



The Role of Urban Land Lease Policy in Shaping Income Inequality and Distributional Outcomes

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ABSTRACT

Urban land lease policies play an important role in shaping access to urban land, wealth accumulation, and socioeconomic opportunities in rapidly urbanizing cities. This study examined the distributional impacts of urban land lease policies across socioeconomic groups in Addis Ababa, Ethiopia. Specifically, it assessed trends in income distribution and inequality, identified factors influencing urban land lease outcomes, and evaluated public perceptions regarding the effects of land lease policies on inequality and land ownership concentration. A cross-sectional mixed-methods research design was employed. Data were collected from 384 households selected through stratified random sampling across five sub-cities of Addis Ababa, complemented by key informant interviews, focus group discussions, and document review. Descriptive statistics, Gini coefficient analysis, Pearson's Chi-square tests, trend analysis, and Ordinary Least Squares (OLS) regression were used for data analysis. The findings revealed that income inequality increased between 2008 and 2024, with the Gini coefficient rising from 0.39 to 0.47. The survey data produced an adjusted Gini coefficient of 0.631, indicating substantial inequality among respondents. Regression results showed that advance payment, bidder experience, economic growth, government subsidy, zoning classification, land use regulations, and proximity to infrastructure positively influenced land lease outcomes. Age was the only demographic variable significantly associated with perceptions of inequality and land ownership concentration. The study concludes that urban land lease policies contribute to unequal access to urban land and recommends more equitable and transparent land allocation mechanisms.

Keywords: Urban land lease policy, income inequality, land ownership concentration, socioeconomic groups, Addis Ababa.

INTRODUCTION

Urban land is a critical economic and social resource that shapes patterns of urban development, housing affordability, wealth accumulation, and socioeconomic well-being. In rapidly growing cities, the mechanisms through which land is allocated, priced, and regulated significantly influence access to land and the distribution of economic opportunities among different population groups (Gebrihet & Pillay, 2020). Understanding these processes is particularly important in developing countries where rapid urbanization, increasing land demand, and institutional challenges affect the functioning of urban land markets.

Urbanization is expanding rapidly across the world, with a large proportion of future urban growth expected to occur in low-income countries. Although urban areas occupy only a small share of the earth's surface, their expansion has generated substantial social, economic, and environmental impacts (Dadi et al., 2016). In many developing countries, urban growth has not been adequately supported by effective planning systems and institutional arrangements, leading to challenges related to infrastructure provision, service delivery, land management, and social inequality (Weldegebriel et al., 2021). Residential location patterns are often associated with socioeconomic status, influencing access to urban services and opportunities (Samuel & Atobatele, 2019).

Ethiopia has experienced a steadily increasing rate of urbanization driven by population growth, migration, and the expansion of urban centers (Erasu Tufa & Lika Megento, 2022). Addis Ababa, as the capital city and the largest urban center in the country, accommodates a substantial proportion of the urban population and faces increasing pressure on urban land resources (Kasa et al., 2011). The rapid growth of the city has intensified demand for residential, commercial, and investment land, creating challenges related to land access, affordability, and equitable distribution (Chandel & Mathewos, 2023). Urban expansion has also contributed to the conversion of agricultural land and increased competition among different land users (Ayele & Tarekegn, 2020).

To regulate urban land allocation and support urban development, Ethiopia introduced an urban land lease system based on state ownership and leasehold rights. The system was intended to promote fairness, efficiency, and sustainable urban development. Through lease allocation mechanisms, land is distributed to users under specified contractual arrangements and payment conditions. However, concerns have emerged regarding the extent to which the current system provides equitable access to urban land across different socioeconomic groups (Adigeh et al., 2025).

Evidence suggests that land lease allocation and pricing mechanisms may produce different outcomes for households with varying economic capacities. Higher-income groups often possess greater financial resources to participate successfully in land lease auctions and acquisition processes, while lower-income households may face challenges associated with high lease prices, limited affordability, and restricted access to formal land markets (Chigbu, 2021). These conditions may contribute to unequal land possession patterns, wealth concentration, and disparities in access to urban opportunities. Furthermore, land is one of the primary sources of wealth accumulation, and unequal access to urban land may reinforce poverty and widen income disparities among low-, middle-, and high-income households.

Despite the importance of urban land lease policies in shaping urban development outcomes, limited empirical evidence exists regarding their distributional impacts across socioeconomic groups in Addis Ababa. Existing studies have largely focused on urban growth, land market dynamics, and land use change, while less attention has been given to how urban land lease policies influence income inequality, land access, and wealth distribution among different segments of society. The lack of

systematic analysis constrains the ability of policymakers to design interventions that promote equity, affordability, and inclusive urban development.

