Drivers of Land Conflict Progression Among Households in Dodoma City

Dickson Nubha[1] & Venance Shillingi[2]
School of Public Administration and Management (SOPAM)
Mzumbe University, Box 1, Mzumbe Morogoro, Tanzania [1,2]

Correspondence: vshillingi@mzumbe.ac.tz

ABSTRACT

Land conflicts in Dodoma City, Tanzania, are rooted in socio-economic disparities and weak legal and institutional systems, challenging urban and peri-urban development. This study explores how these issues influence conflict progression through a mixed-methods approach, combining quantitative surveys (258 respondents) and qualitative interviews (12 key informants). Findings reveal that socio-economic factors, particularly education level (R^2 = 0.319) and employment status (R^2 = 0.289), significantly drive conflict progression, accounting for 35.5% of the variance. Poverty and income inequality exacerbate informal land transactions, while limited legal awareness heightens vulnerability. Legal and institutional weaknesses further perpetuate disputes, contributing 15.0% of the variance. Regression analysis confirms their combined influence (R^2 = 0.381), with institutional reforms showing potential to reduce conflicts (β = -0.183). Reforms such as digitised land records, decentralised dispute resolution, and a Land Crimes Tribunal could reduce conflicts. Socio-economic empowerment through lowering formalisation costs, legal education, and inclusive policies is also crucial. Policy suggestions include revising Tanzania's 1995 National Land Policy to improve transparency, accelerate titling, and encourage participatory planning. These initiatives are vital for reducing land conflicts and fostering equitable, sustainable urban growth in Dodoma and similar cities.

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INTRODUCTION

Land is a vital socio-economic asset needed for farming, housing, investment, and growth. Rising global demand driven by population growth, urbanisation, economic development, and climate change has strained land resources (Moreda, 2023). This has led to increasing land disputes in developing areas due to conflicting interests, weak policies, and poor land governance (Sabogu et al., 2020). Land disputes remain a serious concern worldwide, affecting both rural and urban populations. In nations such as China and India, large land seizures for urban development and industry have forced millions from their homes, sparking protests and court cases (Ren, 2017). Colombia's land return programs after conflict have faced setbacks due to violence and illegal land grabs, especially affecting indigenous groups (Piccone, 2019). In Africa, colonial land laws, inequality, environmental stress, and poor leadership continue to fuel ongoing disputes among farmers, herders, investors, and officials (John & Kabote, 2017). From 2020–2023, more than 500,000 people were displaced in Ethiopia due to forced land deals and unfair compensation (Marzocchi & Arribas Cámara, 2024)

Tanzania faces growing land-related challenges, with 70% of its population relying on land for survival (Tanzania National Bureau Report, 2020), amid rapid urban growth of 5.2% annually and increasing demand for agriculture, housing, and investment. These pressures have led to escalating land disputes, exemplified by the 2023 displacement of over 10,000 families in Morogoro, many of whom lacked formal land documentation (Ministry of Finance and Planning, 2022). Although the 1995 National Land Policy was intended to promote equitable access, tenure security, and reduce informal settlements (Sections 4.2.5 and 4.2.6), it has inadequately addressed deeper socio-economic drivers such as poverty, inequality, and unemployment. The coexistence of statutory and customary laws, weak institutional capacity (Section 4.3), and local corruption continue to impede effective land governance. Despite legislative reforms, including the Land Act and Village Land Act of 1999, land disputes have increased significantly from 13,203 in 2009/2010 to over 30,000 by 2023/2024 (MINISTRY OF LAND, 2023)

Dodoma, the capital of Tanzania, is facing increasing land disputes due to its rapid population growth and urban development. According to the 2022 National Census, the city's population reached 3.08 million, with an urbanisation rate of 41.3%. This expansion has put additional pressure on land, particularly in surrounding areas where informal settlements are expanding and infrastructure projects are underway. In 2023, over 5,000 families were displaced from the outskirts of Dodoma due to various development initiatives. Many residents reported receiving low compensation and having little say in decision-making. Around 60% of Dodoma's residents lack legal land ownership documents, making them vulnerable to eviction(Mwamlangala & Mushy, 2022). These trends expose the deeper socio-economic causes of land conflicts in Dodoma. Factors such as poverty, insecure land rights, unemployment, and the rising market value of land all contribute to ongoing and worsening disputes. Although legal frameworks and the decentralisation of land administration to entities like the Dodoma Municipal Council have been implemented, the capacity to resolve conflicts remains limited. This is mainly due to weak institutions, limited public awareness of land rights, corruption, and poor land use planning (Rubakula et al., 2019). Furthermore, efforts to enhance local government and establish legal mechanisms, such as District Land and Housing Tribunals, have not resulted in a significant reduction of land-related conflicts.

This study aimed to examine how socio-economic conditions and legal and institutional systems have influenced the increase in land conflicts among households in urban and peri-urban areas of Dodoma City. However, measures have been implemented through laws and land-use plans, and disputes continue, impacting communities, investors, and government bodies. The study concentrated on identifying the socio-economic and legal factors behind these conflicts. It added value by emphasising the often-overlooked social aspects of land issues. The findings are intended to assist policymakers,

planners, and land managers in Tanzania and similar settings to promote equitable land use, stability, and sustainable urban growth.

