

RESEARCH ARTICLE

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# Rethinking urban spatial planning and industrial development approaches in Ethiopia: bridging gaps for better outcomes

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## Abstract

Urbanization is occurring at an unprecedented rate in developing countries like Ethiopia, especially with the rapid growth of industrialization. However, this urbanization and industrial development surge puts immense pressure on preparing and implementing city spatial plans. Urban spatial planning plays a crucial role in shaping the development of cities, aiming to create livable and sustainable urban development. The plan-making process and its subsequent implementation often encounter challenges that hinder the realization of planned objectives. Galan and Dukem, cities near Addis Ababa's capital, have seen substantial industrial investment in recent decades. This article explores the challenges associated with urban spatial planning and industrial development while proposing alternative approaches. The paper relies on information gathered from primary and secondary sources, including expert surveys and key informants' interviews. The research highlights that industrial developments have led to significant and uncontrolled changes in urban land use and urbanization in the study areas. Due to the lack of clear planning guidelines and institutional capacity, the study cities are experiencing haphazard development without effective urban spatial plans. Proximity to Addis Ababa has driven the urbanization process through increased investments. The article contends that effective management of urbanization and industrialization can create enjoyable living conditions and foster job growth. Macroeconomic policies, including industrial policies, should pay attention to spatial elements and prevent policy-making processes that are "space-blind". This, however, requires clairvoyance and a high level of expertise, integrating inputs from advocacy planning and community participation to bridge gaps and ensure effective urban spatial plans and industrialization processes.

**Keywords** Industrial development, Spatial planning, Cities, Sustainable development, Urbanization, Ethiopia

## 1 Introduction

Cities development is a continuous process and not static. National policies commonly generate unintended spatial biases linked with haphazardly harming the city's social, economic, and political setup (Renaud, 1981, p. 8). Consequently, these rapid processes of urban spatial

changes must be guided by plans to mitigate those harmful effects (Alem, 2021; Melesse et al., 2022). Cities make important contributions to economic and social transformation. As cities rapidly industrialized, urban spaces became increasingly commodified (Lefebvre, 1991; Ziele-niec, 2018). Thus, public open spaces, agricultural land, water bodies, etc. came under growing pressure in many developing countries' cities, leading to their decline in size and number. The growing commodification of urban spaces and the attendant deterioration of other urban land use gave rise to issues of equity, social justice, and sustainability (Soja, 2010). Every planning endeavor undertaken by the government across all administrative

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tiers has some spatial repercussions. These ramifications can be either direct, such as on a physical location, or indirect, stemming from the impact on factors that gradually or abruptly, consciously or inadvertently, reshape the spatial landscape (Acheampong, 2019; Bidandi & Williams, 2020).

The industrialization process and its subsequent rapid population growth resulted in an opportunity and a challenge. As an opportunity, it allows the chance to promote a dynamic self-sustaining urbanization process, which is an integral part of the overall economic structural transformation in the country (Schmidt et al., 2018). Contrarily, it may result in social, physical, and financial stress (Mehdipour & Rashdi, 2016). It is commonly argued that urbanization driven solely by population growth, lacking the essential prerequisites, can lead to chaos, potentially causing poverty, unemployment, criminal activity, and societal problems (Kassahun & Tiwari, 2012; Tadesse & Imana, 2006). On this point, Tiffen (2003) has noted that the urbanization of poverty has become a primary global concern when rapid urbanization occurs at ever-accelerating rates in developing countries. Fragmented decision-making between economic development agencies and urban planning departments can lead to conflicting priorities and strategies. Coordinated decision-making is essential to harmonize economic development goals with urban spatial planning objectives. Weak urban spatial planning capacity in African countries has been one of the main factors behind weak integration between industrial and urbanization development (Cheru & Akililu, 2020). To tap into the benefits of cities as centers for industrial development, it is essential to implement purposeful policies at various levels (Abera, 2020).

Urban spatial planning should have a long-term vision that anticipates and accommodates industry growth and technological advancements. A lack of foresight and flexibility can lead to inadequate infrastructure, inadequate land allocation, and missed opportunities for economic development (Cartwright et al., 2018b). Effective urban planning requires coordination among various sectors to ensure cohesive and sustainable development (UN-Habitat, 2009). Inadequate coordination can result in disconnected transportation networks, housing shortages, environmental degradation, and inefficiencies in resource allocation. A global agreement exists that effective development planning and execution necessitate thoughtfully structured multi-level governance systems, wherein strategic choices and authority are decentralized to the most grassroots level (Pieterse, 2019). Urban planning should consider the provision of essential physical infrastructure such as roads, utilities, and public amenities. Neglecting infrastructure needs can lead to congestion, inadequate services, and hindered economic growth.

Urban spatial intervention is highly affected by a country's political process, which defines who gets what of the limited resources available (Lefebvre, 1991; Merrifield, 2006). Hence, the spatial decision process has undoubtedly affected the urbanization and industrialization processes and trends. It is critical to emphasize that cities foster investment and economic development. The study's geographical unit has focused on attracting investments and enhancing revenue generation. It is important to note here that it is difficult to undermine the local political process that brought about market-induced urban land-use changes (McCarthy & Smit, 1981). Tian et al. (2017) highlighted that a blend of state coercion and market dynamics influenced the alterations in urban land use in China. According to McCarthy and Smit (1981), the new urban economics perspective attributes urban land-use modifications and spatial choices within cities to a combined influence of political and economic factors.

A practice that has historically hindered citizens' full participation in planning processes is the "unitary plan" approach. This approach suggests that only one agency in a community, typically the city planning commission or department, should be responsible for preparing a comprehensive plan (Davidoff, 2016). The Oromia Urban Plan Institute (OUPI) was established under Regulation No 67/2006 and has since undergone several restructuring processes. The most recent restructuring coincided with overhauling the regional government's executive branch, as stipulated in Proclamation No 242/2021 (OUPI, 2017a, b). OUPI is an autonomous entity empowered to develop policies, supervise regulations, and implement urban planning projects (Tanku & Woldetensae, 2023a).

Akin to numerous developing nations, Ethiopia's urbanization level has been relatively low, yet it has shown a growing trend. Specifically, urbanization was recorded at 11.3 percent in 1984, subsequently increasing to 13.7 percent in 1994 and 16.1 percent in 2007. As of 2020, the estimated level of urbanization has risen to approximately 22 percent, accompanied by a total of 2056 urban centers<sup>1</sup> (CSA, 1984, 1994, 2007; MoUDC, 2020). Considering the continuous processes of urbanization and industrialization, it is understandable that the nation has witnessed a growth in the number of urban hubs. This phenomenon aligns with Renaud's observations. He points out that the early stages of urbanization and industrialization led to population concentration in a few urban centers due to economies of scale and the desire to

<sup>1</sup> In Ethiopian contexts, "urban center" means any locality with an established municipality or a population of 2000 or above inhabitants, of which 50% of the labor force is primarily engaged in non-agricultural activities (MoUDH, 2008).

minimize risk and uncertainty (Renaud, 1981). According to Melesse et al. (2022) in Ethiopia, top-down and bottom-up planning approaches apply simultaneously. This study focuses on major challenges and alternative approaches to urban spatial planning where planning practices are highly centralized. Only a few case studies have touched upon broader implications for urban spaces and urbanization, albeit they still need to propose alternative urban spatial planning approaches for better outcomes. This study seeks to bridge the gap by providing empirical evidence on challenges and alternative urban spatial planning approaches. It aims to explore how existing urban spatial plans influence industrial developments and their locations in the urbanization processes. The ensuing section examines the theoretical discourse, while Section 3 concentrates on the materials and methods employed. Subsequently, the results and discussions are presented, leading to the final section encompassing the conclusion.

