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Rethinking institutional coordination as a transformational issue in providing and administering urban land for housing development in Ethiopia: Evidence from Bahir Dar metropolitan city

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Abstract: Institutional coordination and robust land administration are essential to ensuring sustainable land delivery and housing development in fast-growing cities. It also benefits urban dwellers, particularly low-income groups and homeless individuals. Despite efforts, Ethiopia's metropolitan areas have institutional coordination challenges. The horizontal and vertical coordination between land administration and the government heavily influences the output of housing. The purpose of this study is to evaluate the effectiveness of existing institutional coordination in urban land management to support effective land supply for residential purposes. The institution's current and desired levels of coordination reveal a significant lack of vertical and horizontal coordination. In order to meet the study's objectives, a mixed methodology was used, combining primary and secondary sources. The data collection process utilised rigorous methods like questionnaires, interviews, focus group discussions, field observations, and desk reviews to ensure accuracy and reliability for analysis and further decision-making. The findings unequivocally demonstrate that urban land administration institutions lack adequate vertical and peer coordination, severely hindering their ability to deliver land for housing development efficiently and effectively. Thus, urban and regional governments must rethink and restructure the current institutions for urban land administration, paving the way for a more efficient and effective system. This restructuring should incorporate robust vertical and horizontal coordination and address identified performance capability deficiencies. Ultimately, the study has provided a clear exit strategy that will contribute to the establishment of effective and efficient land administration functions. The study's findings have significant implications for future urban land administration in Ethiopia and similar urban locations worldwide.

Keywords: horizontal coordination; urban land institution; vertical coordination

1. Introduction

Urbanization and increasing demand for housing land have put tremendous pressure on urban land development, particularly for housing. Thus, the urban land sector faces significant challenges, necessitating robust institutional coordination for efficient land supply for housing development. Land administration institutions are crucial in promoting urban growth by implementing policies requiring horizontal and vertical coordination.

Institutions have historically acted as human-made boundaries for political, economic, and social relationships, implementing land policy, maintaining order, and sharing information [1]. They consist of laws, regulations, and enforcement mechanisms influenced by local legal systems, urban and regional realities, procedures, and public sector perspectives on incentives and accountability [2,3].

Performance capacity in land delivery refers to an institution's efficiency and effectiveness in functioning and producing, with dimensions like individual, institutional, and societal capacity varying depending on the country's context [3–5].

Due to the proliferation of urbanisation, housing and land are critical components of a country's economy and human needs [2]. However, the challenge lies in establishing robust institutional coordination for efficient land policy implementation and governance in urban land administration. This is especially important in developing nations like Africa, where more capability is required for successful implementation [6]. Enemark et al. [7] and UN-Habitat [8] stated that the Fit-For-Purpose Land Administration capacity assessment serves as a baseline for measuring progress in institutional coordination for housing development objectives.

Ethiopia's growing population and rising demand for land services pose challenges for housing and urban development [9]. Land markets in Ethiopia are required to facilitate access and transactions, but due to the federal constitution's prohibition on private land ownership, the government holds a monopoly [10].

From the feudal era to the present, Ethiopia lacked a robust land institutional framework, particularly coordination among central, regional, and local governments, but monopolized the land. Studies indicate that governments' effective land management activities, including land policies, information infrastructure, and land administrative functions, promote sustainable development [5]. Moreover, previous research has significantly contributed to urban land administration, policy development, housing practices, and affordability considerations in urban areas [11–13].

Despite Ethiopia's urban development progress, institutional coordination remains a major concern. This is especially true in terms of horizontal and vertical coordination between land administration functions and different levels of government. This lack of coordination in Ethiopia hinders institutions from providing housing land, affecting urban development, and there is limited research on this issue.

The key research issue is: What is the optimal level of coordination required for the effective delivery of urban land to residential development, and how are Ethiopia's urban land administration institutions coordinated horizontally and vertically? The study aims to identify challenges in vertical and horizontal coordination in urban land administration institutions to improve residential land delivery.

Following this introduction, the article goes into the theoretical framework and concepts of institutional coordination for evaluating land administration performance.

