

## ORIGINAL RESEARCH ARTICLE

# Unveiling speculators in Addis Ababa: Insights, recommendations, and economic implications for sustainable development

Bedane S. Gemed<sup>1</sup>, Giuseppe T. Cirella<sup>2\*</sup>, Birhanu G. Abebe<sup>3</sup>, Fekede T. Gemed<sup>1</sup>

<sup>1</sup> Addis Ababa City Land Development and Management Bureau, Addis Ababa 1000, Ethiopia

<sup>2</sup> Faculty of Economics, University of Gdansk, 81-824 Sopot, Poland

<sup>3</sup> Ethiopian Institute of Architecture, Building Construction and City Development, Addis Ababa University, Addis Ababa 1000, Ethiopia

\* Corresponding author: Giuseppe T. Cirella, gt.cirella@ug.edu.pl

## ABSTRACT

Land speculation poses a significant challenge in Ethiopia, particularly in urban and peri-urban areas where large acquisitions and land scarcity prevail. This study aims to discern land speculators in Addis Ababa by employing the motivation and scale method to optimize societal benefits. Employing a multi-sourced data approach and triangulation techniques, this research enhances data reliability. Primary data sourced from interviews, focus groups, and field surveys, supplemented by secondary data from various literature, spanning October 2021 to January 2023, forms the basis of the analysis. Results indicate that affluent individuals, brokers, bankers, and local government officials dominate land speculation activities in both urban core and periphery areas of Addis Ababa, perpetuating the unfair exclusion of lower-income groups from land ownership. To address this issue, three key recommendations are proposed: implementing a one-person, one-plot statute, imposing high property value taxes, and enforcing temporal restrictions on land development. Additionally, exploring the economic and business ramifications of these recommendations on investment patterns and market dynamics is crucial for ensuring their sustained effectiveness in fostering sustainable development.

**Keywords:** cooperative ownership; land hoarding; land speculation; Land Use Act; market dynamics; policy effectiveness; socio-spatial inequalities; urban land distribution

## 1. Introduction

Land speculation presents a pressing challenge in Ethiopia, despite the enactment of the 1993 Land Use Act, which aimed to curb escalating land prices driven primarily by speculative activities. The persistence of large acquisitions and land scarcity in urban and peri-urban areas underscores the ongoing complexity of the issue<sup>[1-4]</sup>. Effective land management is fundamental to establishing a sustainable cycle encompassing city planning, land use development, and the mitigation of speculation<sup>[5]</sup>. Speculative investors prioritize profit generation through land trading rather than its productive utilization, particularly evident in housing, which represents a critical component of urban development<sup>[6,7]</sup>. This profit-driven approach often leads to overvaluation of assets, triggering property bubbles prone to bursts<sup>[8,9]</sup>. Speculative activities, as Mohamed<sup>[8]</sup>

### ARTICLE INFO

Received: 11 May 2024 | Accepted: 3 June 2024 | Available online: 24 June 2024

### CITATION

Gemed BS, Cirella GT, Abebe BG, Gemed FT. Unveiling and speculators in Addis Ababa: Insights, recommendations, and economic implications for sustainable development. *Eco Cities* 2024; 4(2): 2723. doi: 10.54517/ec.v4i2.2723

### COPYRIGHT

Copyright © 2024 by author(s). *Eco Cities* is published by Asia Pacific Academy of Science Pte. Ltd. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), permitting distribution and reproduction in any medium, provided the original work is cited.

suggests, often serve undesirable goals, leading to a prolonged cycle of tension, exacerbated by policy responses that may not yield immediate success. Consequently, developers tend to favor projects on greenfield sites, prioritizing quick returns over sustainable land use practices<sup>[10]</sup>.

Urban expansion encroaching upon the urban periphery is emblematic of economic commitment<sup>[11,12]</sup>. Despite Addis Ababa's notable urbanization trajectory, particularly since the 1960s, it grapples with urban growth and speculation. Speculators hoarding vacant land in urban and peri-urban zones capitalize on substantial profits. Ethiopia recognizes this as a pressing issue, prompting the establishment of the Land Use Act to mitigate escalating land prices fueled by speculative activities. Data from the Addis Ababa City Land Development and Management Bureau reveals that out of the city's total area of 54 km<sup>2</sup>, 35 km<sup>2</sup> is subject to land speculation. Despite efforts, the challenge of extensive land acquisitions and scarcity persists in the metropolitan peripheries, indicating an ongoing issue<sup>[13,14]</sup>. This study endeavors to identify land speculators utilizing the motivation and scale method, with the aim of addressing this challenge and maximizing societal benefits. Furthermore, it emphasizes the imperative of considering economic and business sustainability aspects, especially regarding the potential implications of proposed measures on investment trends and market dynamics, to ensure enduring efficacy. Additionally, to formulate policy recommendations aligned with speculation best practices, a comprehensive analysis of the drivers behind land speculation on the urban periphery of Addis Ababa was conducted.

## 2. Related works

Andreasson et al.<sup>[15]</sup> liken speculators to high-risk traders resembling gamblers, contrasting them with investors who base their decisions on fundamentals and analysis, thus minimizing risks. An ideal investment ensures safety, generates income, and yields returns after careful deliberation. Speculative operations, on the other hand, fail to meet these criteria. While investors acquire land as a productive asset, speculators aim to profit from its market value appreciation<sup>[16]</sup>. Changes in consumer preferences, supply conditions, or key fundamentals do not necessarily incite speculation<sup>[17]</sup>. Despite their potential impact on prices, alterations in fundamentals do not inherently signal speculative activity in the land market, as argued by Knittel and Pindyck<sup>[17]</sup>. Speculative demand, influenced by external factors and government policies, drives fluctuations in the real estate market, particularly shaping urban periphery areas<sup>[2]</sup>.