LITERATURE REVIEW

In this study, two main theories; Resource Dependence Theory (RDT) and Institutional Theory, were employed to examine the key factors and processes that influenced land conflict cases among households in Dodoma City.

Resource Dependence Theory

Resource Dependence Theory (RDT), developed by Jeffrey Pfeffer and Gerald R. Salancik in 1978, explains how organisations or social groups rely on limited resources. This theory, from their book The External Control of Organisations (1978), illustrates that competition over scarce resources often leads to conflict (Sanga, 2019). For example, Matimbwa and Mwalimu (2019) found that farmers and pastoralists with lower levels of education are more likely to experience ongoing land conflicts. RDT emphasises how limited resources shape power dynamics and relationships between groups. It suggests that land conflicts can stem from resource scarcity, illustrating how socio-economic factors such as income, education, and access to resources influence the likelihood and severity of disputes. Consequently, socio-economic factors affect the progression of land conflict, linking this theory to the variable (socio-economic factors) and the research hypothesis of this study.

H_1: *socio-economic factors significantly influence the progression of land conflict incidences among households in Dodoma City.*

Institutional Theory

Institutional theory, introduced by Douglass C. North in 1990, examines how institutions such as rules, norms, and regulations shape behaviour and help resolve conflicts. Donnelly and North (2005) argue that strong legal institutions reduce disputes, while transparency and accountability build trust and prevent conflicts from worsening. Helmke and Levitsky (2012) noted that efficient legal systems promote formal dispute resolution, whereas delays or high costs push people toward informal or violent actions. Uslaner (2008) explained that fair legal systems lower conflict by providing just outcomes. Ostrom (1990) added that effective institutions encourage people to follow rules, reducing future disputes. De Soto (2017) highlighted that a lack of transparency increases perceptions of corruption, leading to informal conflict resolution. This theory illustrates how legal and institutional frameworks influence the occurrence and resolution of land conflicts, connecting them to the variable (legal and institutional frameworks) and the research hypothesis of this study.

H_2: *Legal and institutional frameworks significantly influence the progression of land conflict incidents among households in Dodoma City.*

Empirical literature review

An empirical literature review involves examining relevant literature from previous studies. By reviewing the literature, a researcher gains knowledge and insights from other researchers' studies. The following are some of the early studies related to this research, reviewed by the researcher:

Progression of Land Conflict Incidents

Handoko (2020) studied how a 20-year land conflict in Darmakradenan affected farmers' social, economic, and political conditions. The ongoing dispute has led to divisions among farmers, resulting in

income loss, strained relations with authorities, increased unlawful behaviour, and heightened vulnerability to political tension. Using qualitative methods and purposive sampling, the study gathered views from farmers, local leaders, and plantation staff. While the research provided useful insights, it lacked detailed data and specific case examples, which limited the generalizability of its findings. It suggested that future solutions should focus on reducing vulnerabilities and involve all parties to address the root causes of conflict. It examined land-use conflicts between farmers and pastoralists in Tanzania, highlighting their impact on economic development. The study reported several deadly clashes between 2000 and 2015, showing the serious human toll. Major causes included weak land governance, outdated policies, insecure land rights, corruption, and population growth. Livestock damage to crops often triggers violence. The outdated 1995 National Land Policy failed to effectively manage land use. Using a literature-based qualitative approach, the study recommended adopting the Mediation-Arbitration (MED-ARB) model for resolving disputes. However, it lacked field data and stakeholder input, limiting its practical relevance. Recommendations included updating land policies, improving governance, and promoting inclusive, long-term approaches to conflict resolution.

Mulugeta (2019) investigated inter-household farmland conflicts in Wollo, Northern Ethiopia, focusing on their causes and effects on community security. Key issues included land boundary disputes, evictions, inheritance issues, and contract disputes, exacerbated by weak land administration, land scarcity, and cultural attachment to land. These tensions, combined with the presence of small arms, posed serious social, economic, political, and psychological risks. Using a descriptive case study method, the research drew on interviews, focus groups, and government records. However, it did not fully explore the interaction of these factors or their long-term regional effects. The study recommended legal reforms, digital land registration, and stronger roles for NGOs and the government in resolving land issues.

Handoko (2020), Gwaleba (2019), and Mulugeta (2019) highlighted recurring and intense land conflicts driven by insecure tenure, poor planning, and weak governance. Gwaleba reported violent farmer-pastoralist clashes in Tanzania; Mulugeta noted boundary and inheritance disputes in Ethiopia; Handoko showed Indonesia's long-lasting conflicts. All studies stressed the need for stronger governance, policy reforms, and inclusive solutions such as MED-ARB and digital land registration, thereby supporting the goal of understanding what drives land conflict among households in Dodoma City, Tanzania.

