	0%
	Pfundequity(1)	2.699	.818	10.894	1	.001	14.869	94%
	Pfundpartcont(1)	2.161	1.186	3.321	1	.068	8.683	90%
	Pfundpubcont(1)	-1.968	1.138	2.990	1	.084	.140	12%
	PAPrelig(1)	2.754	1.565	3.099	1	.078	15.707	94%
	NPAP			2.614	2	.271		0%
	NPAP(1)	20.418	17220	.000	1	.999	7.370e8	100%
	NPAP(2)	22.007	17220	.000	1	.999	3.611e9	100%
	PadoptVCC(1)	1.877	.633	8.779	1	.003	6.531	87%
	Constant	-3.260	2.153	2.293	1	.130	.038	4%

In terms of PAP, Table 7 suggests that religious organisations if affected by the projects, such project will also have a marginal funding gap. Suggestively, the cost of removing a religious institution may be higher but once met such institutions often relocate to other places immediately. Therefore, any entity wishing to tackle land that belongs to a religious institution is likely to have limited financial problems. Along similar lines a lower number of PAPs is also associated with a higher probability for bridging the funding gap. Potentially this reflects the smaller compensation amount needed to get the land. In terms of land acquisition approach, entities adopting Voluntary contribution of cash have a higher probability of bridging the fund gap. It seems making cash immediately available from volunteers can significantly reduce the funding gap. The results in Table 6 provide three significant determinants of funding gap. The gap tends to be higher for projects attached to a religious purpose and tend to be lower when equity is used as a financing modality and VCC is used as a land acquisition approach.

CONCLUSION

The traditional approach to compulsory land acquisition for public interest in Tanzania has exhibited significant shortcomings, particularly concerning compensation payments to PAPs. Many complaints stem from a lack of clarity regarding responsible institutions, inadequate financial preparedness for compensation, and non-compliance with valuation review procedures as stipulated by legal frameworks. In response, the Ministry has issued the Valuation and Compensation Circular No. 1 of 2024, which clarifies institutional responsibilities in the valuation and compensation process. This policy shift places the obligation of compensation on the benefiting institution rather than the government, potentially reducing dependence on state funding and encouraging alternative financing models for land acquisition projects.

Financing land acquisition remains a critical challenge, particularly in developing countries where reliance on government budgets has led to project delays and conflicts over compensation. The public sector has traditionally played a significant role in funding land acquisition through fiscal decentralization, which supports infrastructure development. However, budgetary constraints and inconsistent public financing mechanisms have hindered effective land acquisition and compensation. The private sector, while offering alternative funding avenues through mechanisms such as commercial banks, microfinance institutions, and public-private

partnerships, tends to involve higher costs for acquiring authorities. The study identifies key determinants influencing the land acquisition funding gap, noting that projects associated with religious purposes face greater financial constraints, whereas those financed through equity or Voluntary Contribution and Compensation (VCC) models exhibit lower funding shortfalls.

RECOMMENDATION

To improve the efficiency of land acquisition financing, the study recommends greater reliance on equity-based and partner contribution financing models, which have proven effective in bridging funding gaps. Private entities, due to their ability to establish direct connections between land acquisition processes and funding requirements, should play a more active role. However, a fully privatized model is not feasible; rather, a hybrid system involving both public and private sector collaboration should be pursued. Additionally, strengthening institutional frameworks through training and capacity building will enhance the efficiency of land acquisition financing and management. Furthermore, the success of land acquisition projects is not solely dependent on financing models but also on governance structures, the number of PAPs, and the mode of land acquisition utilized. Lessons from other African countries such as Botswana, Zambia, and South Africa suggest that financial institutions, development banks, and public-private partnerships can offer valuable support in bridging funding gaps. Authorities should explore innovative funding strategies beyond traditional budgetary allocations, particularly at the local level, to ensure sustainable land acquisition practices. Thus, integrating local economic development principles, leveraging both public and private sector contributions, and improving governance mechanisms are essential for sustainable land acquisition financing and implementation.

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