Moreover, Zhang et al.<sup>[18]</sup> delve into the analysis of spatio-temporal characteristics and socioeconomic factors influencing land disputes, while concurrently exploring the coupling dynamics between land transfer and carbon emissions, elucidating the broader environmental implications of land speculation processes<sup>[19]</sup>. Additionally, a separate study investigates the impact of socioeconomic factors on the scale of land transfer across 287 cities in China, offering valuable insights into the diverse dynamics of land utilization and their ramifications for sustainable development<sup>[20]</sup>. The emergence of private land developers often arises from the government's inability to meet the soaring demand for housing, leading to haphazard and fragmented expansion of residential areas in cities<sup>[21–23]</sup>. This phenomenon may account for the prevalence of unplanned construction observed in urban fringe developments. Non-compliance with residential development regulations by developers could exacerbate this issue. Wrenn and Irwin<sup>[24]</sup> suggest that developers may flout standard development controls when faced with delays in residential subdivision approvals, fearing financial losses. Furthermore, Lawanson et al.<sup>[25]</sup>, Rukwaro and Olima<sup>[26]</sup>, and Kombe<sup>[27]</sup> argue that governmental authorities' incompetence and negligence in enforcing regulations, coupled with developers' disregard for building codes and planning guidelines, particularly regarding infrastructure services such as road networks, building setbacks, and sewer systems, are primary drivers of haphazard development<sup>[28,29]</sup>.

Within the realm of land speculation, a critical facet requiring deeper examination is the evaluation of

investment value and worth<sup>[30,31]</sup>. Determining the value of land for speculative purposes entails considering a multitude of factors that influence its investment potential<sup>[30,32,33]</sup>. This assessment process is inherently context-specific, varying based on the objectives, strategies, and financial capacities of individual speculators or investor entities<sup>[14,34]</sup>. A pivotal aspect in evaluating investment value lies in the land's location. Factors such as proximity to urban hubs, transportation networks, amenities, and future development prospects heavily shape the perceived value of the property<sup>[14,35]</sup>. Speculators scrutinize current and projected growth trajectories, demographic shifts, and governmental initiatives to gauge investment potential. Moreover, the regulatory and legal framework governing land use and development profoundly influences investment value<sup>[36,37]</sup>. Speculators meticulously analyze zoning ordinances, land use policies<sup>[28,38]</sup>, and potential regulatory alterations that could impact future land value<sup>[37]</sup>. A comprehensive understanding of the legal landscape aids speculators in assessing risks and anticipating regulatory changes that may affect their investments. Additional factors in the assessment of worth encompass the availability and reliability of essential utilities and services, including water, electricity, and sanitation. These considerations contribute to the attractiveness and marketability of the land, thereby influencing its investment value<sup>[39,40]</sup>.

Moreover, the financial dimensions of the investment, encompassing acquisition expenses, potential returns, and associated risks, significantly influence the land's worth<sup>[41–43]</sup>. Speculators engage in financial assessments, evaluating cash flow forecasts, prospective capital appreciation, and the timeframe for realizing investment returns<sup>[40,44]</sup>. It is essential to recognize that the evaluation of investment value and worth in land speculation is subjective and reliant on the specific goals and strategies of individual speculators or investor entities. Each entity brings its own distinct criteria, expertise, and risk tolerance to appraise the potential return on investment<sup>[40]</sup>. Thus, the foundation of value in land speculation is inherently entity-specific, with different investors prioritizing and valuing distinct factors based on their unique circumstances and objectives.

Triantafyllopoulos<sup>[45]</sup> categorizes participants in speculative practices into three tiers. The first tier comprises “informed speculators,” who have access to both public and private information, often including public officers responsible for land plot distribution. The second tier consists of “uninformed speculators,” who possess only public information. Lastly, “private purchasers,” referred to as investors or developers, make up the third tier and are not driven by information. Similarly, Maruani and Amit-Cohen's<sup>[46]</sup> study on the urban periphery of Lagos, Nigeria, identifies developers, landowners, and local estate agents as major players. However, these actors often assume multiple roles; for instance, developers function as investors, orchestrating land development projects, shaping the spatial organization of open areas, and contributing to urban periphery growth<sup>[46,47]</sup>. Additionally, developers have been characterized as “growth machines” for cities by Wilson and Jonas<sup>[48]</sup> and Logan and Molotch<sup>[49]</sup>. The literature underscores the complexity of land speculation, highlighting its nuanced impact on various stakeholders and the broader economy, necessitating further research for comprehensive understanding.

### 3. Materials and methods

The motivation and scale method were chosen for its robust framework in identifying land speculators by examining both the motivations behind speculative behavior and the scale of their activities. This method provides a nuanced analysis of factors influencing land speculation, including economic incentives, policy environments, and market conditions<sup>[50,51]</sup>. Grounded in behavioral economics and urban development theories, it posits that individuals engage in land speculation due to perceived financial gain opportunities, shaped by policy loopholes and market dynamics. By assessing individual motivations through qualitative data from interviews and focus groups and quantifying the scale of activities using quantitative data from

field surveys, a comprehensive profile of land speculators can be created.

Implementation of the motivation and scale method involved several key steps. First, qualitative data were gathered to understand the motivations of potential land speculators through in-depth interviews with key informants and focus group discussions with various stakeholders. Second, quantitative data were collected to measure the scale of speculative activities, including the amount of land acquired, the frequency of transactions, and the duration of land holding. These data were analyzed using a convergent triangulation approach to cross-verify findings and identify patterns. By combining qualitative insights with quantitative measures, the method provided a detailed understanding of who the land speculators are, why they engage in speculation, and the extent of their activities. This detailed approach enables policymakers and officials to develop targeted interventions to address land speculation effectively. By elaborating on the theoretical basis and implementation details, the application of this method becomes clearer, helping readers appreciate its utility in identifying and tackling the challenges posed by land speculators.

### 3.1. Primary and secondary data

The study focuses on Addis Ababa, Ethiopia, aiming to identify land speculators in both the urban core and periphery using the motivation and scale method. To ensure robust findings, two questionnaire groups were formed: one targeting a random and representative sample of 320 members from the local land developer alliance, and another targeting 215 individuals identified as potential land speculators. A total of 535 questionnaires were distributed, however, only 505 were completed and returned. Questions were formulated based on existing literature and practical experiences to address pertinent issues, specifically targeting participants who had accumulated and held onto land in the study area for several years. **Table 1** provides a breakdown of the land speculation questionnaire utilized in the study. Data collection was facilitated by the Addis Ababa City Land Development and Management Bureau, ensuring a straightforward process for obtaining data.