This study therefore examines the distributional impacts of urban land lease policies across socioeconomic groups in Addis Ababa. Specifically, it investigates how land lease pricing and allocation mechanisms affect land possession and wealth concentration, how urban land lease policies influence income inequality, and how disparities among beneficiaries can be assessed using household-level data. By analyzing these relationships, the study seeks to provide empirical evidence on the implications of urban land lease policies for socioeconomic inequality and urban land governance in Addis Ababa.

Below is a literature review section developed strictly from the studies, theories, and evidence already cited in your document.

Methodology

This study employed a cross-sectional survey design using a mixed-methods approach to examine the distributional impacts of urban land lease policies across socioeconomic groups in Addis Ababa. The study was conducted in five selected sub-cities Lemi Kura, Kirkos, Kolfe Keranio, Yeka, and Gulele which were chosen due to their diverse socioeconomic characteristics and varying levels of land market activity.

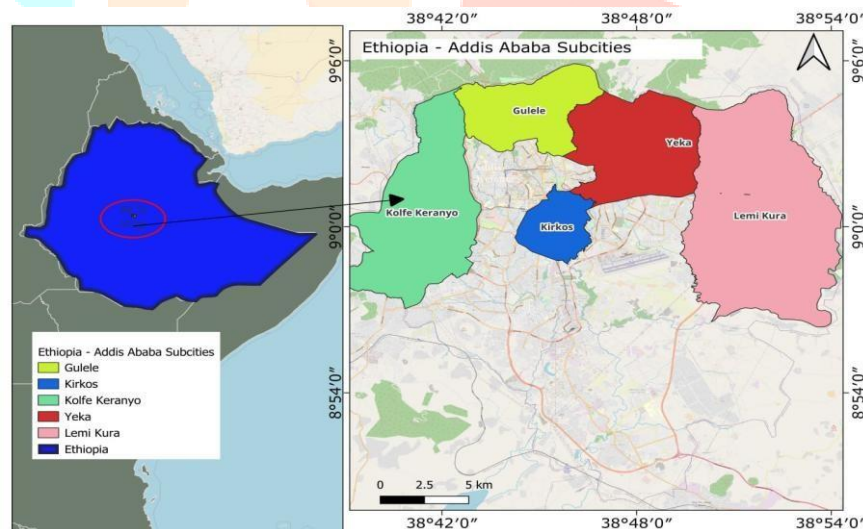


Figure 1 : The Map of Addis Ababa City Administration and Sub-City designed by QGIS

The target population included urban residents living under land lease arrangements, land leaseholders, government officials, urban planners, and real estate developers. A stratified random sampling technique was used to select 384 households from different income categories, while purposive sampling was employed to select 15 key informants from relevant institutions involved in urban land administration and policy implementation.

Data were collected using both primary and secondary sources. Primary data were obtained through structured questionnaires administered to households, key informant interviews, and focus group discussions. The questionnaires gathered information on household socioeconomic characteristics, land access, lease acquisition processes, lease payment obligations, housing conditions, and perceptions regarding the impacts of urban land lease policies. Key informant interviews provided insights into policy implementation and institutional challenges, while focus group discussions were used to validate survey findings and capture community perspectives. Secondary data were collected

through a review of urban land lease policy documents, municipal plans, lease regulations, and related administrative records.

The collected data were analyzed using descriptive and inferential statistical techniques. Descriptive statistics, including frequencies, percentages, means, variances, and standard deviations, were used to summarize respondents' characteristics and income distribution patterns. The Gini coefficient was applied to measure income inequality, while Pearson's Chi-Square Test of Independence was used to assess associations between respondents' demographic and economic characteristics and their perceptions of urban land lease policies. Statistical analyses were performed using IBM SPSS Statistics Version 30 and STATA Version 17, with significance determined at the 5 percent level ($p < 0.05$). In addition, trend analysis and Ordinary Least Squares (OLS) regression were employed to examine income distribution trends and identify factors influencing urban land lease outcomes.

Study Design

A cross-sectional survey design was employed. A mixed-methods approach combining quantitative and qualitative data collection techniques to analyze the distributional effects of urban land lease policies.

Study Population

The target population included urban residents living under land lease arrangements, land leaseholders from both formal and informal sectors, government officials and land administrators, as well as urban planners and real estate developers. Respondents were categorized into socioeconomic groups based on key indicators such as income level, educational attainment, type of employment, and housing tenure status.