2. Conceptualizing land administration institutional coordination

The International Labour Organisation (ILO) emphasizes the importance of institutional coordination among all stakeholders to achieve agreed objectives [14]. Institutional coordination is a theory that examines how institutions collaborate with stakeholders to create beneficial resource arrangements, resulting in both desired and undesirable outcomes [15]. Thus, the evaluation of institutional coordination

capacity considers both horizontal and vertical coordination.

2.1. Horizontal or peer coordination

Megacities face operational dysfunction due to unclear responsibilities, necessitating coordination between agencies. Thus, studies explore European territorial and urban policies, sustainable management, balanced urban-rural links, and cross-national institutional coordination [16,17].

Horizontal coordination evaluates situations, multichannel coordination, relationships, and collaboration. France mitigates centralization's negative effects, while the Netherlands outperforms Europe, fostering strong local and regional units [17]. This is why land administration aims to convert urban land into residential land through well-coordinated institutions. Since land institutions must coordinate to provide information, funding, and technical planning for housing land supply, they often fail to coordinate horizontally [18].

2.2. Vertical coordination

Vertical coordination involves top-level and bottom-level collaboration between land administration and government departments, collaborating with local stakeholders for successful implementation [18,19]. Decentralization in land administration enhances efficiency and effectiveness by reducing the impact of land decisions on individuals and transferring these activities to local governments [20]. India's decentralization aims to create a robust land administration system, ensuring power redistribution and social fairness while ensuring its implementation is "fit for people [18,21]. ICT enhances land administration capacity by combining central processing with local management, ensuring local visibility.

The research shows that land-related institutions need better management because they are closely connected and always looking for new ways to do things [6]. European countries employ various institutional coordination strategies, focusing on spatial and urban policy-making in both institutional and functional aspects [17]. This fundamental concept, along with its ranking, shows that Switzerland ranks third globally in vertical and horizontal coordination, despite the challenge of balancing national policy with local coordination.

This study explores institutional coordination in urban land administration, focusing on current and desirable coordination challenges and enhancing existing literature. The subsequent section explores a research methodology for assessing the coordination of urban land institutions.

3. Research methodology

3.1. Description of the case study area

Bahir Dar city was chosen as a case study to investigate urban-land institutional coordination issues, aiming to enhance them in response to rapid urbanization, population growth, and housing demand. The National Urban Development Spatial Plan for Ethiopia's Urban Development Scenarios [22] forecasts that future urban economic activities such as agro-processing, tourism, conferences, research and

development centres, and textiles will greatly affect the ability of land administration institutions to manage land. Ethiopia, an East African country, borders Eritrea, Kenya, Djibouti, Sudan, and Somalia. It has 12 autonomous regions, and two city administrations, including the Amhara National Regional State (ANRS), comprising 13 administrative zones and three metropolitan cities, including Bahir Dar (**Figure 1** shows the location map of Bahir Dar city administration).