## 2 Literature review

### 2.1 Planning approaches: theoretical debate

“City planners bring cities to life and life to cities and have done so for centuries using plans” (Neuman, 2007, p. 215). Planning uniquely unites different space users and provides a holistic view of the space itself. The presence of diverse stakeholders and the characteristics of the space contribute to a broader understanding of the potential interplay between interests, conflicts, and resources (Kristof et al., 2016). Urban planning approaches are diverse strategies and methodologies governments, urban planners, and stakeholders use to guide the development and growth of cities and urban areas. Different urban planning approaches are employed based on specific objectives, priorities, and the unique characteristics of each urban context (UN-Habitat, 2009). Plans facilitate the connection between individuals and locations by uniting them to collectively shape the fate of their surroundings and their own lives. Through this process, plans establish a connection between the past, present, and future (Neuman, 2007, p. 213). One interpretation of planning pertains to the deliberate involvement of collective entities, including the government and organized civil society, in shaping urban spaces so that outcomes may be turned in one or the other’s favor (Friedmann, 1998, p. 251). In discussing, it is worth mentioning that planning theories contain universal assumptions that do not hold in many parts of the world (Watson, 2008).

Comprehensive rational planning is a traditional approach to urban planning that follows a systematic and logical process (Quattro & Daniels, 2022) and a procedural theory focusing on the planning process rather than an object or end goal (Faludi, 1973). A comprehensive

plan reflects the belief that the planning system should plan towns as a whole and in detail (UN-Habitat, 2009, p. 5). Rationalists are seen as those who have logical reasons for their views or decisions based on facts rather than emotions or values (Taylor, 1998). It involves gathering data, analyzing information, setting clear objectives, and formulating rational strategies to achieve specific goals. Proponents of comprehensive planning perceive it as an indispensable and logical instrument that integrates various critical planning facets including physical land use planning and social, economic, and environmental aspects to safeguard the public interest and steer the city’s distant future (Mahiteme, 2008). Comprehensive plans bring individuals, fields of study, urban roles, challenges, concerns, and concepts within institutional frameworks. Plans become central sources of contention when these elements clash (Neuman, 2007, p. 215). Rational Comprehensive planning emanates from synoptic thinking, data, models, computation, and quantitative measures per se. However, it often neglects the complex underlying factors, such as politics, culture, and other non-quantifiable elements integral to real-world contexts (Quattro & Daniels, 2022; UN-Habitat, 2009). According to Taylor (1998), rational planning is the best method or process of planning and is designed to produce persuasive reasons. Conversely, critics of the comprehensive planning strategy base their viewpoint on the pragmatic challenges of addressing complex and interconnected issues while collaborating across numerous policy areas, rendering effective plans excessively difficult. Comprehensive planning is often accused of promoting an unfeasible and ambitious approach (Mahiteme, 2008).

Advocacy planning, introduced in the mid-1960s, is a planning approach that emphasizes the role of planners as advocates for social justice and equity (Davidoff, 2016; Sager & Sager, 2022). For urban planning to promote democratic urban governance, its functioning should facilitate citizen participation rather than exclude them from engaging in the process (Davidoff, 2016). It entails involving marginalized communities and advocating for their interests within the planning process (Feld & Pollak, 2017). Advocacy planning was blamed for serving narrowly defined interests. In contrast, the proponents of advocacy planning claim that it represents broadly shared interest (Mahiteme, 2008). Feld & Pollak (2017) indicates that the difference between comprehensive and advocacy planning lies in the role of values as a key element of the planning process.

Communicative planning emphasizes the importance of communication and dialogue in the planning process. It recognizes that planning decisions involve multiple stakeholders with diverse perspectives, and effective communication is vital to reach a consensus

and shared understanding (Foley, 2000). Healey (1997) recognizes that political intervention and domination in the planning process, albeit through active communicative acts, can be modified. The primary function of the planner is to listen to people's ideas and assist them in reaching a consensus when there is a different point of view (Mahiteme, 2008). Through communicative planning, residents express their vision of an ideal urban setting and influence decisions that affect their living environment (Foley, 2000).

An integrated approach to planning has recently dominated as cities' geographic scale, and problems have become increasingly more significant. Due to inadequacy in far-sighted planning practice, urban issues such as unemployment, homelessness, environmental challenges, housing, and transportation are difficult to resolve and continue to pose significant challenges. To solve such interrelated urban problems an integrated approach to planning has been suggested recently. "The terms 'structure plans' and 'strategic plans' are closely related, and the latter term is now more commonly used. A strategic plan is a broader-level, selective (or prioritizing) spatial plan, usually showing the desired future direction of urban development more conceptually. Particular decision-making processes accompany a strategic plan" (UN-Habitat, 2009, p. 5). Master plans are visual representations that map out an urban region's envisioned physical condition and layout at a future moment. They have also been called 'end-state' and 'blueprint' plans (UN-Habitat, 2009, p. 5). In light of the preceding, a master plan, an integrated plan, or a structural plan should be conceptualized in the social, political, economic, and environmental context of the country set up (Tanku, 2018).

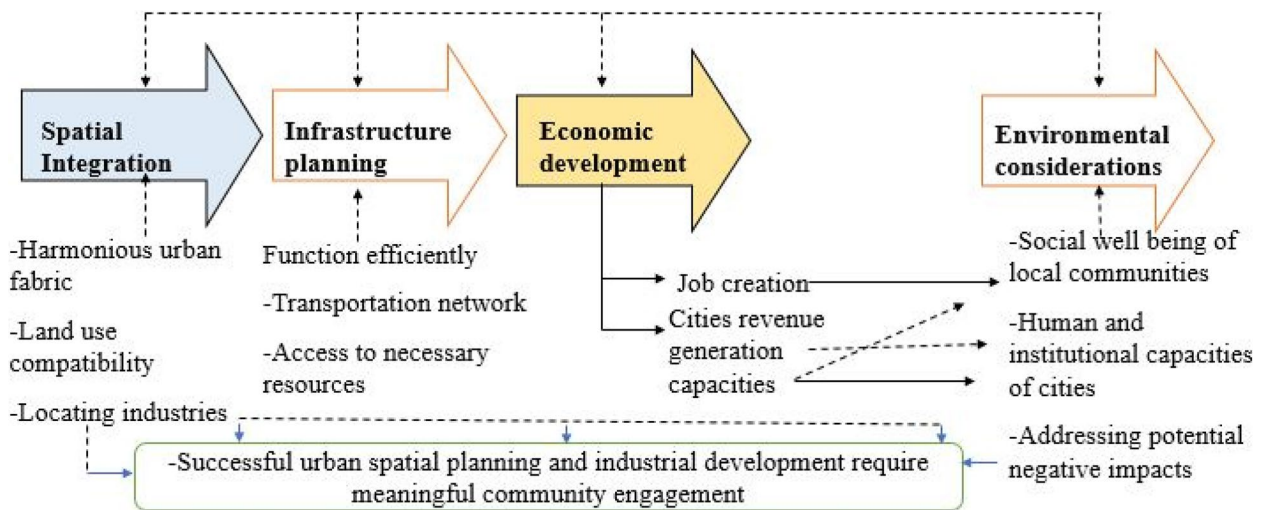
Every urban-oriented policy, regulation, and program in Ethiopia defines its planning framework as a hybrid structure aiming to optimize both "bottom-up" or "discretionary" approaches or "participatory planning" as well as "top-down" or "regulatory" or "planning standards" (Melesse et al., 2022, p. 170). In sum, the main differences between comprehensive rational planning, advocacy planning, and communication planning theories lie in their approaches to decision-making, community involvement, and the role of communication. Comprehensive rational planning is expert-driven and data-focused (Quattro & Daniels, 2022; UN-Habitat, 2009), advocacy planning is community-driven and aims for social equity (Sager & Sager, 2022), while communication planning emphasizes effective information sharing and collaboration among stakeholders (Foley, 2000; Healey, 1997).