Socio-economic Factors

Hussein (2024) investigated rising land conflicts between investors and smallholders in Tanzania, focusing on large-scale farming. The study explored causes of disputes, smallholders' perspectives, and the ineffectiveness of current solutions. Conflicts emerged when government land, often occupied by squatters, was allocated to investors. Socio-economic challenges such as low income, limited education, and unemployment increased smallholders' vulnerability. The study used qualitative methods including interviews, focus groups, and document analysis. While it identified key conflict themes, it overlooked broader policy, market, and governance roles. Hussein (2024) recommended improved mechanisms for conflict resolution, legal access to land, and seasonal land-use management by local authorities. Also, Matimbwa and Mwalimu (2019) examined persistent farmer-pastoralist conflicts in Kambala Village, Morogoro, despite government efforts. The study identified low income, limited education, unemployment, poverty, population growth, unethical practices, overstocking, weak policies, and poor conflict resolution as key drivers. Using a mixed-methods design with 110 participants, the research combined qualitative and quantitative data. However, it did not explore cultural norms, leadership roles, and the interaction of socio-economic factors in depth. Recommendations included fair land governance, inclusive planning, clear policies, anti-corruption measures, and promotion of dialogue and sustainable land management.

Kisoza (2014) investigated resource-use conflicts between smallholder farmers and pastoralists in the Mkata Plains, focusing on socio-economic drivers. The study found that income inequality, employment,

and competition over land and grazing resources intensified disputes. Using Participatory Rural Appraisal and surveys, it collected data via interviews and questionnaires. However, it did not address long-term impacts such as education or government capacity. Kisoza (2014) recommended enhancing conflict management skills, strengthening institutions, and establishing village conflict resolution committees.

Furthermore, studies by Hussein (2024), Matimbwa and Mwalimu (2019), and Kisoza (2014) revealed that socio-economic factors contribute significantly to land conflicts. Matimbwa and Mwalimu identified income, education, employment, poverty, and access to resources as key drivers. Kisoza noted inequality and land competition, urging stronger institutions. Hussein linked low income, poor education, and legal barriers to disputes. Addressing inequality, education, and governance is essential to resolving land conflicts. These findings support this study's objective of examining how socio-economic factors influence the progression of land conflicts among households in Dodoma City.