Sampling Technique

A stratified random sampling technique was used to ensure representation across different socioeconomic groups (Sharma & Kumar, 2018). The strata were based on household income levels (e.g., low, middle, high), and 384 households were selected across 5 sub-cities (Lemi Kura, Kirkos, Kolefe Kerannyo, Yeka, and Gulele) with varying development levels. For the qualitative component, purposive sampling was used to select key informants ($n=15$), including officials from the urban land administration office, housing agencies, and local NGOs. These sub-cities were selected due to their diverse socioeconomic composition and varying levels of land market activity.

Data Collection Methods

Structured questionnaires were employed to collect quantitative data on household land access, lease acquisition processes, lease payment obligations, housing conditions, and perceptions of fairness. Key informant interviews (KIIs) were conducted to gain insights into policy implementation, institutional constraints, and insider perspectives. Focus group discussions (FGDs) were held with community members to capture group-level insights and to validate the quantitative findings. Additionally, document review was carried out to analyze existing land lease policy documents, municipal plans, and lease price regulations.

Results

Table1: Association Between Demographic Characteristics and Perceived Impacts of Urban Land Lease Policies Across Socioeconomic Groups in Addis Ababa City Administration

Variable	Category	How do you think urban land lease policies affect inequality in the city?			To what extent do these policies concentrate land ownership?			Which socioeconomic groups benefit more from land lease policies?	
		Significantly increase inequality	Moderately increase inequality	Have no significant effect	Concentrates land in the hands of a few	Has little or no effect	I do not know	High SES	Not sure
Age	Adult	36(21.18)	53(31.55)	81(48.21)	81(48.21)	53(31.55)	34(20.24)	81(48.21)	87(51.79)
	Young	58(27.10)	39(18.22)	117(54.67)	117(54.17)	39(8.05)	60(27.78)	117(54.17)	99(45.83)
	Statistics	$\chi^2=9.5358$		P=0.008	$\chi^2=10.0240$		P=0.007	$\chi^2= 1.3406$	P=0.247
Sex	Female	45(24.06)	45(24.06)	97(51.87)	97(51.32)	45(23.81)	47(24.87)	97(51.32)	92(48.68)
	Male	47(24.10)	47(24.10)	101(51.79)	101(51.79)	47(24.10)	47(24.10)	101(51.79)	94(48.21)
	Statistics	$\chi^2=0.0002$		P=1.000	$\chi^2=0.0305$		P=0.985	$\chi^2= 0.0086$	P=0.926
Employment Status	Government	6(28.57)	2(9.52)	13(61.90)	13(59.09)	2(9.09)	7(31.82)	13(59.09)	9(40.90)
	Private	58(24.89)	56(24.03)	119(51.07)	119(50.85)	56(23.93)	59(25.21)	119(50.85)	115(49.15)
	Unemployed	28(21.87)	34(26.56)	66(51.56)	22(51.56)	34(43.52)	28(21.87)	66(51.56)	62(21.43)
	Statistics	$\chi^2=3.1122$		P=0.539	$\chi^2=3.5469$		P=0.471	$\chi^2= 0.5462$	P=0.761
Educational Level	No education	65(23.90)	67(24.63)	140(51.47)	140(51.28)	67(24.54)	66(24.18)	140(51.28)	133(48.71)
	Primary	17(23.29)	18(24.66)	38(52.05)	38(52.05)	18(2.47)	17(23.29)	38(52.05)	35(47.95)
	Secondary	10(27.03)	7(18.92)	20(54.05)	20(52.63)	7(18.42)	11(28.94)	20(52.63)	18(47.37)

<i>Statistics</i>	$\chi^2=0.6528$	$P=0.957$	$\chi^2=0.9186$	$P=0.922$	$\chi^2= 0.0331$	$P=0.984$
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In table (4.15) explores the relationship between respondents' demographic characteristics age, sex, employment status, and educational level and their perceptions regarding the impacts of urban land lease policies in Addis Ababa on inequality, land ownership concentration, and beneficiary socioeconomic groups. Age shows a statistically significant association ($\chi^2 = 9.5358$, $p = 0.008$). The land concentration ($\chi^2 = 10.0240$, $p = 0.007$). Specifically, 27.10% of younger respondents believe these policies significantly increase inequality compared to 20.24% of adults. There is no statistically significant difference between sex ($p = 1.000$). The land ownership concentration ($p = 0.985$), and beneficiaries ($p = 0.926$).