## 2.2 Urban spatial planning and industrial development; interrelationship

Theoretical conceptions have explained the interconnections of industrial developments and urban spatial consequences in many streams of literature, including the political economy of urban land use (McCarthy & Smit, 1981), production of urban space (Lefebvre, 1991; Merrifield, 2006), location, and urban economic theories (Alonso, 1964), institutional framework (Healey, 1997, 2007), and new economic geography (Krugman, 1998).

Urban spatial planning aims to integrate different land uses, including industrial areas, within a city or region (Guan et al., 2022; UN-Habitat, 2009). This involves strategically locating industrial zones (Tian, 2015), considering transportation access, proximity to residential areas, and compatibility with surrounding land uses (Daunt et al., 2021; Deslatte et al., 2021; Liu & Zhou, 2021). The goal is to create a harmonious urban fabric where industrial activities coexist with other functions, promoting efficient land use and minimizing conflicts. Effective urban spatial planning involves infrastructure planning that supports industrial development (Beyer et al., 2021). This includes assessing and providing adequate transportation networks and other physical infrastructure to facilitate industrial operations. Proper infrastructure planning ensures that industrial areas are well-connected, have access to necessary resources, and can function efficiently. Industrial development contributes to the economic growth of a nation or a city (Gebreyesus, 2013; Li, 2017; Oqubay, 2015; Tesfaye, 2017). Hence, urban spatial planning should consider the economic impact of industrial activities (Beyer et al., 2021; Kumera & Woldetensae, 2023a), identifying suitable land and land allocation (Daunt et al., 2021; Hersperger et al., 2018; Koroso et al., 2021), and infrastructure provision (Beyer et al., 2021). Urban spatial planning needs to integrate environmental considerations into industrial development. This includes promoting sustainable industrial development practices, minimizing environmental impacts, and safeguarding natural resources.

Industrial development can have significant social implications. Urban spatial planning should consider the social well-being of local communities, ensuring equitable access to job opportunities, affordable housing, and social services (Abreha et al., 2021; Cheru & Aklilu, 2020; Gebreyesus, 2013; Kumera & Woldetensae, 2023a; Tanku & Woldetensae, 2023b). It involves addressing potential adverse impacts, such as pollution and noise, and creating a balance between industrial needs and the quality of life for residents. Planners should play an active role in participatory settings, and oppose those that disproportionately benefit the already affluent (Fainstein, 2016). Successful urban spatial planning and industrial



**Fig. 1** Sustainable and Participatory urban spatial planning; interrelationship

development require meaningful community engagement. It involves involving local communities, stakeholders, and industry representatives in planning, seeking their input, and addressing their concerns (Fischer, 2016).

These interrelationships highlight the importance of integrating industrial development into urban spatial planning processes, considering various factors such as infrastructure, economics, environment, social aspects, and community engagement (see Fig. 1). This integrated approach ensures that industrial development is well-planned, sustainable, and aligned with the broader goals of urban spatial planning.

### 2.3 Industrial and urban policy environs in Ethiopia; a retrospective analysis

Ethiopia has undergone several economic development policy phases under different regimes since the 1940s. The foundations for industrialization were laid during the Hailesilassie era in the 1940s and 1950s (Gebreeyesus, 2013; Oqubay, 2015; Teshome, 1994). From 1974 to 1991, the Derg regime’s socialist ideology suppressed private manufacturing investment, leading to the nationalization of businesses and firms (Gebreeyesus, 2013). This period became known as Ethiopia’s “lost decades” (Oqubay, 2018). Since the fall of the Derg regime in 1991, Ethiopia’s policy landscape shifted to a relatively centralized state-led development model, with restrictions on foreign investment and state ownership of the land (Altenburg, 2010; UN-Habitat, 2014b). The government aimed to establish a market-based liberal economic system and acted as a “developmental state”. To achieve this, the government of Ethiopia devised various policies, strategies, and programs that outlined development priorities and

goals for key economic sectors. Various (Altenburg, 2010; Gebreeyesus, 2013; Giannecchini & Taylor, 2018) studies confirm that Ethiopia has successfully implemented developmental state-oriented policies, leading to significant economic growth rates over a decade.

Soon after the EPRDF<sup>2</sup> took power in 1991, the country followed a policy direction known as Agricultural Development-Led Industrialization (ADLI) to advance industrial output backed by agriculture. It was implemented in successive 5-year development plans, namely SDPRP<sup>3</sup> and PASDEP<sup>4</sup> (Gebre-Egziabher & Abera, 2019). The assumption was that, implicitly or explicitly, the agricultural sector must lead the industrial sector (Gebreeyesus, 2013; NPC, 2015). While the government argues that this represents the sole practical approach to stimulate industrialization, some contend that a sector as fragile as Ethiopian agriculture cannot take a forefront position in the country’s development (Befekadu & Nega, 2000). Ethiopia’s ADLI policy explicitly acknowledged the significance of agro-industrial connections in unlocking the country’s industrial potential (NPC, 2015). Nevertheless, these connections remain underdeveloped in practice (Brautigam et al., 2018). This implies that having a policy document is insufficient to achieve the desired outcomes. Moreover, the Ethiopian economy heavily relies

<sup>2</sup> Ethiopian People’s Revolutionary Democratic Front (EPRDF) was an ethnic federalist political coalition in Ethiopia that was dissolved in 2019.

<sup>3</sup> The Sustainable Development and Poverty Reduction Program (SDPRP) had a life span of three years (2002/03–2004/05).

<sup>4</sup> A Plan for Accelerated and Sustained Development to End Poverty (PAS-DEP) covered 2005/06–2009/10.

on rain-fed agriculture and the ADLI strategy does not adequately address this central problem (Geda, 2001).