**Table 1.** Breakdown of the land speculation questionnaire used in the study (Source: Authors' own fieldwork, 2022).

No.	Question
1)	Arrange the following factors according to their frequency of use in land speculation activities in Addis Ababa, from most to least common: Land acquisition patterns of speculators Tenure status of speculators Strategies employed by speculators Access to credit facilities Sources of finance for speculation
2)	Prioritize the following variables based on their significance in determining land speculation in Addis Ababa, from most to least important: Land price Holding periods Holding size Ownership transfers Volume of transactions Instances of building violations Instances of planning violations
3)	From your perspective, discuss the positive and negative impacts of land speculation.
4)	Describe the general role of property speculation in Addis Ababa. Do you perceive any differences in your sub-city, and if so, how do they manifest?
5)	In your view, what are the primary causes of urban property speculation?
6)	Who do you believe are the key actors involved in built-up land speculation?
7)	What potential measures do you think could be implemented to regulate and control land speculation?

An analysis of the socio-demographic characteristics of the sampled participants revealed that 254 individuals (50.1%) were between the ages of 30 and 40. Regarding gender distribution, 78.2% were male, while 21.8% were female, reflecting prevalent cultural norms where male dominance is prominent across various spheres. In terms of educational attainment, the majority of respondents (88.8%) had tertiary education, with 6.9% having attended primary school and 4.3% having attended secondary school. Furthermore, in terms of primary professions, 40.5% identified as businessmen, 15.4% as civil servants, 31.4% as land and property developers, and 12.7% as other professions (**Table 2**).

**Table 2.** Socio-demographic characteristics of the participants (Source: Authors' own fieldwork, 2022).

No.	Indicator	Frequency	Percentage
1)	<b>Age</b>		
	20–29 years	203	40.2
	30–39 years	254	50.1
	40+ years	48	9.7
2)	<b>Sex</b>		
	Male	395	78.2
	Female	110	21.8
3	<b>Educational background</b>		
	Primary	35	6.9
	Secondary	22	4.3
	Tertiary	448	88.8
4	<b>Main occupation</b>		
	Businessmen	205	40.5
	Civil servants	78	15.4
	Land and property developers	159	31.4
	Other	63	12.7

To bolster the study's reliability, a combination of data sources and triangulation techniques was utilized, specifically adopting a convergent triangulation approach. This method allowed for the integration and comparison of data collected from multiple sources, ensuring a comprehensive and robust analysis. In the study, primary data were collected through interviews, focus group discussions, and field surveys. These data sources provided firsthand insights and qualitative information about land speculation activities, capturing the experiences and perspectives of various stakeholders. The interviews involved key informants such as local officials, real estate developers, and community leaders, who offered in-depth knowledge about the dynamics of land use and speculation in Addis Ababa. Focus group discussions facilitated a broader understanding by engaging diverse participants, including residents and urban planners, in dialogue about the impact of land speculation on their communities. Field surveys added another layer of primary data, enabling the gathering of quantitative information and the direct observation of land use practices.

Secondary data were obtained from literature reviews, articles, and policy documents, offering contextual and historical perspectives on land use and policy measures. These sources provided a foundation for understanding the broader trends and regulatory frameworks that influence land speculation. By integrating secondary data, the study was situated within the existing body of knowledge, identifying gaps that this research aimed to address. The convergent triangulation approach involved independently analyzing the primary and secondary data sets before combining the findings. This process enabled the cross-

verification of information, the identification of patterns, and the resolution of discrepancies. By comparing the results from different data sources, the credibility and validity of the conclusions were enhanced. This methodological rigor ensured that the findings were not solely reliant on a single data source, thereby reducing potential biases and increasing the robustness of the analysis.

The triangulated data helped accurately pinpoint the key figures involved in land speculation within both the urban core and peri-urban areas of Addis Ababa. This comprehensive understanding allowed for well-founded recommendations to policymakers and elected officials. These recommendations aim to deter land hoarding and promote responsible land utilization, ultimately contributing to sustainable urban development. By employing this rigorous triangulation method, the reliability of the study is strengthened, providing a more nuanced analysis of land speculation in Addis Ababa. This approach not only corroborates the findings but also enhances the overall robustness of the research, making the conclusions more actionable and relevant for addressing the challenges of land speculation in urban development.

### 3.2. Identifying land speculators

To identify these speculators, the motivation and scale method, adapted from Widdis<sup>[50]</sup>, was employed. This method delves into the motivation behind an individual or group's land acquisition activities, as well as the scale of their acquisitions and the frequency thereof. By scrutinizing these aspects, it becomes possible to discern land speculators and evaluate their impact on urban development. Such insights are invaluable for policymakers aiming to encourage responsible land usage and curb land hoarding by speculators. One significant challenge in differentiating between land speculators and non-speculators was determining a suitable discriminator. To tackle this hurdle, several variables were utilized, including acres held, acres cleared, involvement in land sales, and capitalization inputs, which can be utilized on one-dimensional axes for speculator identification and classification. Data analysis was carried out using Microsoft Excel and STATA software, facilitating the tabulation and analysis of primary data. To elucidate the behavior of urban land and speculators, temporal equilibrium conditions were considered, as proposed by Gameda<sup>[35]</sup>, over static ones.