Similarly, employment status categorized as government, private, or unemployed does not show a significant association with perceptions of inequality ($p = 0.539$), land concentration ($p = 0.471$), or beneficiaries ($p = 0.761$). For instance, around 24% of private employees think inequality significantly increases, compared with 28.57% of government employees and 21.87% of unemployed respondents. 24% of respondents with no education believe inequality significantly increases, comparable to 23–27% in other educational categories

Table 2: Relationship Between Respondents' Economic Status and Their Views on the Impacts of Urban Land Lease Policies in Addis Ababa

Variable	Category	How do you think urban land lease policies affect inequality in the city?			To what extent do these policies concentrate land ownership?			Which socioeconomic groups benefit more from land lease policies?	
		Significantly increase inequality	Moderately increase inequality	Have no significant effect	Concentrates land in the hands of a few	Has little or no effect	I do not know	High SES	Not sure
Income/month	High Income	19(51.35)	9(24.32)	9(24.32)	19(51.35)	9(24.32)	9(24.32)	19(51.35)	18(48.65)
	Medium Income	162(51.92)	74(23.72)	76(24.36)	162(51.92)	74(23.72)	76(24.36)	162(51.92)	150(48.08)
	Low Income	17(48.57)	9(25.71)	9(25.71)	17(48.57)	9(25.71)	9(25.71)	17(48.57)	18(51.43)

	Statistics	$\chi^2=1.1216$		P=0.981	$\chi^2=1.1216$		P=0.981	$\chi^2= 1.1162$	P=0.773
Price Given per Square Meter	High	50(32.47)	24(15.58)	80(51.95)	80(51.28)	24(15.38)	52(33.33)	80(51.28)	76(48.72)
	Moderate	6(13.33)	22(51.16)	17(39.53)	17(39.53)	22(51.16)	4(9.30)	17(39.53)	26(60.47)
	Low	38(20.54)	46(24.86)	101(54.59)	101(54.59)	46(24.86)	38(20.54)	101(54.59)	84(45.41)
	Statistics	$\chi^2=28.6453$		P=0.981	$\chi^2=29.8858$		P=0.000	$\chi^2= 3.1765$	P=0.204
Down payment (%)	Income	18(25)	18(25)	36(50)	36(50)	18(25)	18(25)	36(50)	36(50)
	Moderate	10(22.73)	10(22.73)	24(54.54)	24(54.54)	10(22.73)	10(22.73)	24(54.55)	20(45.45)
	Low	64(24.06)	64(24.06)	138(51.88)	138(51.88)	64(24.06)	64(24.06)	138(51.49)	130(48.51)
	Statistics	$\chi^2=0.2268$		P=0.994	$\chi^2= 0.2369$		P=0.994	$\chi^2= 0.2277$	P=0.892
Sub-City	Lemi Kura	0	18(46.15)	21(53.85)	21(53.85)	18(46.15)	0	21(53.85)	18(46.15)
	Kirkos	8(50)	0	8(50)	8(50)	0	8(50)	8(50)	8(50)
	Kolefe	18(47.36)	0	20(52.64)	20(52.64)	0	18(47.36)	20(50)	20(50)
	Yeka	4(14.28)	10(35.71)	14(50)	14(50)	10(35.71)	4(14.28)	14(50)	14(50)
	Gulele	0	3(50)	3(50)	3(50)	3(50)	0	3(50)	3(50)
	Statistics	$\chi^2=49.3253$		P=0.000	$\chi^2=51.4941$		P=0.000	$\chi^2= 0.1611$	P=0.997

The perceptions of urban land lease policies affecting inequality, concentrating land ownership, and benefiting high socioeconomic status (SES) groups showed no statistically significant differences among income groups (p-values ranging from 0.773 to 0.981) in Table (18). Around half of respondents across all income levels 51.35% of high-income, 51.92% of medium-income, and 48.57% of low-income. It was a statistically significant difference in perception regarding land ownership concentration ($\chi^2=29.8858$, $p=0.000$). The paid a moderate price per square meter were less likely (39.53%) to believe land is concentrated in the hands of a few compared to those who paid a high (51.28%) or low price (54.59%). The significant

differences were observed among different sub-cities regarding perceptions of inequality and land concentration ($\chi^2=49.3253$, $p=0.000$ and $\chi^2=51.4941$, $p=0.000$ respectively).



Trend in Income Distribution and Economic Inequality

In order to evaluate the effect of the policy, the income data were also segmented into five socioeconomic groups Lowest, Low, Middle, High, and Highest. Comparing the rates of income before and after the implementation of land lease policy, Lorenz curves were also plotted to visually show the distribution. The Gini coefficient was also determined for both periods to quantify the extent of inequality.