Since 2005, the EPRDF regime has strongly advocated for a developmental state ideology with “Ethiopian characteristics”, particularly following the contentious national election (in 2005). The late Prime Minister Meles Zenawi was the architect behind the Ethiopian “developmental state”, expressing dissatisfaction with neoliberalism while promoting “revolutionary democracy”. While Meles Zenawi’s leadership commanded widespread acceptance, the concept of revolutionary democracy remained ambiguous and subject to various interpretations throughout his lengthy tenure in power, even after he died in 2012 (Giannecchini & Taylor, 2018). Centralization is undoubtedly among the primary objectives of the development agenda, which is strongly influenced by Marxist-Leninist ideology. Despite the lack of clarity surrounding this discussion, it is crucial to recognize that such a political economy system has shown signs of revitalizing economic growth. In a nutshell, Ethiopia has made considerable strides in economic growth during the period characterized by the “developmental state” political economy (Gebreyesus, 2013; Giannecchini & Taylor, 2018; Mbate, 2017). Henceforward, the 2018 political reforms spearheaded by Nobel Peace Prize laureate Prime Minister Abiy Ahmed have effectively ended this ideology. After this transformative period, he introduced a new ideology known as “Medemer”, translating to “synergy”, and pledged to avoid wrongdoing. Despite a comprehensive book dedicated to it, questions still need to be answered regarding this new ideology’s clarity and *modus operandi*.

The 1995 FDRE<sup>5</sup> super law constitution has stated many fundamental rights and freedoms in connection with urban development (FDRE, 1995). Only recently, urban development in Ethiopia was paid attention to, and the urbanization agenda has been kept in the dark because the national development strategy focused on ADLI (Cheru & Aklilu, 2020). However, the Federal Council of Ministers developed and approved the National Urban Development Policy in March 2005. It is the first government initiative to recognize the role of urban development in the national development agenda. The policy considers cities and towns as the nerve center of development that can foster national and rural development (MoUDH, 2015; NPC, 2015, 2020). A national urban policy should aim to define a vision and set of linked actions by national governments to realize positive outcomes and address the problems arising from

population growth and economic activity (UN-Habitat, 2014b, p. 5). Promoting a thriving urban-industrial economy necessitates implementing intentional policy actions supported by an enduring vision for economic transformation (Abera, 2020). In Ethiopia, the impetus behind formulating urban-related policies and regulations has been imperative in tackling numerous prevailing urban development issues (Melesse et al., 2022). All countries would benefit from a national urbanization strategy that results from a careful national debate about economic, political, social, and cultural goals (Renaud, 1981).

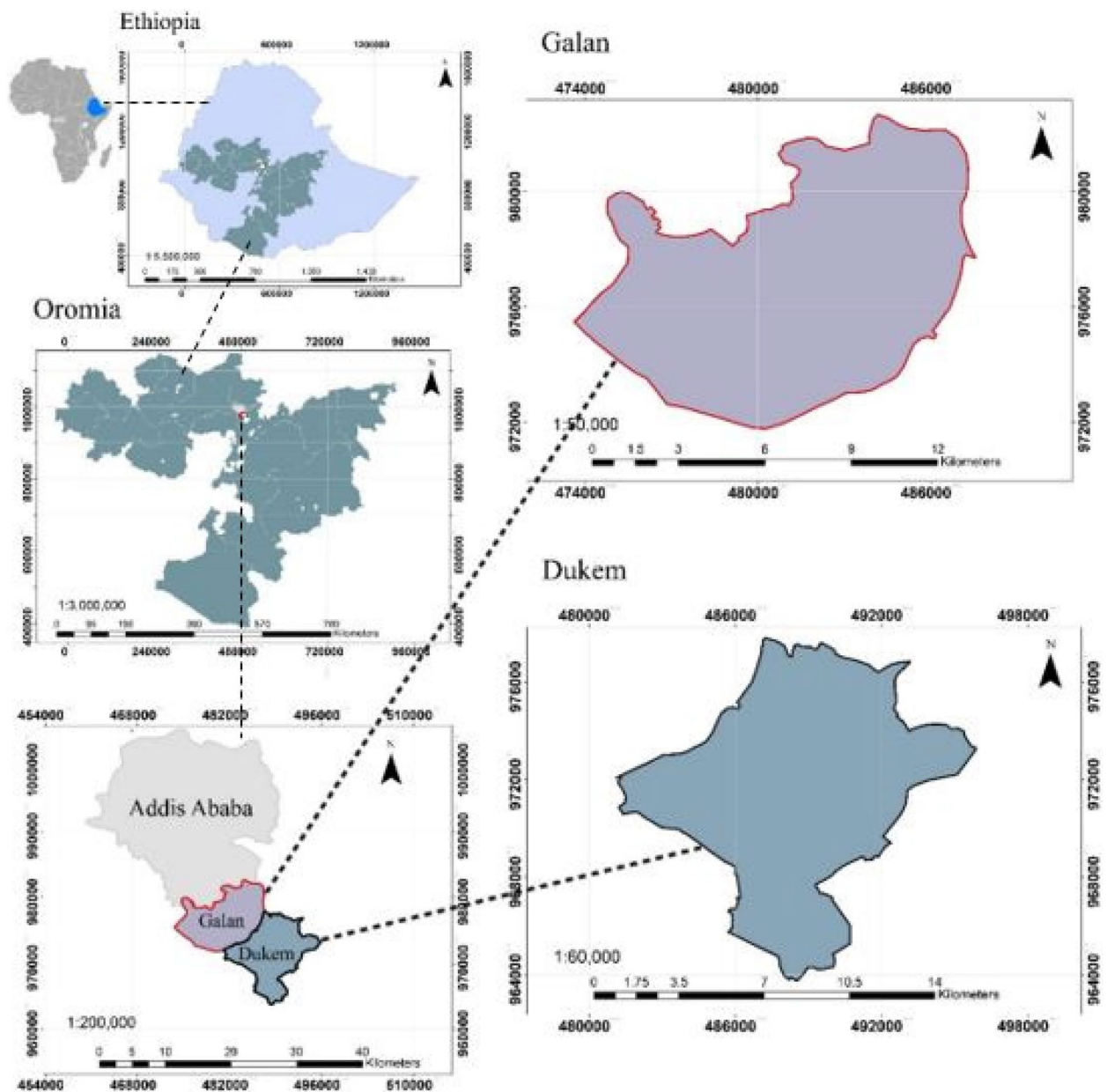
### 3 Materials and methods

#### 3.1 Description of the study area

Oromia Regional State is one of the biggest regional states in Ethiopia. The study spatial units, namely, Galan and Dukem, are located in the Oromia Regional State 25 and 37 km south of Addis Ababa, respectively (see Fig. 2). They lie adjacent to each other along the highway between Addis Ababa and Djibouti. According to the most recent structure plan (2017), Galan population is 76,800, with a total household population of 21,333, and the city’s planning boundary is 9,068 hectares. Galan hosts approximately 110 operational industrial plants occupying about 625 hectares of land, encompassing various industries such as manufacturing, agro-processing, beverages, medicine, and pharmaceuticals (OUPI, 2017a, b). In contrast, Dukem has a population of 85,839, 23,884 households, and a planning boundary covering 9,630 hectares. According to OUPI (2017a, b), Dukem has 1 industry zone (Eastern Industry Zone within 200 hectares of land), and there are about 264 industries that are functional in the city, including agro-processing industries, industrial manufacturing, chemical manufacturing, tannery, and leather products industry; textile and garment industries (OUPI, 2017a, b). Astronomically, Galan and Dukem are located in an approximate geographical coordinate of between 8° 53′N – 8° 45′N latitudes and 38° 46′E – 38° 56′E longitudes.