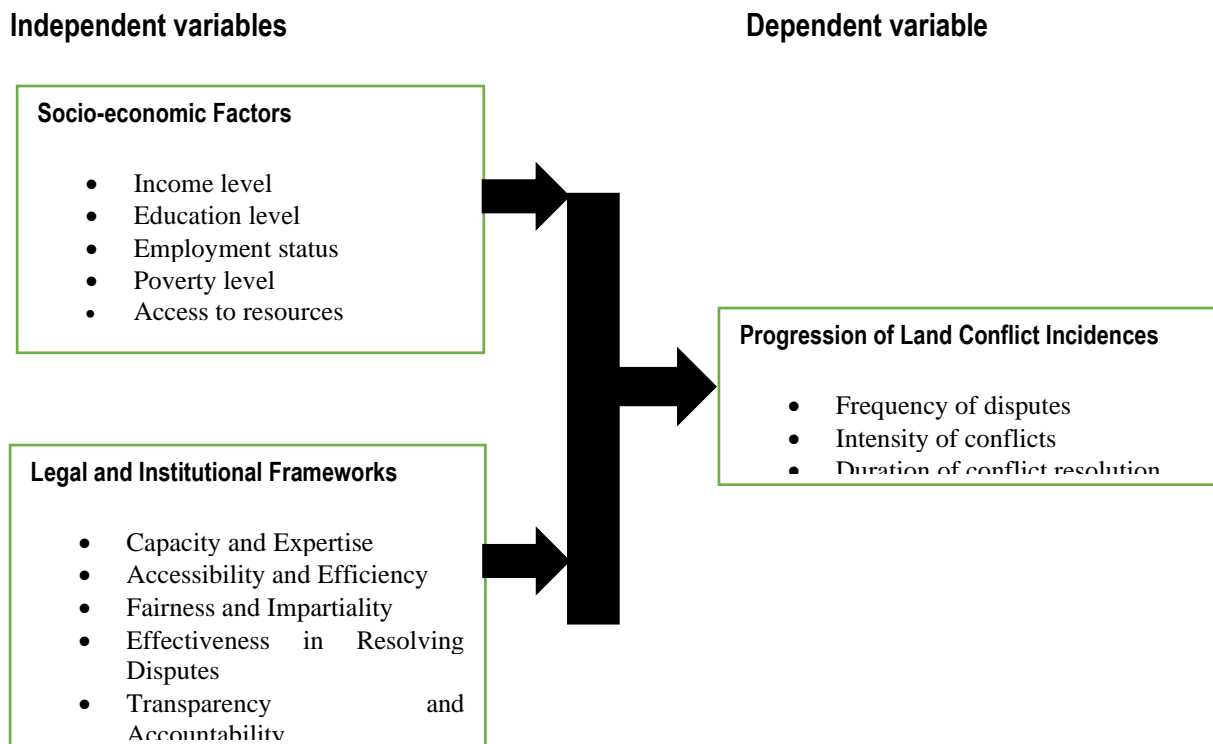## Legal and Institutional Frameworks

Omodo et al. (2023) examined the effectiveness of land governance institutions in managing land conflicts in Lira District, Lango Sub-Region, Uganda. Their study found that weak institutional capacity, poor access, and perceived unfairness in legal systems hindered land conflict resolution. Their findings showed weak correlations between formal institutions such as Land Tribunals (r = .120) and Local Council Courts (r = .224) and effective conflict management, indicating low efficiency and public trust. In contrast, informal Ad-hoc Mediators had a stronger correlation with dispute resolution (r = .518) and (Beta = .479), reflecting higher community trust. The study used correlation and descriptive methods with 200 participants but lacked long-term analysis and qualitative data. It also did not examine broader cultural or socio-economic factors. The authors recommended strengthening Land Tribunals and conducting further research to understand conflict drivers better and improve both formal and informal systems. Also, Kwapena et al. (2021) identified major challenges in managing customary land in Papua New Guinea. They found that formal legal institutions lacked capacity and expertise, and the slow formalisation of land titles limited access. Weak state recognition of customary land rights caused legal unfairness and community disconnect, leading to dissatisfaction. The lack of transparency and accountability further eroded public trust and escalated conflicts. Using data from the 2019 National Land Summit and international sources, the study lacked field data and case studies, limiting socio-economic analysis. It recommended strengthening legal systems, recognising customary titles, enhancing transparency, and engaging stakeholders for better governance.

John and Kabote (2017) found that outdated colonial laws continued to influence governance despite reforms. Key challenges included weak institutional capacity, limited legal access, ineffective dispute resolution, complex legal systems, and poor infrastructure, all of which hindered smallholders' access to justice. Unfairness, outdated practices, and local power dynamics reduced trust in legal institutions. The study used mixed methods, surveying 270 households and conducting focus groups. It recommended strengthening institutions, improving legal awareness, increasing transparency, and making legal processes more inclusive and accessible. Moreover, studies by Omodo et al. (2023), Kwapena et al. (2021), and John and Kabote (2017) highlighted how weak legal systems and limited institutional capacity hinder the resolution of land conflicts. Omodo et al. found reliance on informal mediators in Uganda. Kwapena et al. emphasised the need for legal reform and the integration of customary law in Papua New Guinea. John and Kabote noted outdated laws in Tanzania. Strengthening institutions and legal access is crucial for resolving land conflicts fairly. Their findings align with this study's second objective, which examines how legal and institutional frameworks influence the progression of land conflict cases in Dodoma City.

Conceptual Framework

This study employed a conceptual framework to examine how socio-economic factors and legal and institutional frameworks influence the progression of land conflicts, as assessed by dispute frequency, intensity, and duration, to identify root causes and guide effective policy responses.

Figure 1. Conceptual Framework

Independent variables   **Dependent variable**

Socio-economic Factors

- Income level
- Education level
- Employment status
- Poverty level
- Access to resources

Progression of Land Conflict Incidences

- Frequency of disputes
- Intensity of conflicts
- Duration of conflict resolution

Legal and Institutional Frameworks

- Capacity and Expertise
- Accessibility and Efficiency
- Fairness and Impartiality
- Effectiveness in Resolving Disputes
- Transparency and Accountability

Source: Literature reviewed, 2025

METHODS

This study used a mixed-methods design with an explanatory sequential approach to examine how socio-economic, legal, and institutional factors influence the progression of land conflicts among households. The process began with collecting and analysing quantitative data, followed by qualitative research to deepen understanding and interpret results through triangulation. In the quantitative stage, structured questionnaires were administered to 258 household heads in seven wards: Nzuguni, Dodoma Makulu, Mkonze, Ihumwa, Mtumba, Kikombo, and Iyumbu, selected to represent a range of urban and peri-urban settings with documented high prevalence of land conflicts. The study population consisted of 775 household heads with officially recorded land conflict cases across these wards. Using Yamane's formula for a finite population, a minimum sample size of 258 respondents was calculated. To ensure proportional and representative sampling, a stratified random sampling technique was employed. The stratification was based on ward (to ensure geographic and demographic coverage) and gender (to ensure the inclusion of both male-headed and female-headed households). The questionnaire included socio-economic variables, legal and institutional indicators, and land conflict metrics like frequency, severity, and duration, using Likert scales. Quantitative data were analysed to identify patterns and relationships among variables, forming the basis for the subsequent qualitative phase. This sequential integration ensured methodological rigour and provided a comprehensive understanding of the dynamics influencing land conflict progression.

The qualitative phase involved semi-structured interviews with 12 purposively selected key informants, including land officers, legal experts, planners, surveyors, valuers, and village leaders. These individuals

were selected for their expertise and practical experience in land administration and conflict resolution. Interviews focused on perceptions of land tenure security and the influence of social and institutional dynamics on the escalation of land conflicts. Data were analysed thematically using ATLAS. Ti, following a systematic coding process to identify recurring patterns and themes across interviews. Interviews continued until thematic saturation was achieved, ensuring completeness and depth in the findings. To improve the reliability and validity of the research instruments, a pilot survey was conducted with 21 households and 3 informants prior to the main data collection. Feedback from the pilot helped refine the clarity, structure, and relevance of both the questionnaire and the interview guide. These measures enhanced data collection quality and strengthened the robustness of both the quantitative and qualitative components of the study.