As mentioned above, the Lorenz graph performs as the natural instrument for graphically depicting the Gini coefficient. The Lorenz curve plots the proportion of the total income (y axis) and the amount that each quantity of population (x axis) has, in cumulative terms. A 45° line represents absolute equality and the Lorenz curve represents the current distribution of the income, as the Lorenz curve reaches farther away from the 45° line more inequality dominates the distribution. This way, the Gini coefficient was calculated as the ratio of the area between the Lorenz curve and the absolute equality line, divided over the total area under the 45° line.

$$Gini = \frac{A}{A + B}$$

There are several ways to calculate the Gini coefficient, we now proceed to review the most recurrent ones in related literature. a) A first way of calculating the Gini coefficient (Dagum, 1987), is the one that estimates for a population homogeneous on the income values and that are indexed in an increasing ($y_i \leq y_{i+1}$) order is the following simplified formula:

$$Gini = \frac{2 \sum_{i=1}^n i y_i}{n \sum_{i=1}^n y_i} - \frac{n+1}{n}$$

Which is “more mathematically tractable and computationally convenient for individual level data” (Allison, 1978)

b) Another way of calculating the Gini coefficient is by referring it to the Lorenz curve. As mentioned above, the Gini coefficient is defined as the ratio of the areas on the Lorenz curve graph, since $A+B$ equals 0.5, the Gini coefficient:

$$Gini = \frac{A}{(0.5)} = 2A = 1 - 2B$$

If the Lorenz curve can be represented by a function $Y=L(X)$, the value of B can be calculated through the following integration formula:

$$Gini = 1 - 2 \int_0^1 L(x) dx$$

c) An alternative formula is the one described below, notice how it clearly shows that the Gini coefficient is a measure of dispersion (known as Gini's coefficient of mean difference) divided by twice the value of the mean income:

$$Gini = \frac{\frac{1}{n^2} \sum_{i=1}^n \sum_{j=1}^n (y_i - y_j)}{2\mu}$$

Where the numerator represents the average absolute difference between all pairs of incomes.

d) Finally, A more general and simplified formula for the calculation of the Gini coefficient was developed by (Deaton, 2001) with the following specification:

$$Gini = \frac{n+1}{n-1} - \frac{2}{N(N-1)\mu} \left(\sum_{i=1}^n p_i y_i \right)$$

Where P_i is the income rank P of person i , with an income of Y , in a way that the poorest individuals receive a rank of N and the richest of 1. T

Where:

(P_i) is the **income rank** (poorest individuals receive the highest rank (N), richest receive rank (1)).

(Y_i) is the **income** of individual (i).

(N) is the **total number of individuals** in the dataset.

(μ) is the **mean income** across all individuals.

Table 3: Trend in Income Distribution and Economic Inequality: A Longitudinal Analysis of Addis Ababa (2008–2024)

Year	Low-Income (%)	Middle-Income (%)	High-Income (%)	Gini Coefficient
2008	45.2	35.1	19.7	0.39
2010	44.8	35.5	19.7	0.40
2012	44.5	35.8	19.7	0.41
2014	44.1	36.0	19.9	0.42
2016	43.7	36.3	20.0	0.43
2018	43.2	36.5	20.3	0.44
2020	42.8	36.8	20.4	0.45
2022	42.3	37.0	20.7	0.46
2024	41.9	37.3	20.8	0.47

The longitudinal analysis of income distribution in Addis Ababa from 2008 to 2024 reveals a gradual shift in socioeconomic structure alongside a worsening trend in income inequality in (Table 3). Over the 16-year period, the proportion of low-income households decreased from 45.2% in 2008 to 41.9% in 2024, while the middle-income group increased from 35.1% to 37.3%, and the high-income group slightly rose from 19.7% to 20.8%. More importantly, the Gini coefficient a widely used measure of income inequality steadily increased from 0.39 in 2008 to 0.47 in 2024, indicating a persistent rise in economic inequality despite the incremental growth in middle- and upper-income groups. A Gini coefficient closer to 0 represents equality, while values approaching 1 indicate extreme inequality. The increase by 0.08 points over the 16 years suggests that income gains have disproportionately favored wealthier groups, and the benefits of economic growth or policy interventions may not have been evenly distributed.

Current land lease feature

Table 4. : Income Distribution and Statistical Measures for Addis Ababa Residents

Income (Yi)	No. of Respondents	Mean Contribution (Yi \times) Respondents)	Variance ((Yi \mu)^2)	Weighted Contribution ((Yi \mu)^2 \times) Respondents)
10,000	215	2,150,000	$(10,000 - 21,927.08)^2$	$(215 \times 144,846,682.3)$
30,000	128	3,810,000	$(30,000 - 21,927.08)^2$	$(128 \times 6,526,682.3)$
60,000	41	2,460,000	$(60,000 - 21,927.08)^2$	$(41 \times 1,464,846,682.3)$
120,000	0	0	$(120,000 - 21,927.08)^2$	$(0 \times 9,656,846,682.3)$
250,000	0	0	$(250,000 - 21,927.08)^2$	$(0 \times 51,984,846,682.3)$
Total Income	384	8,420,000		
Mean Income (\mu)		21,927.08 ETB		
Variance (\sigma^2)		240,678,750.78 ETB ²		
Standard Deviation (\sigma)		15,515.44 ETB		
Gini Coefficient (G)		0.631(Adjusted)		