Addis Ababa is the country’s commercial, political, administrative, and cultural hub. Addis Ababa has been a primate city in the country for a long time, with the primacy index being nearly 10 times larger than the second-largest city in Ethiopia (CSA, 2007). It is situated in the central part of the country and has solid interdependencies/linkages with these Oromia cities regarding the social, environmental, economic, and infrastructure aspects. These cities were selected for this study because (1) they are found next to each other and use urban spatial plans prepared by the same centralized institution (OUPI) (OUPI, 2017a, b), (2) they have a substantial investment trend, (3) they have been facing rapid urbanization and industrialization, (4) they are close to major

<sup>5</sup> The Federal Democratic Republic of Ethiopia (FDRE) constitution adopted the federal-state structure in 1995 and established a two-tiered government comprising the federal and regional governments.



**Fig. 2** The study area in its national and regional settings

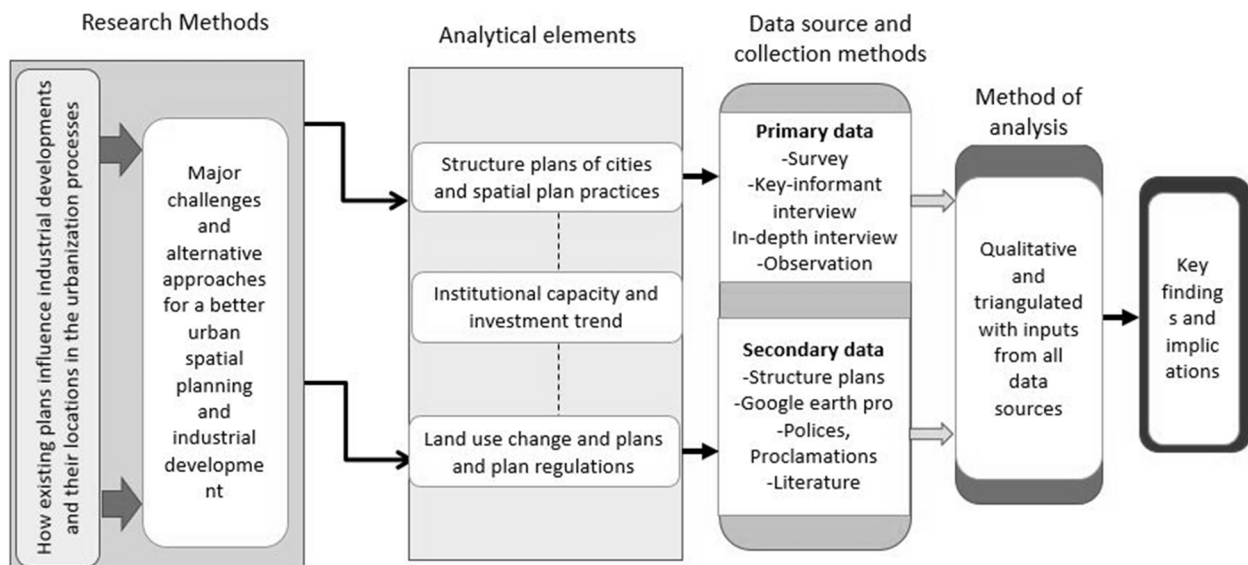
highways, the Addis Ababa-Djibouti railway/import-export corridor, and a dry port.

**3.2 Data collection and analysis**

The study utilized primary and secondary data sources (see Fig. 3). Primary data was acquired through a structured survey involving 69 experts in September 2022, alongside interviews with 21 key informants conducted between May and July 2022 (see Table 1):

The main reasons behind the selection of the above participants were: OUPI operates as an independent

entity vested with the authority for initiating policies, regulating, overseeing, and executing urban plans within the Oromia region. The MUI is responsible for formulating a comprehensive national master plan and monitoring its execution. The consultants were deliberately chosen due to their familiarity with the ongoing progress in the two cities. Additionally, informal discussions were conducted with local communities, and conversations with planners and other relevant parties further aided in comprehending the complex dynamics involved in local plan implementation endeavors



**Fig. 3** Methodological framework

**Table 1** Categories of respondents

Respondents	Key Informant Interviews (KII)	Questionnaire Survey
Federal Ministry of Urban and Infrastructure (MUI) officials, team leaders, and experts	3	15
Regional Institute (OUPI) officials and experts	3	15
City administration officials and experts		
Galan	2	12
Dukem	2	12
Industry developers		
Galan	2	-
Dukem	2	-
Residents		
Galan	2	-
Dukem	2	-
Consultants	3	15
Total	21	69

(Daunt et al., 2021). Professionals from relevant institutions were interviewed, chosen purposefully based on their engagement in planning and cumulative work experience within their organizations. A similar approach was recently employed by (Alem, 2021; Dinsa et al., 2023; Maru & Worku, 2022; Nikolić et al., 2021). Survey participants were provided with self-administered questionnaire links through the web-based application KoboCollect, which they utilized to complete and submit the questionnaires. To assess expert's perceptions a Likert-style question format was used, involving a scale of five points (ranging from strongly

agree to disagree strongly). Key informants (KIs) were presented with significant inquiries related to challenges in urban spatial planning, alternate approaches to formulating and executing urban spatial plans, emerging patterns at the intersection of industrial advancements and urban spatial planning, as well as violations of urban land use regulations (Fig. 3). Statistical Package for the Social Science (SPSS) and Excel were used to check missing data, percent mismatch, and error encoding before analysis and interpretation. The research process involved reviewing and analyzing documents, such as the 2017 structure plans for



**Table 2** Experts’ perception of industrial and urban spatial planning interrelation

Items	Likert scale					Mean
	1	2	3	4	5	
There is a clear decision-making process for industrial development and urban land-use change	27	27	10	5	0	1.90
There is proper integration between socio-economic planning and physical planning	25	30	9	5	0	1.91
The urban spatial plans only focus on physical planning	1	9	19	23	17	3.67
Limited expertise in the urban plan-making process makes it difficult to achieve a sustainable city and industry development	0	7	3	27	32	4.22
Lack/limited baseline data of cities makes urban planning difficult	0	13	2	24	30	4.03

the two cities, economic and physical plans, manuals, standards, directives, and national plans and policies.

Physical observations (Being There) in the two study sites were also conducted during the key informant interviewing period.

## 4 Results and discussion

### 4.1 Background of the respondents

Among the 69 experts surveyed, 65% were male, and 35% were female. Regardless of the gender compositions of the respective institutions, this does demonstrate the ideal size of female experts included in the survey. All respondents fall in the age category of 30–65; 55% had 8–15 years of work experience, and 45% had 16–65 years of work experience. This indicates that most respondents possess substantial experience in addressing the posed questions. Respondents had a diploma (3%), first degree (28%), second degree (67%), Ph.D., and above (8%). Of the respondents’ experts, Planners (30.4%), Economists (18.8%), Land management (8.7%), Sociologists (7.2%), Geographers (7.2%), Architectures (6%), Civil engineers (5.8%) Environmentalist (4.3%), Urban managers (2%). This suggests that the participants in the survey encompass a balanced blend of the necessary professions for engaging in urban spatial planning (MoUDC, 2014) and a diverse range of educational backgrounds.