RESULTS

This section presents comprehensive findings on the progression of land conflicts in Dodoma City, drawing on both statistical analyses and qualitative insights from key informant interviews. The results reveal that socio-economic challenges, particularly poverty, low education levels, and unemployment, are major contributors to land disputes. Additionally, systemic weaknesses in legal and institutional frameworks, including limited accessibility and a lack of transparency, further exacerbate the situation. Descriptive statistics indicate that land conflicts are frequent and intense, often prolonged by slow dispute-resolution mechanisms and inadequate institutional capacity. Inferential analysis confirms that socio-economic pressures significantly escalate land conflicts, while stronger legal frameworks help mitigate their occurrence. Thematic analysis deepens this understanding by highlighting widespread land tenure insecurity, even among titled landowners, due to fraud, high titling costs, digital exclusion, and delays in formal registration. Perceived insecurity is intensified by undeveloped land being vulnerable to encroachment, fragmented land information systems, and widespread mistrust in governance institutions. Corruption, especially involving former land officials and surveyors, alongside rapid urbanisation and a lack of legal accountability for land grabbers, further fuels the progression of land conflicts. Together, these findings provide a comprehensive picture of the factors contributing to land conflict in Dodoma City and point to areas where further policy or institutional attention may be required.

Descriptive Statistics

This section summarises survey findings using descriptive statistics on a 5-point Likert scale to assess socio-economic factors and perceptions of legal systems. It examined the frequency, intensity, and duration of land conflicts, highlighting socio-economic pressures and institutional shortcomings behind ongoing land disputes in Dodoma City.

Socio-economic Factors

To assess the influence of socio-economic conditions on the progression of land conflicts in Dodoma City, five key indicators were measured on a 5-point Likert scale, ranging from 1 (Very Low) to 5 (Very High). Table 1 presents the mean scores and standard deviations for each factor, offering insight into how respondents perceived their role in driving land conflicts.

The results indicate that both education level and poverty level had a mean score of 2.98, falling within the "moderate influence" range. This suggests that limited education and widespread poverty are perceived as moderately significant contributors to land conflicts. One town planning officer supported this by stating, *"Lack of education can cause mistakes and delays, increasing land disputes."* Likewise, a land surveyor noted that *"poorer households are more vulnerable to land conflicts,"* confirming the statistical interpretation. Income level (M = 2.88) and employment status (M = 2.82) also showed moderate influence. These findings suggest that financial instability contributes to risky land behaviours, such as the informal selling of plots to multiple buyers. As one respondent observed, *"Low-income households often sell one plot to several buyers because they cannot afford survey costs."* Access to resources scored lowest (M = 1.93), indicating "low influence" according to the Likert scale. However, it remained important in peri-urban areas, where unequal access to basic infrastructure, services, or land information can indirectly contribute to land disputes.

Table 1: Socio-economic factors contributing to land conflict

Socio-economic factors	Mean	Std. Deviation
Income level	2.88	0.356
Education level	2,98	0.151
Employment status	2.82	0.458
Poverty level	2.98	0.124
Access to resources	1.93	0.262

Source: Surveyed data, 2025

Legal and Institutional frameworks

To evaluate the effectiveness of legal and institutional frameworks in addressing land conflicts in Dodoma City, five core indicators were assessed using a 5-point Likert scale, where 1 = Very Poor and 5 = Excellent. Table 2 presents the mean scores and standard deviations for each indicator, providing insight into public perceptions of institutional performance in land conflict resolution.

The data reveal that the overall perception of Dodoma's legal and institutional systems is extremely poor. Capacity and expertise, though scoring the highest among the indicators, still received a very low mean score of 1.19, indicating that institutions are perceived as lacking the knowledge and human resources necessary to handle land matters effectively. A land surveyor attributed this to instability, noting that *"Frequent changes in land management systems undermine the effectiveness of legal and institutional systems in Dodoma.* "Accessibility of legal mechanisms, fairness, transparency, and effectiveness in dispute resolution all scored around 1.00, the lowest possible score, suggesting a near-total lack of public trust in institutional processes. Respondents described the system as corrupt, inaccessible, and opaque. For instance, a City Council officer observed, *"Serious shortcomings persist, including unethical employees who sell public land, delays of more than three years, and lack of integration."* Another interviewee added that "*Cases are stuck for years while encroachers build stronger claims,"* reflecting the lack of institutional enforcement power and the prolonged nature of dispute resolution. These findings suggest that, beyond resource constraints, widespread corruption, bureaucratic inefficiencies, and lack of accountability have fundamentally undermined the legitimacy and functionality of land governance systems in Dodoma.

Table 2: Perceptions of Legal and Institutional Frameworks in Land Conflict Progression

Institutional Indicators	Mean	Std. Deviation
Capacity and Expertise	1.19	0.393
Accessibility of Legal Mechanisms	1.00	0.062
Fairness and Impartiality	1.01	0.088
Effectiveness in Dispute Resolution	1.00	0.000

Transparency and Accountability	1.01	0.088

Progression of land conflict incidences

To assess how land conflicts manifest and evolve in Dodoma City, the study examined three key indicators: frequency, intensity, and duration of land conflict incidences. These indicators were measured using a 5-point Likert scale, where 1 = Very Low and 5 = Very High. Table 3 presents the mean scores and standard deviations, providing insight into the extent and nature of land conflicts in the study area. The results show that the frequency of land conflicts had a mean score of 2.98, placing it in the "moderate to high" range. Land disputes occur relatively often within the city. The intensity of conflicts was slightly higher at 3.00, indicating that when conflicts occur, they tend to be severe, often involving legal action or physical confrontations. As one land officer noted, *"Disputes frequently escalate to physical fights or long court cases,"* confirming the high-stakes nature of these incidents.