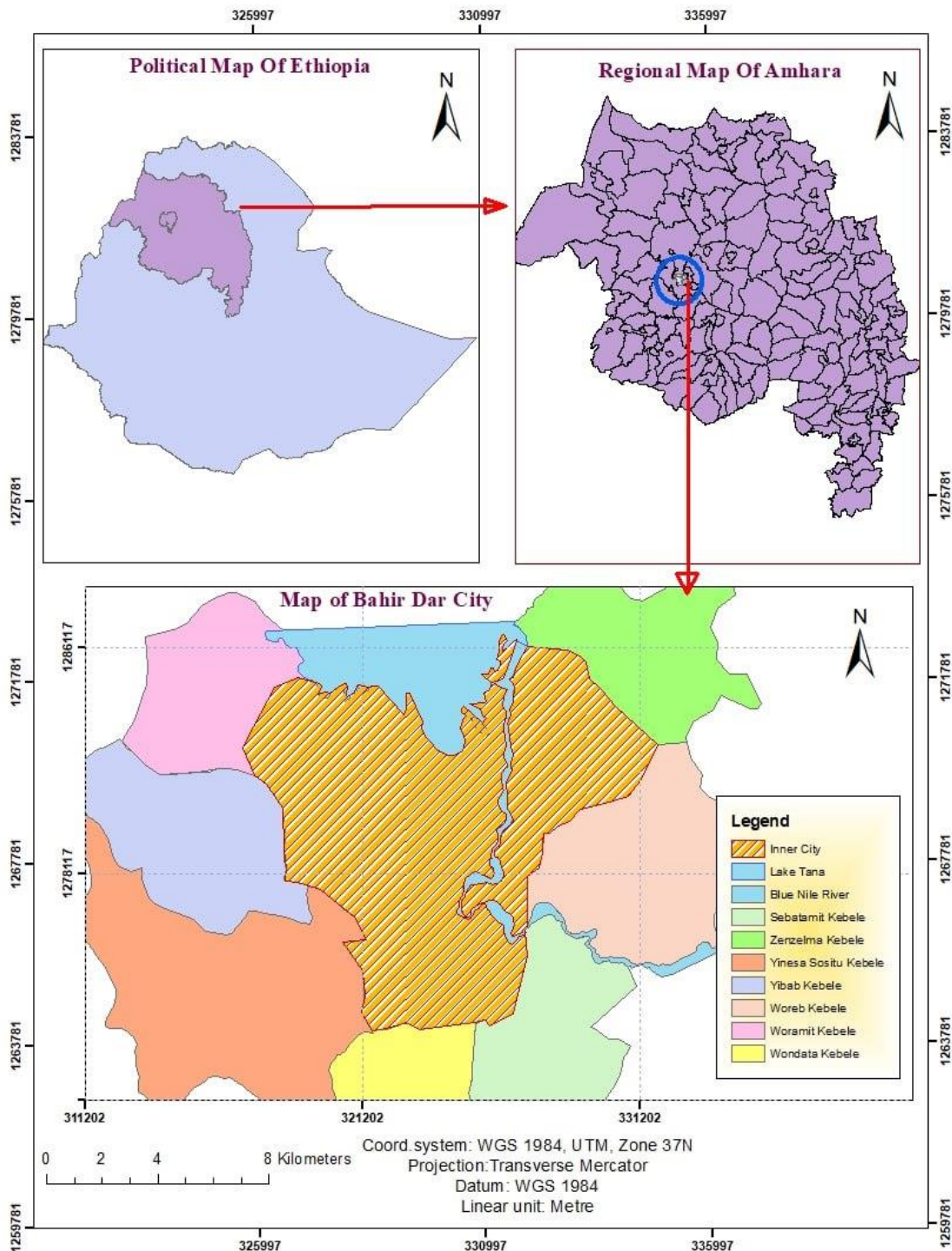


Figure 1. Location map of Bahir Dar city administration.

Bahir Dar, the capital of ANRS, consists of 39 kebeles, three satellite cities, and

six sub-cities, with a population of 325,506 in 2021 [23], and a projected increase to 972,000 by 2035 [22]. However, it faces challenges in land and housing supply due to a lack of urban land institutional coordination, necessitating additional research.

3.2. Research approach

The study examines the impact of coordination among municipal land administration institutions on the efficiency of residential land delivery in Bahir Dar, Ethiopia, using a three-stage research approach. The first stage examines the present level, while the second stage evaluates the desired level of horizontal and vertical coordination in urban land administration utilising primary data from Bahir Dar and the region. The third stage involves comparing the current coordination level to the desired level to identify gaps.

The study examines the impact of coordination gaps among municipal land administration institutions on residential land delivery efficiency, utilising primary sources, past research, and unpublished reports. They used a 1–5 scale to compare present levels to desired ones and identified gaps using paired sample differences and descriptive statistics. The case study area’s primary information was supplemented by theories and data on land delivery trends to analyze the findings.

3.3. Data collection and analysis methods

The study employed various data collection methods and tools, including questionnaires, interviews, focus group discussions, field observations, and document reviews, both qualitative and quantitative, to achieve its objectives. Due to frequent employee turnover, experienced urban land experts understand institutional coordination and prospects better than newbies.