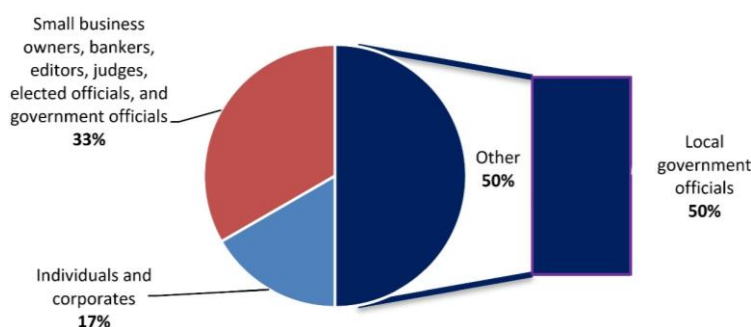
Through extensive dialogue and the collation of secondary data spanning from October 2021 to January 2023, this study facilitated the identification and categorization of land speculators in Addis Ababa. Initially, 64 individuals were identified as potential speculators; however, 20 were subsequently excluded from the study due to failing to meet eligibility criteria, such as transactions among family members or gifts. Consequently, 44 individuals were recognized as local speculators. Additionally, data obtained from the Addis Ababa City Land Development and Management Bureau in early 2023 confirmed that each prospective speculator was required to possess more than 400 m<sup>2</sup> of land, aligning with prevailing cultural and economic norms during the study period.

## 4. Results

### 4.1. Nominated land speculators

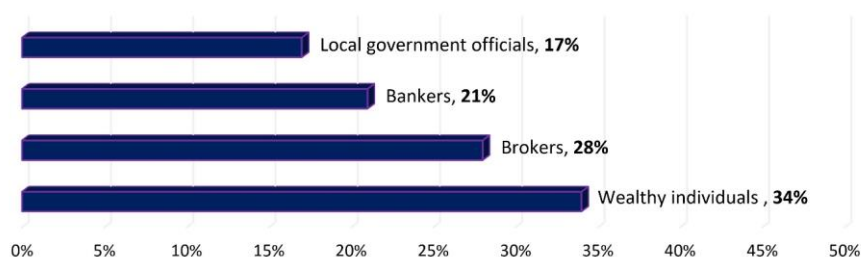
As depicted in **Figure 1**, the study area was segmented into distinct categories based on the nature of the speculators. The first group comprised affluent individuals and businessmen who acquired properties through warranty deeds or tax-titled quitclaim deeds at minimal prices. Possessing ample financial resources, these individuals and corporations could retain the land until a profitable opportunity arose. Predominantly residing in their home states, most of these speculators were affluent. The second group encompassed small business owners, bankers, editors, judges, elected officials, and government functionaries who engaged in property investment as a supplementary venture. The third category comprised local government officials

who held vacant land in Addis Ababa for prolonged periods. Insights from interviews corroborated the prevalence of land speculation in the city over the past decade, particularly between 2015 and 2022, involving affluent individuals, officials, planners, politicians, dealers, and bankers.



**Figure 1.** Land speculators according to the fraction of land hoarding in Addis Ababa, 2023.

As noted in the methodology, in order to ensure the accuracy and validity of the collected data, triangulation was conducted through interviews with nominated land speculators across various regions of Addis Ababa. Employing multiple data sources augmented the study's findings, corroborating data from primary and secondary sources and offering a more comprehensive insight into the subject matter. Findings from the fieldwork revealed that wealthy individuals constituted the majority of land speculators (34%), followed by brokers (28%), bankers (21%), and local government officials (17%), as illustrated in **Figure 2**.



**Figure 2.** Land speculators by category, 2023.

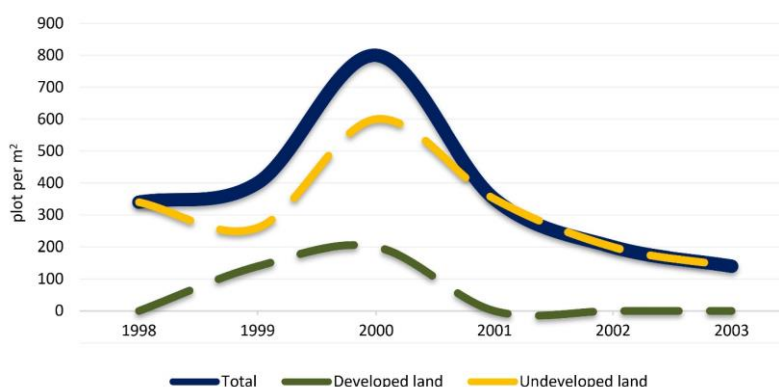
## 4.2. Types of land speculators

Based on the fieldwork and data sourced from the Addis Ababa City Land Development and Management Bureau, two distinct types of property speculators were identified within the study area. The first category, classical speculators, engaged in the short-term acquisition of land with the aim of selling it for profit in the near future. In contrast, the second category, known as land bankers, acquired substantial parcels of land and retained ownership over extended periods, sometimes spanning decades, anticipating substantial increases in land value before either selling or developing the property.

### 4.2.1. Classical speculators

Upon reviewing data from the Addis Ababa City Land Development and Management Bureau, it was evident that non-resident landowners were not prevalent in the Bole sub-city, a southeastern suburb of Addis Ababa. However, during earlier periods, a minority of individuals held extensive land holdings for prolonged durations, subsequently divesting portions of them at various intervals or in their entirety without actively developing the land. For instance, one affluent individual, as depicted in **Figure 3**, participated in this practice. The prevalence of such activity reached its zenith around 2000 before experiencing a notable decline from 2001 to 2003. It is noteworthy that this phenomenon extends beyond the confines of the Bole sub-city and is widespread across Addis Ababa. The absence of robust regulation and enforcement of land

utilization and development policies has facilitated the accumulation of vast expanses of undeveloped land by affluent individuals and corporations, exacerbating challenges for many citizens in accessing land for housing and other essential purposes.



**Figure 3.** Land trading in Addis Ababa by classical speculators in terms of plot per m<sup>2</sup>, 1998–2003.

The trend of affluent individuals viewing land as a lucrative investment extends beyond undeveloped properties. Through fieldwork, it emerged that the wealthiest individual among the interviewees, a native of Addis Ababa involved in legal counseling and legislative assembly duties, viewed land ownership as a profitable venture. This individual acquired a substantial amount of partially developed land early in life, which was subsequently divested in large quantities without significant further development efforts. Consequently, numerous parcels of semi-developed land across Addis Ababa remained dormant. Regarding urban land development, this individual lacked the resources, capital, or inclination to retain the property for maximizing selling prices, akin to trading assets like stocks. Thus, development activities on the land often occur haphazardly, overseen by local residents without adequate supervision.