In contrast, the duration of conflict resolution was very low (M = 1.12), suggesting prolonged dispute settlement processes. This reflects systemic delays in mediation and legal processes, as highlighted by the District Land Mediation Council officer, who noted they handled over 300 unresolved cases in the past year. Similarly, the Mtumba Ward chairman stated, "*Slow mediation allows land grabbers to strengthen their claims,"* emphasising how drawn-out processes often embolden illegal occupation. These findings demonstrate that land conflicts in Dodoma are not only common and intense but also protracted, driven by institutional inefficiencies and poor enforcement.

Table 3: Indicators of Land Conflict Incidences in Dodoma City

Indicators	Mean	Std. Deviation
Frequency of Conflicts	2.98	0.186
Intensity of Conflicts	3.00	0.062
Duration of Conflict Resolution	1.12	0.326

Inferential Statistics

Inferential statistics, particularly multiple linear regression, were utilised to analyse the influence of socio-economic and legal-institutional factors on the progression of land conflicts among households in urban and peri-urban Dodoma. This method allowed the simultaneous examination of multiple predictors on a continuous outcome. As Pallant (2020) explained, it provided coefficients showing the strength and direction of each variable's impact while controlling for others. In this study, multiple regression assessed the combined effect of socio-economic and legal frameworks on the progression of land conflict.

Combined Regression Model

The regression analysis revealed a moderate positive relationship between the predictor variables and the progression of land conflicts (R = 0.618), explaining approximately 38.1% of the variance (R^2 = 0.381; Adjusted R^2 = 0.377), with a standard error of 2.883 (Table 4). Although the R^2 value may appear modest, it is considered acceptable in studies of social behaviour and land-related conflicts, where multiple unobserved factors may influence outcomes. Frost (2019) emphasised that in real-world data, particularly in the social sciences, R^2 values below 0.5 are common, and the interpretive value of a model lies not only in its R^2 but also in its statistical significance and contextual relevance. Similarly, Hox (2010) noted that R^2 values around 0.30 are typical for regression models in the social sciences. Supporting this,

Cohen (1988) classified R² values of 0.13 as small, 0.26 as medium, and 0.39 as large within the behavioural sciences, suggesting that the present model approaches a large effect size.

Table 4: Overall Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618a	.381	.377	2.883

a. Predictors: (Constant), Socio-economic factors, Legal and institution frameworks

The ANOVA results from Table 5 (part of the regression output) further confirmed that the model was statistically significant (F = 78.622, p < 0.001), indicating a good model fit.

Table 5: Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1306.596	2	653.298	78.622	.000b
1	Residual	2118.881	255	8.309		
	Total	3425.477	257			

a. Dependent Variable: Progression of land conflict incidences
a. Predictors: (Constant), Socio-economic factors, legal and Institutional framework

Coefficients and Final Regression Equation

Both predictors were statistically significant, as shown in Table 6. Socio-economic factors had a positive influence ($\beta = 0.681$, t = 12.251, p < 0.001), while legal and institutional frameworks had a negative influence ($\beta = -0.183$, t = –3.296, p = 0.001), indicating a mitigating effect on conflict. The regression equation was $LCI = 24.959 + 0.538X_1 - 0.326X_2$, where X_1 = socio-economic factors, X_2 = Legal and institutional frameworks and LCI = Progression of Land Conflict Incidences. This model indicated that for every one-unit increase in socio-economic stress, land conflict progression increased by approximately 0.538 units. In comparison, a one-unit improvement in institutional frameworks decreased conflict progression by about 0.326 units.

Table 6: Regression Coefficients

Model		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		B	Std. Error	Beta		
	(constant)	24.959	1.729		14.436	.000
1	Socio-economic factors	.538	.044	.681	12.251	.000
	Legal and institution frameworks	-.326	.099	-.183	-3.296	.001

a. Dependent Variable: Progression of land conflict incidences
Source: Surveyed data, 2025

Influence of Socio-Economic Factors on the Progression of Land Conflict Incidences

The results of the linear regression analysis showed a positive relationship between socio-economic factors and the progression of land conflict incidences ($\beta = 0.681$, p = 0.000), indicating that socio-economic factors were statistically significant in influencing land conflict progression. The model goodness of fit was: $LCI = 24.959 + 0.538X_1 - 0.326X_2$

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The model implied that a unit change in socio-economic factors would increase the progression of land conflict incidents by 0.538, or 53.8%. If socio-economic factors did not exist, land conflict incidences would decrease to a baseline level of 24.959, keeping legal and institutional frameworks constant.

Influence of Legal and Institutional Frameworks on the Progression of Land Conflict Incidences

The results indicated a negative but statistically significant relationship between legal and institutional frameworks and land conflict progression ($\beta = -0.183$, $p = 0.001$). This suggested that stronger legal and institutional frameworks helped reduce land conflict incidences. The model goodness of fit was: $LCI = 24.959 + 0.538X_1 - 0.326X_2$

The model implied that a unit increase in legal and institutional strength reduced the progression of conflict by 0.326, or 32.6%. Without these frameworks, land conflicts would increase, assuming the socio-economic variable was held constant.