A survey was conducted among 98 respondents, followed by interviews and focus group discussions with 24 interviewees and 19 FGD participants from the urban land and housing sectors. The participants include government officials and experts from various bureaus, including regional land management, urban infrastructure, Bahir Dar city land administration, and housing administration offices. However, the study excludes land beneficiaries, non-involved employees, former officials, and kebele-level staff due to Ethiopia’s centralised urban land administration system. To verify the validity of the data source, interview questions based on expert opinions were used.

Data analysis used a mixed approach to evaluate urban land administration institutions’s existing and desired levels of coordination. The study utilized quantitative data from expert surveys and qualitative data from expert interviews, focus group discussions, and field observations to identify gaps, generate findings, and provide recommendations.

4. Results and discussions

The section examines the influence of institutional coordination in urban land administration on housing land delivery performance by comparing desired and existing levels.

4.1. Assessing the current urban land institution coordination

Table 1 presents data from questionnaire surveys evaluating horizontal and vertical coordination to determine current and desired levels, based on the context of institutional coordination concerns.

Table 1. Observed current and desire level of institutional coordination ($n = 98$).

Parameters of institutional coordination	Observed current coordination level (%)					Observed level of satisfaction (%)			Observed desired coordination level (%)				
	1	2	3	4	5	Yes	No	Unknown	1	2	3	4	5
Horizontal coordination	42.9	33.7	19.4	2	2	7.14	92.9	0	5.1	6.1	10.2	28.6	50
Vertical coordination	46.9	38.8	12.2	1	1	7.14	92.9	0	3.1	5.1	6.1	19.4	66.3

Source: Field survey (2023/24).

4.1.1. Assessing the current level of horizontal coordination

According to the survey, 42.9% believe horizontal coordination with peer institutions is not optimal, while 33.7% believe it is fair. However, a minority of respondents (19.4%) believe current urban land institutions have good institutional coordination and only 2% claim very good or excellent coordination. The result indicates that urban land administration institutions are underperforming due to inadequate horizontal coordination to facilitate land delivery services.

Furthermore, previous studies show the Netherlands and France excel in horizontal coordination, promoting it to counter the negative effects of centralization [17]. This suggests that horizontal coordination is crucial for achieving land administration objectives.

Moreover, the research on exploring the institutional capacity of urban land delivery and administration for housing development [18] emphasises the necessity for efficient coordination among land administration institutions for information, funding, and technical planning for urban land preparation. However, 93% of urban land administration officials and experts in Ethiopia, particularly in the study area, express dissatisfaction with current horizontal institutional coordination, calling for urgent government intervention for effective housing development.

4.1.2. Assessing the current level of vertical coordination

The study found that coordination issues among urban land institutions significantly impact land delivery performance, highlighting the need for improved vertical coordination among urban land administrations [6]. Inter-institutional and vertical coordination is crucial for effective land administration, with Switzerland excelling in this area and each country adopting its institutional approach [17].

The Indian experience demonstrates that decentralisation requires careful “fit-for-purpose” implementation to establish a credible power distribution system and social fairness [21]. A recent survey indicates that federalism significantly maintains vertical coordination between institutions. While Ethiopia has federalism, 46.7% of respondents believe there is minimal vertical coordination between institutions. Ethiopia faces challenges in developing its vertical coordination mechanism, with 38.8% of respondents rating it as “fair” and 1% as “very good” or “excellent.”

Efficient land administration institutions necessitate close coordination among urban land sectors at national, regional, and municipal levels for effective and efficient management [24]. However, a survey of urban land experts and officials in Bair Dar, Ethiopia, revealed 93% dissatisfaction with current coordination, suggesting challenges in urban land administration could potentially hinder development.

The performance capacity analysis of an urban land institution reveals poor coordination (**Figure 2**). Hence, in the survey, most respondents rated it as poor, while only a few rated it as very good or excellent. This implies a major need for improvement in the institution's horizontal and vertical coordination. According to the survey results, urban Ethiopians prefer higher land delivery execution rates for housing development. This shows the need for better institutional coordination for effective land delivery and improved housing construction.