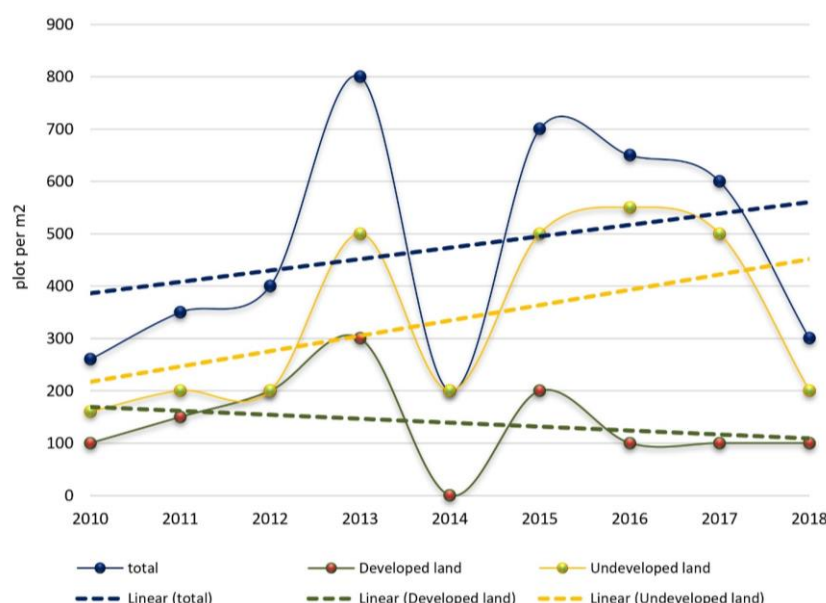
#### 4.2.2. Land bankers

In the Akaky Kaliti sub-city, the southernmost suburb of Addis Ababa, a notable figure emerged as a significant player in the local land market—a distinguished banker and land speculator. This individual, among the earliest to engage in land speculation within the city, amassed a substantial land portfolio across all areas of Addis Ababa. Over the period spanning from 2010 to 2018, this individual engaged in frequent property transactions, reaping considerable profits along the way. Diverging from conventional property developers, this individual primarily functioned as a land banker, akin to managing large-scale stock portfolios. Their approach prioritized land acquisition without immediate development intentions, opting instead to retain the properties until their value was significantly appreciated (**Figure 4**). This strategy, focused on swift returns rather than land development, resulted in escalated property values, attracting like-minded buyers. Unlike many investors constrained by limited financial resources, this individual's long-term outlook provided them with a competitive advantage in the market. However, it is plausible that some property owners encountered difficulties in selling their holdings, prompting them to accept lower prices to fulfill tax obligations.

The analysis of **Figure 4** underscores the success of the land banker strategy employed by individuals, particularly during the initial years of the land market's development. However, as the market matured and government intervention increased, challenges arose. The fluctuation in property values is apparent, notably declining from 2016 to 2018 due to market saturation with similar property transactions. This scenario illustrates the volatile nature of a land speculator's fortunes in a dynamic market environment. In essence, individuals adopting this strategy epitomize the archetype of land speculators primarily focused on acquiring



and reselling land for profit rather than engaging in development activities, as inferred from the linear interpretation of the data between developed and undeveloped land.



**Figure 4.** Land trading in Addis Ababa by land bankers in terms of plot per m<sup>2</sup>, 2010–2018.

## 5. Discussion and conclusions

The findings of this study resonate with prior research, particularly the categorization of participants in speculative activities by Triantafyllopoulos<sup>[45]</sup> into informed speculators, uninformed speculators, and private purchasers. Notably, the fieldwork identified individuals of considerable wealth as the primary actors in both the urban core and periphery of Addis Ababa, followed by brokers, bankers, and local government officials. Such findings underscore the pressing need for robust policies and enforcement mechanisms aimed at promoting responsible land utilization and curbing land hoarding by speculators<sup>[2,13,14]</sup>. Implementing such measures holds the potential to foster equitable access to land and facilitate sustainable urban development not only in Addis Ababa but also in other Ethiopian cities.

Furthermore, the significance of urban land access as a national asset cannot be overstated. Unfortunately, some individuals lack the financial means to participate in land acquisition or navigate allocation methods, placing them at a distinct disadvantage. Prior studies have highlighted how speculators, capitalizing on the lease system, amass fortunes and subsequently outbid lower-income groups in land lease auctions<sup>[3,13,52]</sup>. This unfair advantage enables speculators to engage in unlimited lease bids, effectively excluding marginalized groups from land acquisition opportunities. Consequently, this scenario fosters an imbalanced negotiation dynamic between the government and speculators regarding urban land distribution. Addressing these disparities and leveling the playing field is imperative for promoting inclusive urban development and fostering socioeconomic equity.

Additionally, several limitations were encountered during the triangulation process, mainly due to data incompatibility and potential biases. Discrepancies between qualitative data from interviews and quantitative data from field surveys posed challenges. These were addressed through cross-referencing and multiple rounds of analysis to validate the information. To mitigate biases in data collection, a diverse range of stakeholders was included, and standardized procedures with neutral, open-ended questions were used. Observer bias during field surveys was minimized through extensive training of field researchers and regular audits of the collected data. Despite these limitations, triangulation significantly enhanced the study's

reliability by providing a multi-faceted view of land speculation activities. The combined use of different data sources allowed for a comprehensive understanding and cross-verification of findings, thereby strengthening the accuracy and validity of the results. Acknowledging and addressing these limitations ensured a more transparent and robust analysis, contributing valuable insights for policymakers and stakeholders involved in sustainable urban development.