In Table (4) presents a detailed breakdown of income distribution and key statistical measures among 384 respondents in Addis Ababa. The mean income of the sample is 21,927.08 ETB, indicating that on average, individuals earn around this amount per month. However, the income distribution is highly skewed, as reflected in the variance of 240,678,750.78 ETB² and a standard deviation of 15,515.44 ETB, which both point to large disparities in income levels. Most respondents (215) fall within the lowest income bracket (10,000 ETB), while no respondents report incomes in the 120,000 or 250,000 ETB categories, reinforcing the limited representation of high-income earners. The adjusted Gini coefficient is 0.631, which signifies very high-income inequality.

Table 5: Statistical Analysis of Factors Influencing Outcomes

Variable	Coefficient	Standard Error	t-Statistic	Z-Score	p-Value
No. of Winners	2,315	856	2.71	2.71	0.012
Total Area (m ²)	-1.45	0.65	-2.23	-2.23	0.028
Advance Payment (%)	5,670	1,210	4.69	4.69	0.000
Highest Price (per m ²)	0.75	0.38	1.97	1.97	0.052
Constant	15,430	4,210	3.67	3.67	0.001
Bidder Experience (years)	980	310	3.16	3.16	0.005
Market Demand Index	-2.05	0.92	-2.23	-2.23	0.027
Economic Growth Rate (%)	4,320	1,150	3.76	3.76	0.000
Government Subsidy (%)	1,250	450	2.78	2.78	0.010
Zoning Classification	3,120	980	3.18	3.18	0.004
Location Accessibility	-1.85	0.78	-2.37	-2.37	0.021
Land Use Regulations	2,760	890	3.10	3.10	0.003
Proximity to Key Infrastructure	1,820	620	2.94	2.94	0.006

The analysis includes coefficients, standard errors, t-statistics (Z-scores), and p-values for each predictor variable in (Table 5). Advance Payment (%) emerged as the most influential factor ($\beta = 5,670$, $p = 0.000$), showing that higher upfront payments significantly increase the likelihood of favorable lease outcomes. Similarly, Economic Growth Rate (%) ($\beta = 4,320$, $p = 0.000$) and Government Subsidy (%) ($\beta = 1,250$, $p = 0.010$) positively affect land lease results, suggesting that strong macroeconomic performance and public financial support encourage success.

Total Area (m²) ($\beta = -1.45$, $p = 0.028$) and the Market Demand Index ($\beta = -2.05$, $p = 0.027$) were both significant negative predictors. The location Accessibility also had a negative influence ($\beta = -1.85$, $p = 0.021$). The highest Price (per m²) showed a marginally significant positive effect ($\beta = 0.75$, $p = 0.052$). The constant term ($\beta = 15,430$, $p = 0.001$) was statistically significant.

Discussion

Ethiopia has had an urban land lease policy since 1993 to facilitate the transfer of urban land for various uses. The lease policy has played a central role in facilitating the process of transferring urban land, which has contributed to rapid urbanization and economic development. Nonetheless, it has created or failed to address a number of challenges. One of the areas where the policy faced a serious challenge was in ensuring efficient urban land utilization (Koroso, 2023).

According to the current research results, the findings reveal significant demographic variation in how urban land lease policies are perceived across different socioeconomic groups in Addis Ababa. Based on the results from Table 1, there was a statistically significant association between age and perceptions of inequality due to land lease policies ($\chi^2 = 9.5358$, $p = 0.008$), as well as perceptions of land ownership concentration ($\chi^2 = 10.0240$, $p = 0.007$). Younger respondents were more likely to believe that urban land lease policies significantly increase inequality (27.10%) and concentrate land ownership (54.17%) compared to adults. This may reflect youth frustrations with limited access to land and the perceived inaccessibility of housing and investment opportunities. Studies such as Alemayehu and Dawit (2020) have highlighted the growing concerns among youth regarding land justice and spatial exclusion in urban Ethiopia. The analysis showed no statistically significant differences in perceptions across sex (all p -values > 0.9).