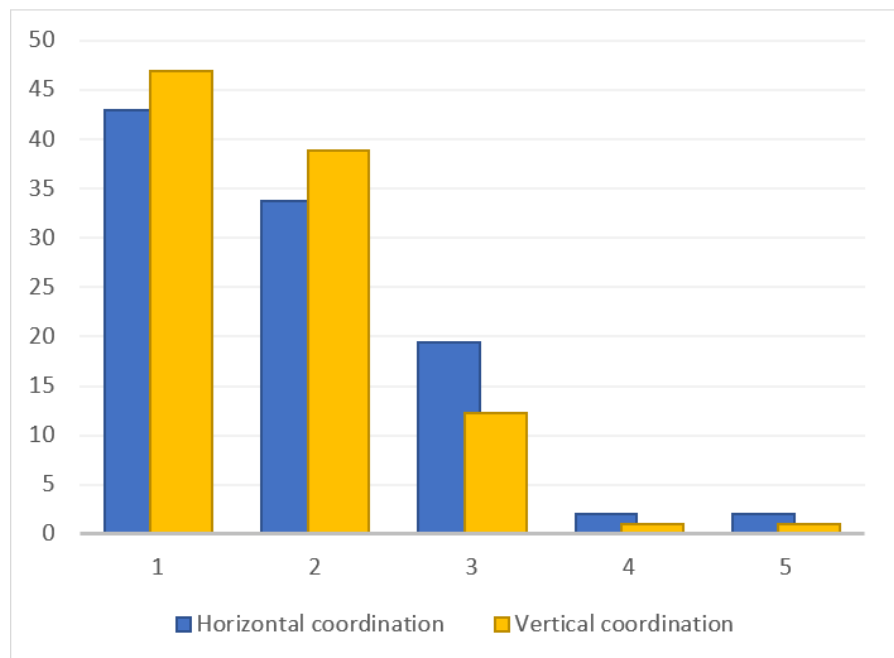


Figure 2. The current coordination level for urban land institutions.

Source: Field survey 24 January 2023.

The lack of coordination among urban land administration institutions is likely to frustrate housing land seekers. Experts interviewed reveal that the absence of vertical coordination within urban land administration institutions, primarily due to specific work processes, hinders land and housing development. Most FGD participants express dissatisfaction with the lengthy time required to develop and provide sufficient urban land for housing.

4.2. Assessing the desired level of institutional coordination

The assessment of institutional coordination for effective urban land administration requires a more precise evaluation of how to enhance coordination for housing development preparation and delivery.

Table 1 shows horizontal and vertical coordination, respectively. The majority of respondents (50%–66.3%) desire optimal levels, while 19.4%–28.6% desire

excellent levels. Thus, the survey found that 69.4% to 94.9% of respondents desire very good to excellent coordination because of its effectiveness in aligning and accelerating the time cycle. Efficient coordination is crucial for an institution's success in both vertical and horizontal aspects, ensuring alignment with its structure, legal frameworks, and responsibilities.

Similarly, most respondents support strong vertical coordination between government levels, emphasizing the significance of establishing a participatory system through vertical communication channels.

Moreover, World Bank publications [7] mention that determining the needed skills to achieve development goals will help track progress. The interview with senior officials underscores the significance of enhancing institutional coordination from top to bottom, both vertically and across peer institutions.

Institutions and leaders must collaborate with the necessary knowledge, skills, and attitudes to efficiently and effectively deliver urban land. Moreover, urban land practitioners emphasise the need for improved coordination between land administration functions and government levels to enhance urban land deliverability and governance performance (see **Figure 3**).