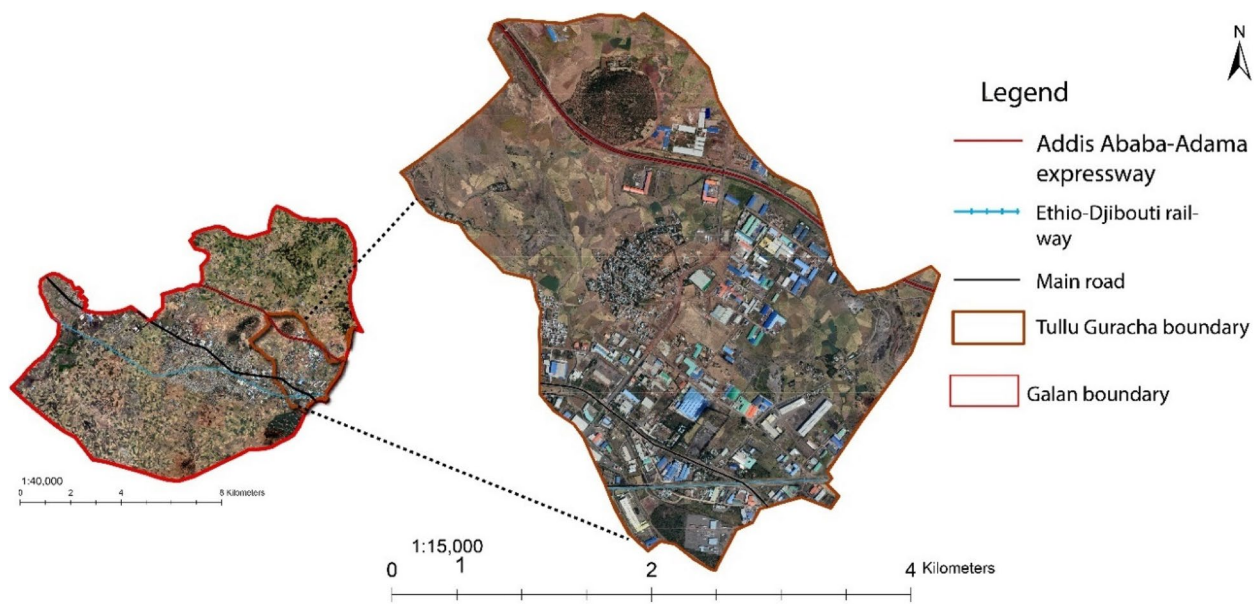
### 4.2 Aspatial industrialization and apolitical urban spatial planning

In the study of cities, industrial development often occurs spatially uncoordinatedly, without adequate consideration for urban spatial planning (Alem, 2021; Dadi et al., 2020; Mohamed et al., 2020; Terfa et al., 2020). This means that industries are established without proper planning for their location, resulting in haphazard distribution across the urban landscape (Tanku & Woldentensae, 2023a, b). The lack of spatial planning can lead to inefficient land use, congestion, and inadequate infrastructure (Beyer & Hagemann, 2021; Beyer et al., 2021; Damasco et al., 2021). The urban spatial planning in these

cities is often apolitical, meaning that it needs to sufficiently consider the political dynamics and governance structures that shape urban development. Urban spatial planning implementation in Ethiopian cities requires political will (Tanku, 2018). As per Addis Ababa University academician, “*Decisions related to land use, zoning regulations, and infrastructure development made without proper consultation or consideration of the needs and aspirations of the local communities. This can result in a mismatch between urban planning strategies and the political and institutional frameworks*”. Respondents were asked in the expert survey about the urban spatial planning and industrial development interrelation in the study area, and their perceptions are presented in Table 2.

The findings indicate (see Table 2) that a significant number of experts held a negative view of the presence of a transparent decision-making process for industrial development and urban land-use change. Specifically, 27 experts “Strongly disagreed” and 27 “Disagreed” with the statement, totaling 54 respondents in disagreement. The mean value of 1.9 indicates that most experts had a negative view, suggesting inadequate integration between socio-economic and physical planning. However, the expert survey results also demonstrate the potential for better integration of socio-economic aspects into physical planning.

Most experts believe that limited expertise in the urban plan-making process poses a challenge in achieving sustainable city and industry development. The mean value of 4.2 suggests, on average, that the experts’ perception strongly leaned toward agreement with the statement. The capacity to enforce urban planning regulations should be prioritized (UN-Habitat, 2009). A study by Dinsa et al. (2023) suggested that recruiting skilled personnel will improve the effective implementation of urban structure plans. Besides, most experts believe that the lack of baseline data for cities makes urban planning difficult. The mean value of 4.03 indicates, on average, that the experts’ perception leaned toward agreement with the statement. This is consistent with OUPI



**Fig. 4** Industries dominated *kebele* (lowest administrative units in Ethiopia): Tullu Gurracha in Galan city

interviewed experts, *data inconsistencies, inaccessibility, and complete absence are some of the problems of urban planners during the process of plan making.* Cartwright et al. (2018a) state that urban spatial planning requires data, analytical expertise, and robust evidence-based debate. A study by Nikolić et al. (2021) found that outdated data and incomplete sets of information used in the initial phase of plan-making are some of the main reasons for the failure of plan implementation.

The development of cities in developing countries is influenced by institutional and political-economic factors (Watson, 2003, 2008). Institutional frameworks shape urban development, including laws, regulations, and administrative systems (Healey, 1997, 2007). However, weak institutions, bureaucratic inefficiencies, and a lack of enforcement mechanisms can hinder effective urban planning and sustainable development. In addition, the political economy framework of a city can significantly impact its development trajectory (Goodfellow, 2013, 2018). Political stability, good governance practices, and inclusive decision-making processes ensure that urban development aligns with the city’s and its residents’ best interests (Moberg, 2017). To address these challenges, it is essential to strengthening the linkages between industrial development, urban spatial planning, and the political and institutional frameworks in African cities. Unquestionably, the development of the urban-industrial economy is driven by key policy directives and associated programs and projects (Abera, 2020; Cheru & Aklilu, 2020). Pieterse (2019) argues that it is apparent that too much policy formulation and prioritization

remain “space-blind” and not appreciative of the importance of urban development as a catalytic dynamic to achieve structural transformation. Reframing planning as both a technical and political endeavor involves making decisions regarding land policy, industrial development, and urban areas, intending to facilitate a social process of space creation (Goodfellow, 2018; Healey, 1997) (Fig. 4).