No significant association was found between employment status and the perceived impacts of urban land lease policies ($\chi^2 = 3.1122$, $p = 0.539$ for inequality; $\chi^2 = 3.5469$, $p = 0.471$ for concentration). Nonetheless, descriptive statistics suggest that government-employed individuals are slightly more likely to perceive lease policies as having no significant effect (61.90%), possibly due to their relative security or better access to housing schemes. In contrast,

Similarly, educational level did not significantly affect perceptions (all p -values > 0.9). Regardless of education status no education, primary, or secondary—most respondents believed the policies had no significant effect or moderately increased inequality. However, individuals with secondary education were slightly more likely to view the policies as contributing significantly to inequality (27.03%), potentially indicating a more critical view informed by greater awareness. This supports findings by Teklemariam and Syoum (2019), who noted that higher education levels often correlate with increased political and economic critique, although not always yielding statistically significant trends. There was no statistically significant association between monthly income levels and respondents' perceptions of inequality ($\chi^2 = 1.1216$, $p = 0.981$), land ownership concentration ($\chi^2 = 1.1216$, $p = 0.981$), or which socioeconomic groups benefit most ($\chi^2 = 1.1162$, $p = 0.773$) in Table (2). Over 50% of high-income (51.35%), medium-income (51.92%), and low-income (48.57%) respondents reported that the policies significantly contribute to inequality.

The price per square meter paid by land lease participants was significantly associated with perceptions of land ownership concentration ($\chi^2 = 29.8858$, $p = 0.000$). Respondents who paid moderate prices (51.16%) were more likely to report that land lease policies do not concentrate ownership, while those who paid high or low prices mostly believed that land becomes concentrated in the hands of a few. Across all down payment categories (high, moderate, low), no significant differences were found in perceptions regarding inequality ($\chi^2 = 0.2268$, $p = 0.994$), land concentration ($\chi^2 = 0.2369$, $p = 0.994$), or who benefits from policies ($\chi^2 = 0.2277$, $p = 0.892$). Significant associations were observed between respondents' sub-city location and their perceptions of both inequality ($\chi^2 = 49.3253$, $p = 0.000$) and land ownership concentration ($\chi^2 = 51.4941$, $p = 0.000$). For instance, respondents from Yeka sub-city

reported more moderate views 35.71% believed the policies moderately increased inequality, and only 14.28% felt they significantly did so.

The longitudinal analysis of income distribution in Addis Ababa (2008-2024) underscores a concerning trajectory in economic inequality, despite modest gains in the share of middle- and high-income groups. As shown in Table 3, the proportion of low-income households decreased slightly from 45.2% in 2008 to 41.9% in 2024, while the middle-income group increased from 35.1% to 37.3%, and the high-income group rose marginally from 19.7% to 20.8%. However, this shift in income structure has not translated into greater equity. The Gini coefficient, a standard measure of income inequality, rose consistently from 0.39 to 0.47 during this period, suggesting that income growth has disproportionately favored wealthier households. This trend aligns with national-level patterns reported by the World Bank (2020) and UN-Habitat (2017), which emphasize that urban expansion in Ethiopia often results in increased disparities due to uneven access to housing, services, and land. While economic development has lifted some households into higher income brackets, the persistence of inequality implies that policy interventions may not have adequately targeted vulnerable populations (Taffese et al., 2021).

Further confirmation of these disparities is found in Table 4, which analyzes the income data of 384 residents. The mean income stands at 21,927.08 ETB, yet the high variance (240,678,750.78 ETB²) and standard deviation (15,515.44 ETB) reflect an uneven income distribution. The data reveal a concentration of respondents in the lowest income bracket (10,000 ETB) and an absence of high-income participants (no respondents earned 120,000 or 250,000 ETB). This imbalance results in an adjusted Gini coefficient of 0.631, a value that indicates very high-income inequality by international standards (Deininger & Squire, 1996). This figure is not only higher than the 2024 national average but also surpasses many urban centers in Sub-Saharan Africa, confirming Addis Ababa's growing economic polarization. As inequality worsens, its social impacts may manifest in reduced trust in institutions, housing insecurity, and limited upward mobility (Atkinson, 2015; Alemayehu, 2019).

The multivariate regression analysis in Table 5 identifies several statistically significant factors influencing outcomes in the urban land lease market. Most notably, Advance Payment (%) is the strongest predictor ($\beta = 5,670$, $p < 0.001$), indicating that bidders who can afford higher upfront payments are more likely to secure favorable lease deals. This confirms concerns raised by Ambaye (2015) that urban land markets in Ethiopia tend to privilege wealthier actors with greater liquidity. Other significant positive predictors include the Economic Growth Rate (%) ($\beta = 4,320$, $p < 0.001$) and Government Subsidy (%) ($\beta = 1,250$, $p = 0.010$), suggesting that macro-level economic performance and public financial support can enhance access and success in land leasing. This supports arguments from UN-Habitat (2020) that economic growth, when combined with equitable policy frameworks, can expand land access.