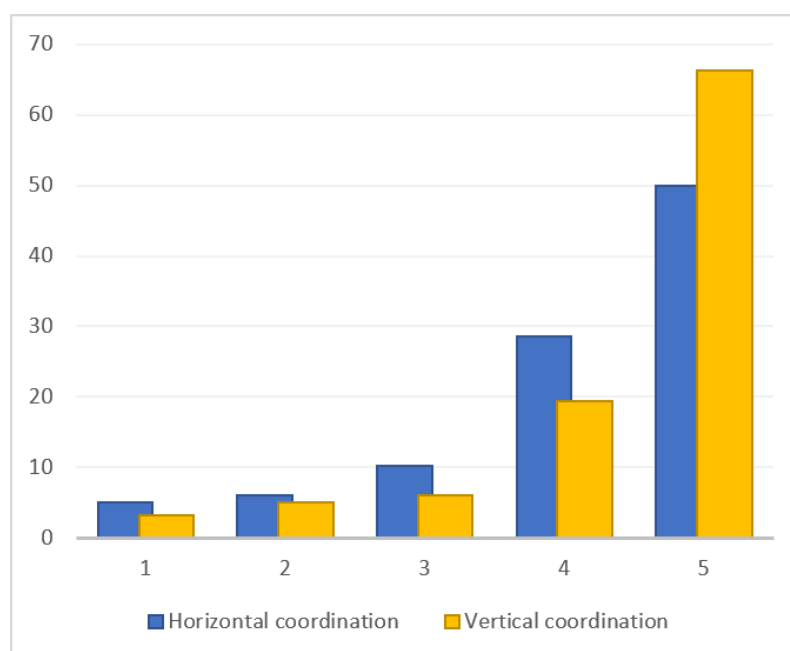


Figure 3. The desired coordination level for urban land institution.

Source: Field survey 24 January 2023.

One positive result is that most respondents at the city and sub-city levels desired well-coordinated institutions across all land administration functions and between government levels. Only 3.1% to 28.6% of respondents preferred levels 1–4, implying that urban land leaders and high-level government officials prioritize maintaining the status quo over rethinking institutional coordination.

Experts have highlighted the gap between successful institutional coordination and traditional land administration methods as a crucial first step towards reform. Improving institutional efficiency in urban land supply and housing development requires addressing coordination challenges and proposing efficient solutions. The

next section compares institutional coordination levels to what is needed to identify gaps and establish solutions for improving vertical and horizontal coordination.

4.3. Identifying the institutional coordination gap

The current level of institutional coordination is insufficient, necessitating remediation by calculating the average difference across all three coordination capacity levels (efficiencies 3, 4, and 5). The statistical estimation is based on efficiency levels, current and desired institutional coordination parameters, and the frequency distribution of respondents. The majority of respondents (50%–66.3%) prefer level 5 (excellent level) for optimal coordination across urban land administration institutions. Some of the respondents, 28.6% and 19.4%, preferred level 4 (very good), while the minority (10.2% and 6.1%) needed horizontal and vertical coordination levels 3 (good). The survey results reveal that 93% of respondents believe the current institutional coordination levels are insufficient and require reform to achieve their desired outcomes.

The evolution of coordination methods across land administration functions and government levels is posing fundamental capacity challenges and demanding processes. Previous research shows that Ethiopia's land institutions are failing to adequately deliver land for urban development, despite shared responsibilities between regional urban infrastructure bureaus and the Federal Ministry of Urban Infrastructure [25]. Thus, land administration is a multifaceted administrative challenge that necessitates inter-institutional coordination in urbanized and developing nations.

A comprehensive assessment was conducted to identify gaps, which involved in-depth interviews, focus group discussions, and statistical analysis of the observed issues. The study found that there is no significant shift towards stronger institutional coordination for land administration and land delivery for housing development.

Statistically, the paired-sample T-test compares two sample averages for current and desired coordination levels to identify gaps, using the same respondents to assess both parameters. As a rule of thumb, if the observed level is equal to the desired level, then the mean difference will be zero. If a gap exists, the average difference is not equal to zero, indicating a coordination problem.

The study revealed a significant disparity between the current and desired levels of institutional coordination, with a significant difference at the 0.05 level. The horizontal coordination level is currently 3.18 points below the desired level, while the desired vertical coordination level is 3.77 points higher than the current level on average (**Table 2** and **Figure 4**). Thus, the gap analysis revealed inefficiencies, particularly in vertical coordination, which were not adequately addressed by various government levels.

Thus, the study indicates that improved coordination between vertical and horizontal aspects of urban land institutions is crucial for effective housing development.