Future research in this area could explore several avenues for deeper understanding. Firstly, investigating the specific strategies and mechanisms employed by wealthy individuals, brokers, bankers, and local government officials in land speculation across the urban core and periphery of Addis Ababa would provide valuable insights. Delving into their motivations, tactics, and networks could inform the development of targeted policies and enforcement measures. Secondly, conducting comparative studies across various Ethiopian cities or regions would offer insights into the diverse practices of land speculation and their impacts on urban development. Examining the roles of speculators in different urban contexts and evaluating the effectiveness of policy interventions would provide a broader perspective on the issue.

Moreover, delving deeper into the socioeconomic implications of land speculation and hoarding would provide a comprehensive understanding of their broader consequences. Analyzing their effects on housing affordability, displacement of vulnerable populations, and socio-spatial inequalities is essential<sup>[53–55]</sup>. Additionally, assessing the effectiveness of existing policies and enforcement mechanisms aimed at curbing land speculation and promoting responsible land use is crucial. Identifying gaps, obstacles, and potential enhancements in the current regulatory framework would assist policymakers in developing more robust strategies. Exploring alternative models for land distribution and access, such as community land trusts or cooperative ownership structures, could offer fruitful insights. Assessing the feasibility, impact, and scalability of these models in the Ethiopian context would contribute to discussions on equitable land distribution and sustainable urban development<sup>[56,57]</sup>. By addressing these areas in future studies, researchers can advance our understanding of land speculation, inform evidence-based policymaking, and contribute to the creation of more inclusive and sustainable urban environments.

Understanding the economic and business ramifications of recommendations aimed at curbing land speculation is crucial for ensuring sustained effectiveness in fostering sustainable development. Insights into how these policies influence investment patterns and market dynamics provide valuable guidance for long-term urban development strategies. By anticipating potential shifts in investment behavior and market responses, policymakers can refine their approaches to mitigate unintended consequences and promote equitable growth. Moreover, a thorough understanding of the economic implications helps policymakers adapt policies to evolving market conditions, ensuring their continued relevance and efficacy. Thus, a comprehensive analysis of the economic and business dimensions is essential for achieving lasting progress towards sustainable development goals.

In conclusion, addressing the issue of land speculation in Ethiopia requires a multifaceted approach that includes proactive measures to identify and regulate speculators' activities. The motivation and scale method, employed in this study, serves as an effective tool for pinpointing speculators and understanding the extent of their activities. However, identifying speculators is only the first step; implementing robust policy interventions is necessary to control and mitigate their impact. Several key policies are proposed to address land speculation. The “one-person, one-plot statute” aims to limit plot acquisition, ensuring that individuals cannot monopolize land resources. This policy would be implemented through a thorough registration process, backed by a robust monitoring system to ensure compliance. A comprehensive database of land ownership would be established, with regular audits to detect and prevent violations.

Additionally, imposing high property value taxes is suggested as a deterrent against speculative land holdings. This would involve a progressive tax structure, where the tax rate increases with the value of the property, thereby discouraging individuals from holding multiple plots purely for speculative purposes. Regular assessments would be necessary to reflect changes in market values, ensuring that the tax system remains effective over time. Temporal restrictions on land development are also crucial. These restrictions would set clear timelines for land development, with penalties for non-compliance to incentivize productive land use. This policy aims to prevent land from being left idle for long periods, thus promoting active development and utilization. Regular inspections would be conducted to enforce these timelines and ensure compliance. The expected effects of these policies include a significant reduction in speculative activities and an increase in the availability of land for lower-income groups, promoting fairer land ownership distribution. These measures are designed to create a more equitable urban landscape where access to land is not disproportionately skewed toward affluent individuals and speculators.

However, several challenges may arise in the implementation of these policies. Resistance from affluent speculators, administrative hurdles, and potential market disruptions are anticipated. To address these challenges, comprehensive response strategies are necessary. Public awareness campaigns can help garner support for these policies, highlighting their benefits for sustainable urban development. Streamlined administrative processes are essential to reduce bureaucracy and facilitate smooth implementation. Additionally, economic incentives, such as subsidies or tax breaks for compliant landowners, can encourage adherence to the new regulations. By detailing these implementation mechanisms and evaluation strategies, the proposed recommendations become more actionable and practical. This detailed approach enhances their potential for success in promoting sustainable urban development and fairer land distribution. Ultimately, effective oversight and regulation by elected officials and authorities are crucial to realizing these policy objectives. Responsible land use practices across Ethiopia's cities can only be fostered through diligent enforcement and continuous evaluation of these policies. This comprehensive approach aims to curb speculative activities, ensuring that urban land serves the needs of the many rather than the interests of a few, thereby fostering a more inclusive and sustainable urban development trajectory for Ethiopia.

## **Author contributions**

Conceptualization, methodology, software, validation, formal analysis, investigation, resources, data curation, writing—original draft preparation, BSG, GTC, BGA, and FTG; writing—review and editing, visualization, supervision, project administration, funding acquisition, GTC. All authors have read and agreed to the published version of the manuscript.

## **Funding**

This research was funded by the Polo Center of Sustainability, grant number PCS-AFR1001-202. The APC was funded by the Polo Center of Sustainability.

## **Institutional review board statement**

The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of the University of Gdansk (Protocol code: "FoE Project-101021" for PCS-AFR1001-202; date of approval: 10 October 2021).

## **Acknowledgments**

The authors are grateful to the Addis Ababa City Land Development and Management Bureau for their

assistance in data collection, the Faculty of Economics at the University of Gdansk, and the Ethiopian Institute of Architecture at Addis Ababa University for supporting this work. We also express gratitude to several colleagues and faculty members for their valuable advice in piecing together the manuscript and refining conceptual development.

## Conflict of interest

The authors declare no conflicts of interest.