#### 4.3 The answer is sustainable urban and industrial development but what was the question

Industrial and urban development is crucial in fostering economic expansion, generating employment opportunities, and enhancing residents’ quality of life (UNIDO, 2018). However, these developments must be guided by effective political and institutional frameworks to ensure sustainability (Tanku & Woldetensae, 2023a). MUI key informant stated, “*Ethiopia’s political and institutional framework plays a crucial role in shaping industrial and urban development. It includes the legal and regulatory framework, administrative systems, and governance structures. It also helps attract investments, ensure compliance with environmental standards, and foster public participation in decision-making*”. A robust institutional framework is essential for effective urban planning, land management, and infrastructure development (UN-Habitat, 2009). Industrial development can contribute to spatial inequalities within urban spaces (Zhang, 2017). Urban spatial planning plays a vital role in determining the location and distribution of industrial activities (Cheru & Aklilu, 2020). Zoning

**Table 3** What do you recommend for achieving sustainable industry and city development?

Factors (multiple responses)	Total
Ensure stakeholders' participation /integration in the community	52 <sup>a</sup> (75.3) <sup>b</sup>
Ensure professionalism and capacitate staff	45 <sup>a</sup> (65.2) <sup>b</sup>
A website or media source must inform the public about the proposed spatial plan	27 <sup>a</sup> (39.1) <sup>b</sup>
Control corruption and unethical practices	58 <sup>a</sup> (84.0) <sup>b</sup>
Ensure policy clarity, strong regulations, and empower institutions	35 <sup>a</sup> (50.7) <sup>b</sup>
Minimize political decisions in spatial planning and industry development	61 <sup>a</sup> (88.4) <sup>b</sup>
Industrial policies must align with the local context and benefit the people	28 <sup>a</sup> (40.5) <sup>b</sup>

<sup>a</sup> Multiple responses

<sup>b</sup> Numbers in parenthesis are percentages

regulations and land-use policies can either perpetuate spatial injustices or promote equitable development (Soja, 2010).

The political economy dynamics within cities can significantly influence industrial and urban development. Political interests, corruption, and rent-seeking behaviors can shape decision-making processes, impacting resource allocation, land use patterns, and infrastructure provision (Moberg, 2017). It is important to address these challenges by promoting transparency, accountability, and good governance practices. Regarding industrial development, Ethiopia has made efforts to attract local and foreign investments, particularly in sectors such as manufacturing (Gebreyesus, 2013; Oqubay, 2015). This involves providing incentives, improving infrastructure, and creating a conducive business environment. The government's industrialization policies aim to diversify the economy, reduce reliance on primary commodities, and promote value-addition and export-oriented industries (NPC, 2020). The perspectives of the surveyed experts (see Table 3) are used to identify and suggest the most critical factors for achieving sustainable industry and city development.

The respondents emphasized the importance of minimizing political decisions in spatial planning and industry development, controlling corruption and unethical practices, and ensuring stakeholder participation /integration in the community can contribute to sustainable industry and city development. According to Feltynowski (2015), local community participation is also a source of information that allows one to make the right decision and manage the city space in a better way.

Ethiopia's urban development faces challenges, including rapid urbanization, inadequate infrastructure, and informal settlements (Cheru & Aklilu, 2020; Gebre-Egziabher & Abera, 2019; Koroso et al., 2021). To address these issues, urban planning and spatial

development strategies are crucial (Tanku & Woldetensae, 2023a). This involves developing master plans (Mahiteme, 2007), zoning regulations (Daunt et al., 2021), and land-use policies that promote sustainable urban growth (Damasco et al., 2021). Furthermore, the political and institutional framework must support citizen participation and engagement in decision-making processes (Davidoff, 2016). Inclusive governance structures allow for the representation of diverse voices, ensuring that the needs and aspirations of different groups are considered in urban development plans. Community-led initiatives, participatory budgeting, and partnerships between local governments and civil society organizations can enhance citizen involvement and improve the effectiveness of urban development strategies (Zheng & Zheng, 2022). However, participatory governance goes beyond and contributes to developing practical communication skills, citizen empowerment, and community capacity (Fischer, 2016).

The 1995 FDRE constitution has stated many fundamental rights and freedoms concerning urban development. Interaliea, article 44 of the FDRE constitution states the right to live in a clean and healthy environment of the citizens. Secondly, article 43 of the FDRE constitution states the right to development. Sub-articles under Article 43 outline three fundamental principles: the entitlement to enhanced living conditions, the promotion of sustainable growth, and the right to engage in public involvement. Third, articles 43/2 and 89/6 of the FDRE constitution state the right to participate in national development and to be consulted with respective policies, projects, etc. Besides, article 90/1 of the FDRE constitution states that government policies aim to provide all Ethiopians access to public health and education, clean water, housing, food, and social security (FDRE, 1995). In sum, for all these rights of the citizens to be respected, urban planning ought to be designed to promote urban development. The planning

implementation process must benefit the people's interests as a whole.

#### 4.4 Primate city and urban growth corridor formation: the development dynamics and challenges

Megacities and villages represent only the very extreme ends of a continuum. Refraining from considering the possibility of enhancing living standards in smaller towns would mean overlooking the most substantial portion of human living areas in the years to come (FIG, 2004). The development dynamics between a primate and a small city can be complex, particularly when considering haphazard development, poor administrative linkages, and land grabbing (Fitawok et al., 2020; Terfa et al., 2017, 2020). A primate city, often the capital or most significant in a country or region, tends to dominate economic, political, and cultural activities (Shi et al., 2020). It attracts a substantial share of investments, infrastructure development, and public services, creating a disparity between the primate city and smaller cities. This concentration of resources and opportunities in the primate city can lead to haphazard development as the city becomes the primary focus of attention and investment. Haphazard development in the primate city can result in imbalanced growth, with infrastructure and services needing to be more adequately distributed to smaller cities. This creates challenges for small cities, which may need help attracting investments, providing basic amenities, and promoting sustainable economic activities. As a result, small cities may need more support in providing employment opportunities, quality education, healthcare, and other essential services to their residents.

Galan and Dukem are located near the primate city, which is a source of the market, and industrial developers want to invest in and around the area. Galan municipal administration officials were interviewed, and it was discovered that a large number of applicants for land were received daily. However, there is no guarantee that they will not speculate and use the land for other purposes. A key informant academician attested, *"The implication of the urban corridor formation would not stop the expansion of additional infrastructure. It will also enhance the growth of urbanization and integrated economic development along Addis Ababa-Bishoftu economic growth corridors. The proximity of Galan and Dukem to Addis Ababa has a tremendous advantage as it brings a comparative advantage to goods export and import"*. According to MoUDH (2015), industrial areas must be built and properly situated in the designated corridors for the corridor development strategy to be successful. Upgrading this corridor through road infrastructure will help boost economic and tourism capital and help agricultural products reach the central areas of the region. The Oromia region

has plans to develop a Special Economic Zone named 'Gadaa' between Adama and Mojo cities (OWWDSE, 2019). These initiatives underscore the growing significance of the Addis-Adama corridor, where the studied cities are situated. Despite these efforts, Ethiopia still faces significant challenges in achieving sustainable industrialization and urban development (Abreha et al., 2021; Cheru & Aklilu, 2020; Gebreeyesus, 2013; Kumera & Woldetensae, 2023a; Tanku & Woldetensae, 2023b).

Poor administrative linkages exacerbate the disparities between primate cities and small cities. A senior consultant stated, *"Limited coordination and communication between different levels of government can hinder effective planning and resource allocation. This can lead to fragmented development, with small cities experiencing neglect and a lack of integrated urban planning strategies. Inadequate administrative linkages can also impede the sharing of best practices, and knowledge between cities, hindering the replication of successful development models. Another challenge is land grabbing"*. Primate cities are more susceptible to land grabbing due to increased demand for land and urban expansion. This can lead to displacement, social unrest, and environmental degradation, further widening the gap between primates and small cities (Fitawok et al., 2020; Otazo-s et al., 2017). An academician pointed out *"Transparent and accountable governance structures in Addis Ababa and Galan and Dukem cities are essential for effective land management in Addis Ababa and surrounding cities"*. Addressing the disparities between primate cities and small cities requires a comprehensive approach. This includes addressing haphazard development (Mohamed et al., 2020) and strengthening the political and institutional framework (Tanku, 2018). Implementing urban growth control measures that contradict market mechanisms proves to be fruitless and ineffective in fostering sustainable expansion of primate cities, but, more significantly, they can result in substantial financial burdens (Chengri et al., 2022).