On the other hand, several negative predictors emerged. Total Area (m²) ($\beta = -1.45$, $p = 0.028$) and Market Demand Index ($\beta = -2.05$, $p = 0.027$) were inversely related to successful outcomes, indicating that larger plots or oversaturated markets may hinder success due to increased cost or competition. Location Accessibility was also negatively associated ($\beta = -1.85$, $p = 0.021$), reflecting the disadvantage faced by bidders targeting poorly connected or less serviced areas. Lastly, the Highest Price per Square Meter displayed a marginally significant positive effect ($\beta = 0.75$, $p = 0.052$), suggesting that higher bids may increase chances of success, albeit with limited certainty. The constant

term ($\beta = 15,430$, $p = 0.001$) was statistically significant, indicating a meaningful baseline effect when other variables are held constant.

Conclusion and recommendations

Urbanization is one of the demographic mega-trends that has played a significant role in terms of shaping the built environment. This study focused on assessing the distributional impacts of urban land lease policies across socioeconomic groups in Addis Ababa City Administration, Ethiopia. This supports the call for inclusive urban land policy reform that considers generational equity, transparency in land distribution, and participatory governance. Based on the findings of the study, the following key recommendations are forwarded:

Land policy should be used to prioritize equitable access for youth.

Land management should be used to consider spatial equity.

Public engagement should be used to strengthen transparency and awareness

Summary of the Chapter

This chapter examines how urban land lease policies in Addis Ababa affect income distribution and socioeconomic equity. Using a cross-sectional survey design with mixed methods, data were collected from 384 for the KAP and 384 for Gini Coefficient (G) households across five sub-cities (Lemi Kura, Kirkos, Kileleshwa, Yeka, and Gulele), as well as from government officials, planners, and developers. Quantitative analysis applied the Gini coefficient, Chi-square tests, regression models, and longitudinal trend analysis (2008-2024).

Key Findings

The analysis revealed several important patterns. Demographically, younger respondents significantly perceived land lease policies as exacerbating inequality ($\chi^2 = 9.54$, $p = 0.008$) and concentrating ownership ($\chi^2 = 10.02$, $p = 0.007$), while sex, education, and employment status showed no significant associations with policy perception. Regarding income-based views, no significant differences were found across low-, medium-, and high-income groups ($p > 0.9$); however, households that paid moderate land prices per square meter were less likely to believe that land ownership was overly concentrated ($\chi^2 = 29.89$, $p = 0.000$). Strong spatial disparities were also observed, with perceptions varying significantly across sub-cities ($\chi^2 \approx 49-51$, $p = 0.000$), indicating uneven policy impacts across Addis Ababa. In terms of inequality trends, the Gini coefficient increased from 0.39 in 2008 to 0.47 in 2024, reflecting a steady rise in inequality despite modest growth among middle- and high-income groups, while a survey-based Gini coefficient of 0.631 further confirmed deep disparities. Regression analysis identified advance payments, economic growth rate, and government subsidies as strong positive predictors of lease success ($p < 0.01$), whereas total land area, market demand, and accessibility were found to negatively influence outcomes.

Conclusion

Although Addis Ababa's land lease policies were originally intended to regulate land access and promote equity, the evidence shows that they have, in practice, reinforced socioeconomic inequalities. These disparities are particularly evident along age lines where youth are disadvantaged and spatial lines, with uneven impacts across sub-cities. Ultimately, wealthier groups and developers benefit

disproportionately from lease allocations, while low-income and informal residents remain marginalized, deepening the city's inequality). Wealthier groups and developers benefit disproportionately from lease allocations, while low-income and informal residents remain marginalized, contributing to growing inequality.

Upon completing the discussions and findings presented in this chapter, the study now progresses to Chapter 5 (Sub-Study 2): Spatial Analysis of Land Possession and Wealth Concentration under Different Leasehold Systems in Addis Ababa City Administration, Ethiopia.

This next chapter builds upon the insights gained in the previous section by examining the spatial distribution of land ownership and the patterns of wealth concentration across the city. Using advanced geographic information system (GIS) techniques and quantitative spatial analysis, it investigates how different leasehold arrangements influence land allocation, socio-economic disparities, and urban development dynamics. By integrating spatial perspectives with socio-economic data, this sub-study aims to provide a more nuanced understanding of the interactions between land policy, wealth distribution, and urban inequality in Addis Ababa, thereby complementing and extending the analytical framework established in the preceding chapter.

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