## References

1. Dimuna KO. Enhancing Land Acquisition for Individual Housing Development in Nigeria: A Case Study of Benin Metropolis Edo State, Nigeria. *International Journal of Research and Innovation in Applied Science*. 2016; 1: 1-9.
2. Gemeda BS, Abebe BG, Cirella GT. Urban land speculation: model development. *Property Management*. 2020; 38(5): 613-626. doi: 10.1108/pm-01-2020-0007
3. Gemeda BS, Abebe BG, Cirella GT. How Efficient Is Urban Land Speculation? In *Sustainable Human–Nature Relations: Environmental Scholarship, Economic Evaluation, Urban Strategies*. Springer; 2020.
4. Nwoko KC. Land Ownership versus Development in the Era of Globalisation: A Trajectory of Conflict and Wealth Accumulation in Southern Nigeria. *Journal of African Transformation*. 2016; 1: 77-94.
5. Molotch H. The city as a Growth Machine: Toward a Political Economy of Place. *American Journal of Sociology*. 1976; 82(2): 309-332. doi: 10.1086/226311
6. Chang V, Newman R, Walters RJ, et al. Review of economic bubbles. *International Journal of Information Management*. 2016; 36(4): 497-506. doi: 10.1016/j.ijinfomgt.2016.02.007
7. Makkonen T, Williams AM. Border region studies: the structure of an ‘offbeat’ field of regional studies. *Regional Studies, Regional Science*. 2016; 3(1): 355-367. doi: 10.1080/21681376.2016.1209982
8. Mohamed R. The Psychology of Residential Developers. *Journal of Planning Education and Research*. 2006; 26(1): 28-37. doi: 10.1177/0739456x05282352
9. Siegel JJ. What Is an Asset Price Bubble? An Operational Definition. *European Financial Management*. 2003; 9(1): 11-24. doi: 10.1111/1468-036x.00206
10. Mehari A, Genovese PV. A Land Use Planning Literature Review: Literature Path, Planning Contexts, Optimization Methods, and Bibliometric Methods. *Land*. 2023; 12(11): 1982. doi: 10.3390/land12111982
11. Fauser M. The Emergence of Urban Border Spaces in Europe. *Journal of Borderlands Studies*. 2017; 34(4): 605-622. doi: 10.1080/08865655.2017.1402195
12. Joshua PB, Glanda GG, Ilesanmi FA. The Effects of Land Speculation on Urban Planning and Development in Bajabure Area, Girei Local Government, Adamawa State. *Journal of Environment and Earth Science*. 2016; 6: 128-133.
13. Gemeda BS, Abebe BG, Paczoski A, et al. What Motivates Speculators to Speculate? *Entropy*. 2019; 22(1): 59. doi: 10.3390/e22010059
14. Cirella GT. *Uncertainty Shocks in Africa: Impact and Equilibrium Strategies for Sound Economic and Social Development*. Springer: Cham; 2023.
15. Andreasson P, Bekiros S, Nguyen DK, et al. Impact of speculation and economic uncertainty on commodity markets. *International Review of Financial Analysis*. 2016; 43: 115-127. doi: 10.1016/j.irfa.2015.11.005
16. CRSP (Center for Research in Security Prices). Index Definitions and Calculations. Available online: <https://www.crsp.org/> (accessed on 1 May 2023).
17. Knittel CR, Pindyck RS. The Simple Economics of Commodity Price Speculation. *American Economic Journal: Macroeconomics*. 2016; 8(2): 85-110. doi: 10.1257/mac.20140033
18. Zhang M, Tan S, Chen E, et al. Spatio-temporal characteristics and influencing factors of land disputes in China: Do socio-economic factors matter? *Ecological Indicators*. 2024; 160: 111938. doi: 10.1016/j.ecolind.2024.111938
19. Zhang M, Zhang Z, Tong B, et al. Analysis of the coupling characteristics of land transfer and carbon emissions and its influencing factors: A case study of China. *Frontiers in Environmental Science*. 2023; 10. doi: 10.3389/fenvs.2022.1105552
20. Zhang M, Tan S, Zhang X. How do varying socio-economic factors affect the scale of land transfer? Evidence from 287 cities in China. *Environmental Science and Pollution Research*. 2022; 29(27): 40865-40877. doi: 10.1007/s11356-021-18126-6
21. Boanada-Fuchs A, Boanada Fuchs V. The role of real estate developers in urban development. *Geoforum*. 2022; 134: 173-177. doi: 10.1016/j.geoforum.2022.05.009
22. Boukari W, Long F. Do the developers need government assistance? The effect of TIF policy on affordable housing construction budgets. *Cities*. 2022; 120: 103398. doi: 10.1016/j.cities.2021.103398