4.2.4 Correlation Analysis for All Variables

Pearson correlation analysis revealed that rising socio-economic challenges were linked to increased land disputes ($r = 0.596**$, $p = 0.000$). Additionally, weak institutional frameworks contributed to land conflict ($r = 0.132*$, $p = 0.034$), confirming significant relationships (Table 7).

Table 7: below shows the result of the correlation analysis.

		Progression of Land Conflict Incidences	Socio-Economic Factors	Legal and Institution Frameworks
Progression of Land Conflict Incidences	Pearson Correlation	1	.596**	.132*
	Sig.(2-tailed)		.000	.034
	N	258	258	258
Socio-Economic Factors	Pearson Correlation	.596**	1	.463**
	Sig.(2-tailed)	.000		.000
	N	258	258	258
Legal and Institution Frameworks	Pearson Correlation	.132*	.463**	1
	Sig.(2-tailed)	.034	.000	
	N	258	258	258

Source: Surveyed data, 2025

Hypothesis testing results

The study hypotheses were tested using linear regression. Results in Table 4.16 indicated that both null hypotheses were rejected, confirming the significant influence of both socio-economic and institutional factors on the progression of land conflict.

Table 4.8: Hypothesis tests

Hypothesis	Relationship	Sig value	Decision
Socio-economic factors do not significantly influence the progression of land conflict incidences among households in Dodoma City.	Positive	0.000	Reject Ho
Legal and institutional frameworks do not significantly influence the progression of land conflict incidences among households in Dodoma City.	Negative	0.001	Reject Ho

Source: Surveyed data, 2025

Thematic Findings on the progression of land conflicts among households

The thematic findings from in-depth interviews in Dodoma City reveal that land tenure insecurity is a central factor driving the progression of land conflicts, rooted in both socio-economic limitations and institutional weaknesses. Although the possession of land ownership documents such as title deeds was found to reduce disputes, systemic challenges, including high costs of titling, fraudulent practices, and bureaucratic inefficiencies, prevented many households, particularly low-income ones, from securing formal ownership. Furthermore, delays in processing title applications and widespread digital exclusion, exacerbated by the implementation of the e-Ardhi system, left many residents reliant on informal land transactions, thereby increasing their vulnerability to disputes. Even where formal documentation existed, undeveloped plots were often perceived as unclaimed, making them targets for encroachment. Thus, the disconnect between legal ownership and practical control contributed to growing insecurity, especially in peri-urban areas.

Institutional drivers also played a significant role in the escalation of land conflicts, particularly due to fragmented land information systems (such as MORIS, IRMIS, and e-Ardhi) and widespread mistrust in land governance structures. The weakened authority of ward councils, combined with corruption among district-level officials and former CDA staff, enabled practices such as multiple plot allocations and illegal sales. Urbanisation pressures following Dodoma's elevation to the national capital exacerbated land competition, fueling the spread of informal settlements. The lack of enforcement mechanisms and public understanding of legal land rights further contributed to a culture of impunity, where encroachers often avoided penalties or were even rewarded with alternative plots. These findings highlight that both socio-economic barriers and institutional failures, rather than the mere absence of documentation, are key to understanding how land conflicts unfold among urban and peri-urban households in Dodoma.

DISCUSSION

This research demonstrates how socio-economic disparities and institutional weaknesses drive land conflicts in Dodoma City, Tanzania. The findings support Resource Dependence and Institutional Theories, emphasising poverty, legal deficiencies, and poor governance as key factors in intensifying disputes. Combining quantitative and qualitative methods, the study captures both broad systemic patterns and individual experiences. These insights are crucial for land policy reform and urban planning amid rapid city growth.

Influence of socio-economic Factors

The study revealed that socio-economic factors play a significant role in the emergence of land conflicts in Dodoma City. Data showed that respondents strongly agree that poverty, employment, education, and income levels are crucial in causing land disputes. Poverty is identified as a primary factor, consistent with Hussein (2024), who argued that economic marginalisation contributes to conflicts between smallholders and investors. Likewise, Matimbwa and Mwalimu (2019) linked poverty and limited

education to conflicts between farmers and pastoralists in Morogoro. Also, regression analysis confirmed these associations, with education level (R^2 = 0.319, t = 10.963) emerging as the most significant predictor, followed by employment, income, poverty, and resource access. The model accounted for 35.5% of the variation in land conflict progression, indicating a notable impact. These results concur with Kisoza (2014), who noted that in the Mkata Plains, poor households compete more fiercely for limited land resources. Qualitative data also revealed that low-income residents often engage in informal land transactions, such as double-selling and land grabbing, driven by financial hardship. Education appears to empower individuals to understand legal land claims better and avoid exploitation.

Moreover, socio-economic factors were the strongest predictor even when considered alongside legal and institutional frameworks (β = 0.681, t = 12.251, p = 0.000). The combined model accounted for 38.1% of the variation, supporting the Resource Dependence Theory (RDT), which posits that competition for scarce resources increases conflict in unequal environments. Unlike Regasa and Molla (2019), who identified ethnicity as a major factor in land conflicts in Ethiopia, this study found little evidence of ethnic tensions in Dodoma. This difference might be due to Tanzania's Ujamaa policies, which historically prioritised national unity over tribal differences in land management.