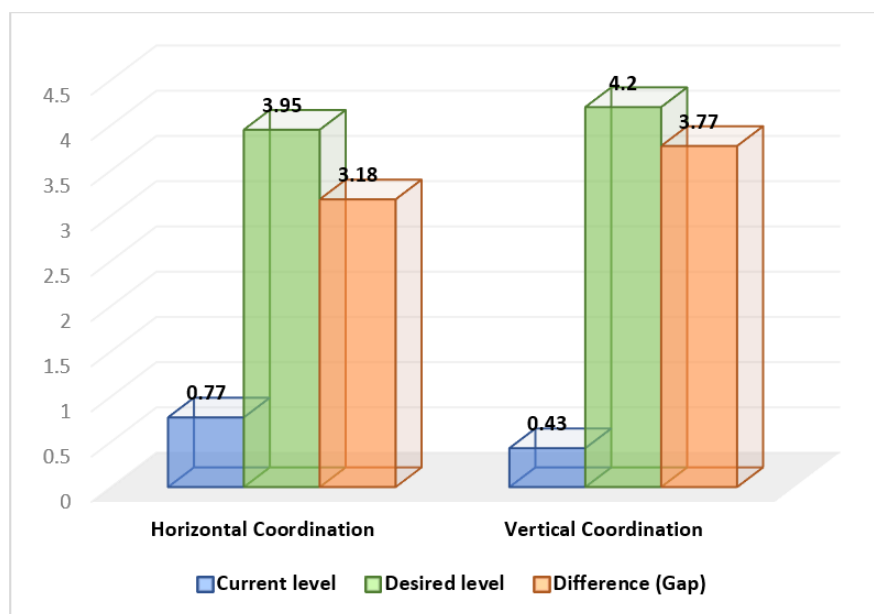


Figure 4. Total mean difference: Institutional coordination.

Source: Questionnaire field survey 24 January 2023.

Table 2. Paired difference and descriptive statistics for current and desired coordination level.

Two related and paired samples	Paired differences			95% confidence interval of the difference		<i>t</i>	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error mean	Lower	Upper			
Pair 1 Current horizontal coordination—Desired horizontal coordination	-3.18	2.088	0.211	-3.602	-2.765	-15.098	97	0.000
Pair 2 Current vertical coordination—Desired vertical coordination	-3.77	1.902	0.192	-4.157	-3.394	-19.646	97	0.000

* $P < 0.05$.

4.4. Implication and applicability of the results

Despite government attempts, the study finds insufficient coordination in Bahir Dar's urban land institutions, which impedes effective land delivery, housing shortages, and affordability difficulties, resulting in poor governance and impacting urban development.

Thus, government involvement is crucial for resolving institutional coordination issues, raising awareness among urban land officials and experts, and promoting sustainable housing land delivery methods.

The study underscores the significance of comprehensive land administration strategies and effective coordination across functions and government levels for enhancing urban land delivery efficiency. The findings and recommendations can serve as a model, but it's crucial to consider both national and local contexts.

5. Conclusions

The study identified the institutional coordination gap as one of the capacity challenges in urban land administration when it comes to urban land supply for housing development. Hence, the institutional coordination of urban land

administration in Bahir Dar, Ethiopia, is weak, causing deficiencies and threats in its execution and efficiency in delivering land for housing.

Inefficient land delivery for housing development has resulted in housing shortages, which puts pressure on urban governments. Previous research on strengthening institutional coordination of social protection [14] emphasises the importance of institutionalising all stakeholder actions, which is critical for achieving the agreed-upon objectives.

To address capacity issues, cities and regional governments should enhance urban land administration structures through strong horizontal and vertical coordination among departments, agencies, and government levels. No urban land or housing project can be successful unless municipalities and regional bureaus address their concerns and implement the necessary reforms. Thus, a coordinated institutional framework that links land information infrastructure is critical for effectively managing urban housing land needs.

The Bahir Dar city administration should improve land administration coordination to address the housing shortage and establish a solid foundation for urban land development. To achieve this, urban land institutional arrangements are recommended to prioritise vertical and horizontal coordination as a capacity issue for land administration and delivery.

This study explored the coordination of urban land institutions, suggesting future research should examine the impact of local institutional clarity and integrated monitoring on urban land delivery and housing development. This broadens the scope of this research to a national perspective. Ultimately, the findings can help the government improve institutional coordination and support processes, leading to further research in Bahir Dar and similar metropolitan areas worldwide.

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