23. Czischke D, van Bortel G. An exploration of concepts and policies on 'affordable housing' in England, Italy, Poland and The Netherlands. *Journal of Housing and the Built Environment*. 2018; 38(1): 283-303. doi: 10.1007/s10901-018-9598-1
24. Wrenn DH, Irwin EG. Time is money: An empirical examination of the effects of regulatory delay on residential subdivision development. *Regional Science and Urban Economics*. 2015; 51: 25-36. doi: 10.1016/j.regsciurbeco.2014.12.004
25. Lawanson T, Yadau O, Salako I. Investigation of Rural-Urban Linkages of the Lagos Megacity. *Journal of Construction, Project Management and Innovation*. 2012; 2: 461-481.
26. Rukwaro RW, Olima WHA. Developer Profits Undermine Residents' Satisfaction in Nairobi's Residential Neighbourhood: Implications for Local Government in Kenya. *Habitat International*. 2003; 27: 143-157. doi: 10.1016/S0197-3975(02)00040-1
27. Kombe WJ. Land Use Dynamics in Peri-Urban Areas and Their Implications on the Urban Growth and Form: The Case of Dar Es Salaam, Tanzania. *Habitat International*. 2005; 29: 113-135. doi: 10.1016/S0197-3975(03)00076-6
28. Baye F, Adugna D, Mulugeta S. Administrative failures contributing to the proliferation and growth of informal settlements in Ethiopia: The case of Woldia Township. *Heliyon*. 2023; 9(3): e13758. doi: 10.1016/j.heliyon.2023.e13758
29. Mycoo MA, Bharath K. Sustainable Development Goal 11 and a New Urban Agenda for Caribbean Small Island Developing States: Policy, Practice, and Action. *Frontiers in Sustainable Cities*. 2021; 3. doi: 10.3389/frsc.2021.554377
30. Rauf MA, Weber O. Housing Sustainability: The Effects of Speculation and Property Taxes on House Prices within and beyond the Jurisdiction. *Sustainability*. 2022; 14(12): 7496. doi: 10.3390/su14127496
31. Davis A. Defining speculative value in the age of financialized capitalism. *The Sociological Review*. 2017; 66(1): 3-19. doi: 10.1177/0038026117711637
32. Hirano T, Stiglitz J. Land Speculation and Wobbly Dynamics with Endogenous Phase Transitions. *National Bureau of Economic Research*; 2022. doi: 10.3386/w29745
33. Bentick BL. The Impact of Taxation and Valuation Practices on the Timing and Efficiency of Land Use. *Journal of Political Economy*. 1979; 87(4): 859-868. doi: 10.1086/260797
34. Krajewska M, Szopińska K, Siemińska E. Value of land properties in the context of planning conditions risk on the example of the suburban zone of a Polish city. *Land Use Policy*. 2021; 109: 105697. doi: 10.1016/j.landusepol.2021.105697
35. Gameda BS. The Role of the Property Tax in Urban Land Speculation. *Journal of Environment and Earth Science*. 2020; 9: 37-41. doi: 10.7176/JEES/9-1-05
36. Kornegay FA. The Speculative Geopolitics of Conflict and Intervention in Northeast Africa: A Review Essay. *A Current Bibliography on African Affairs*. 1981; 14(1): 3-12. doi: 10.1177/001132558201400103
37. Meth P, Goodfellow T, Todes A, et al. Conceptualizing african urban peripheries. *International Journal of Urban and Regional Research*. 2021; 45(6): 985-1007. doi: 10.1111/1468-2427.13044
38. Foldvary FE. Market-hampering Land Speculation: Fiscal and Monetary Origins and Remedies. *The American Journal of Economics and Sociology*. 1998; 57(4): 615-637. doi: 10.1111/j.1536-7150.1998.tb03382.x
39. Almudhaf F. Speculative bubbles and irrational exuberance in African stock markets. *Journal of Behavioral and Experimental Finance*. 2017; 13: 28-32. doi: 10.1016/j.jbef.2016.11.002
40. Bhattacharyya D. Speculation. *Comparative Studies of South Asia, Africa and the Middle East*. 2020; 40(1): 51-56. doi: 10.1215/1089201x-8186038
41. Zeqiraj V, Sohag K, Hammoudeh S. Financial inclusion in developing countries: Do quality institutions matter? *Journal of International Financial Markets, Institutions and Money*. 2022; 81: 101677. doi: 10.1016/j.intfin.2022.101677
42. Lausberg C, Lee S, Müller M, et al. Risk measures for direct real estate investments with non-normal or unknown return distributions. *Zeitschrift für Immobilienökonomie*. 2019; 6(1): 3-27. doi: 10.1365/s41056-019-00028-x
43. Cheng P, Lin Z, Liu Y. Characteristics of Long-run Return and Risk: A Unified Performance Metric. *Journal of Real Estate Research*. 2017; 39(2): 165-188. doi: 10.1080/10835547.2017.12091468
44. Devarajan S, Gill IS, Karakulah K. Debt, Growth and Stability in Africa: Speculative Calculations and Policy Responses. *Journal of African Economies*. 2021; 30(Supplement\_1): i74-i102. doi: 10.1093/jae/ejab022
45. Triantafyllopoulos N. On the origins of tourist urbanisation in Greece: Land speculation and property market (in)efficiency. *Land Use Policy*. 2017; 68: 15-27. doi: 10.1016/j.landusepol.2017.06.007
46. Maruani T, Amit-Cohen I. Characteristics of developers and their relations to open space conservation. *Land Use Policy*. 2011; 28(4): 887-897. doi: 10.1016/j.landusepol.2011.03.006
47. Maruani T, Amit-Cohen I. Open space planning models: A review of approaches and methods. *Landscape and Urban Planning*. 2007; 81(1-2): 1-13. doi: 10.1016/j.landurbplan.2007.01.003
48. Wilson D, Jonas AEG. *The City as a Growth Machine: Critical Reflections Two Decades Later*. SUNY Press; 1999.

49. Logan JR, Molotch H. *Urban Fortunes*. University of California Press; 2007. doi: 10.1525/9780520934573
50. Widdis RW. Motivation and Scale: A Method of Identifying Land Speculators in Upper Canada. *Canadian Geographies/ Géographies canadiennes*. 1979; 23(4): 337-351. doi: 10.1111/j.1541-0064.1979.tb00669.x
51. Dyca B. Land Value Taxation and Land Speculation: The Case of São Paulo, Brazil. Available online: <https://thesis.eur.nl/pub/46412/-1-40711.pdf> (accessed on 16 March 2023).
52. Thontteh EO, Babarinde JA. Analysis of land speculation in the urban fringe of Lagos, Nigeria. *Pacific Rim Property Research Journal*. 2018; 24(2): 161-184. doi: 10.1080/14445921.2018.1461770
53. Alia S, Maulana RY. Sociological Perspectives on Urban Gentrification and Its Societal Implications. *Journal of Current Social and Political Issues*. 2023; 1(2): 72-77. doi: 10.15575/jcspi.v1i2.477
54. Lowe JW. Land Speculation: Does It Have Real Economic Consequences? *Finance & Development*. 1975; 12(003). doi: 10.5089/9781616353223.022.A009
55. González-Marín P, Vásquez-Vera H, López-Gay A, et al. Gentrification and its association with health inequalities in Barcelona (2011–2017). *Frontiers in Environmental Health*. 2023; 2. doi: 10.3389/fenvh.2023.1202149
56. Tonne C, Adair L, Adlakha D, et al. Defining pathways to healthy sustainable urban development. *Environment International*. 2021; 146: 106236. doi: 10.1016/j.envint.2020.106236
57. Meja M, Bassa M, Mirkeno T. Assessing the Challenges of Irrigation Development in Ethiopia: A Review. *International Journal of Engineering Research and Technology*. 2020; V9(01). doi: 10.17577/ijertv9is010114