Influence of Legal and Institutional Frameworks

The study also found a statistically significant relationship between institutional frameworks and the progression of land conflicts. Transparency, accountability, and institutional capacity emerged as key predictors, accounting for 15.0% of the variation (R^2 = 0.150). The negative beta coefficient (β = –0.326, p = 0.001) indicated that stronger institutional frameworks could reduce land conflicts by approximately 32.6%. Respondents expressed widespread dissatisfaction with institutional performance, citing ineffective dispute resolution (M = 1.00), legal inaccessibility, and bias. Interviews revealed systemic issues such as corruption, delayed title processing, and overlapping land registries, consistent with Omodo et al. (2023) and Kwapena et al. (2021), who found that weak institutions exacerbate conflicts. Additional issues included surveyor errors, double allocations, and procedural delays, all of which increased land insecurity. These results support Institutional Theory (North, 1990), which states that weak governance leads to disorder. Kwapena et al. (2021) noted bureaucratic delays in Papua New Guinea, whereas this research emphasised corruption and accountability problems as more significant in Dodoma, likely due to differences in governance systems.

CONCLUSION

The study examined the factors driving escalation of land conflicts in Dodoma City, Tanzania, focusing on socio-economic conditions and legal-institutional frameworks. It found that poverty, unemployment, income inequality, and limited education contribute to land disputes. Poor households often resort to informal land transactions, double-selling, and land grabbing, thereby increasing conflicts. These findings align with Resource Dependence Theory (RDT), which states that competition over scarce resources intensifies disputes amid economic inequality. Inadequate legal and institutional frameworks worsen conflicts through corruption, inefficiency, lack of transparency, and slow dispute resolution. Improving institutional mechanisms could reduce disputes by about 32.6%, supporting Institutional Theory, which emphasises governance. Rapid urban growth and rising populations also increase land pressure, causing boundary conflicts, informal settlements, and illegal land acquisitions. Land tenure insecurity, stemming from a lack of formal documentation, fraud, and poor land management, poses a risk of eviction and land grabbing. These findings highlight the need for policy reforms to address socio-economic inequalities, improve land governance, and strengthen legal frameworks for sustainable urban development and conflict resolution in Dodoma and similar areas.

Recommendations

To reduce land conflicts in Dodoma, strengthen land governance through training officials, decentralise dispute resolution, digitise records, and increase transparency. Promote socio-economic empowerment via public awareness, lower registration costs, and inclusive policies to secure tenure for marginalised groups. Engage communities in urban planning, formalise informal settlements, and coordinate across sectors. Legal reforms should align laws, expedite titling, establish a Land Crimes Tribunal, and encourage alternative dispute resolution and collaboration among local leaders. Future research on conflict, climate change, and migration will inform policies. A multi-stakeholder Land Governance Forum is recommended for better coordination and advocacy. These strategies aim to ensure fair access to land, reduce disputes, and support sustainable development in Dodoma and beyond.

Policy and Practical Implications

This study highlights gaps in Tanzania's 1995 National Land Policy and calls for reforms to address land conflicts in Dodoma City. Sections 3.1 and 3.2 recommend reducing formalisation costs, providing subsidies, and including land rights education in vocational training and microfinance to diversify livelihoods and reduce reliance on informal markets. Increasing social protection can also lessen land-related distress. Sections 4.2 and 4.3 suggest improving land administration, ensuring fair dispute resolution through digital literacy training, penalties for fraud, and decentralising dispute handling to ward-level land committees. To manage urban growth (Sections 5.1 and 5.4), it is important to institutionalise participatory land-use planning, formalise informal settlements, and monitor migration. As per Sections 4.1 and 4.5, speeding up land titling with system integration, awareness campaigns, and a Land Crimes Tribunal can boost tenure security and combat fraud.

Furthermore, implementing these reforms requires boosting institutional capacity and community involvement. Land officers need training in modern surveying, conflict resolution, and digital land management. Local governments should have greater accountability and authority. Community efforts, such as mobile land clinics, can help residents secure legal titles, and strengthening village tribunals can support dispute resolution (ADR). Expanding e-governance and creating a central land database will improve transparency and reduce fraud, with stakeholder collaboration crucial. A Land Governance Forum with government, NGOs, and community leaders can coordinate reform efforts. Private partnerships also promote affordable housing and reduce urban land demand.

Limitations Areas for Further Study

This study provides important insights into land conflicts in Dodoma City, but it has notable limitations. Since it focuses on a single urban area, the results cannot be easily extended to rural areas or to other cities with different land governance systems. Although the sample size of 258 respondents is adequate, it may not represent the full range of stakeholder perspectives. The use of self-reported data carries risks such as recall bias and social desirability bias. Additionally, the study's focus on socio-economic and institutional factors overlooks cultural, historical, and customary influences that significantly impact land governance. These limitations indicate that caution is needed when applying these findings to other contexts. Future research should encompass both rural and urban regions across Tanzania to gain a comprehensive understanding of land conflict dynamics. Employing larger, stratified samples enhances the representativeness of findings, while longitudinal and observational studies help reduce bias and improve validity. Exploring cultural and customary governance through ethnographic approaches would provide deeper insights into conflict-resolution mechanisms. Furthermore, investigating emerging issues such as climate change, rapid urbanisation, and infrastructure projects is crucial, as these factors are likely to influence land ownership patterns and escalate disputes within Tanzania's evolving landscape.

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