OUPI expert attested, *"The overlapping boundaries in these spatial units (Addis Ababa-Galan-Dukem) has been a common phenomenon. In some cases, the city administration is unaware of the exact boundaries of the jurisdiction. Following this, land use has overwhelmingly been abused"*. Angel et al. (2012) argued that room is required for urban expansion in rapidly growing cities and should consider their expected fragmentation levels. Ethiopia's urban system faces various challenges, including some stemming from past development policies that went astray. Among these issues, a particularly noteworthy concern in the country's urban system is the problem of urban primacy (Cheru & Aklilu, 2020; Gebre-Egziabher & Abera, 2019). It is argued that primacy goes counter to

promoting a balanced urban system and defusing development to more expansive areas that would improve equity and reduce poverty (Roberts, 2014). Empirical evidence by Mercandalli et al. (2023) from Zimbabwe shows that because primate cities do not function as potent growth drivers, the dynamics of territories are swiftly transforming due to renewed movement of individuals, commodities, services, and information across various economic sectors, as well as between rural and urban regions. In contrast, a case study from China indicates that primate cities play a pivotal role in advancing the holistic progress of provinces regarding economic, societal, cultural, and ecological development (Shi et al., 2020).

#### 4.5 Addressing urban and industrial development irregularities through institutional and political economy frameworks

Throughout history, urban growth has been a common characteristic of development in all nations. As countries progress economically, economic activities tend to concentrate more densely in, cities, and metropolitan areas (World Bank, 2009). It is crucial to emphasize that such growth necessitates effective planning and institutional frameworks to guide economic development and manage city expansion appropriately. As per Lall et al. (2017), regulations lack inherent mechanisms for enforcement. Consequently, more human capacity and financial resources are needed to ensure effective implementation. In a broader context, urban plans' original intentions and results are altered due to institutional shortcomings, divisions, political involvement, and insufficient regard for a city's political dynamics. Institutions and policies shape the development processes and influence the direction of technological progress and growth rate (Peres & Primi, 2009). According to Wade (2009), the future policy dialogue should consider the particular problems and institutional frameworks of countries to ensure that the industry policies selected are appropriate for the relevant country and implemented effectively.

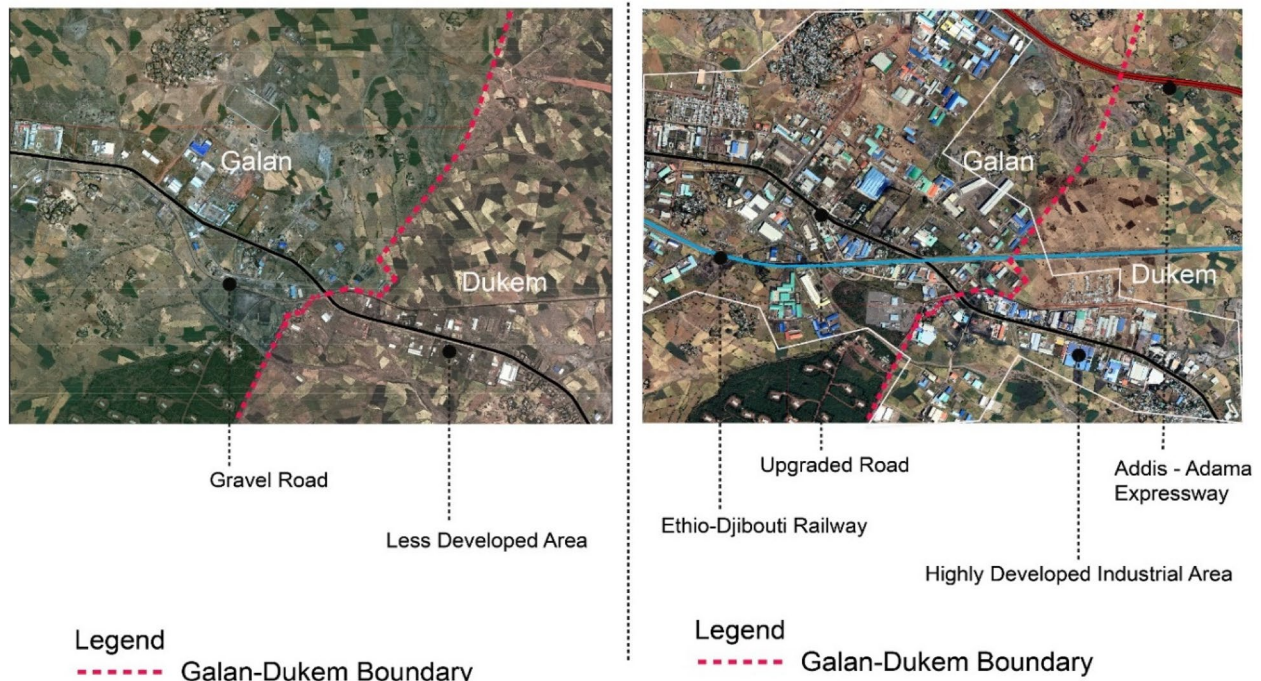
Institutional and political economy frameworks can be crucial in addressing urban and industrial development irregularities. In numerous developing nations, including Ethiopia, deficient urban spatial planning is a shared concern, frequently resulting in unplanned urban expansion, insufficient infrastructure, and ineffective land utilization. To confront this challenge, it is imperative to consider both frameworks' underlying principles. The government should establish effective national, regional, and local urban planning institutions. These institutions should have clear mandates, adequate resources, and skilled personnel to develop comprehensive spatial plans that promote sustainable urban development

(UN-Habitat, 2009). Integrating various stakeholders, including urban planners, architects, engineers, and community representatives, is vital for participatory and inclusive urban planning processes. Above all, there should be a democratic way of viewing urban spatial plans (Davidoff, 2016).

In recent times, there has been a significant rise in industrial concentration in Galan and Dukem cities (see Fig. 5). The mean value of 2.24 on legal rules and regulations suggests that, on average, the experts' perception leaned towards disagreement with the statement (Table 4). Most experts believe that the legal rules and regulations for industry developers are not conducive, indicating that the current policies and frameworks do not support the development of industries in urban areas. Most experts believe the investors' interests have contributed to urban land use violations. This suggests that certain investments may lead to non-compliance with existing land use regulations, resulting in violations and potential negative impacts on urban development. The mean value of 3.48 indicates that, on average, the experts' perception leaned toward agreement with the statement. Most experts believe that political interference during the preparation of the urban spatial plan has indeed contributed to land use violations. Historically, urban planning has primarily fallen under the central government's jurisdiction. In recent decades, from the mid-to-late 1900s, decentralization has gained momentum (Lall et al., 2017).

According to Nikolić et al. (2021), one of the problems of plan implementation is the high dependence of the local government on the national government. The mean value of 3.81 suggests that, on average, the experts' perception leaned toward agreement with the statement. This perception highlights concerns about the negative impacts of political influences on the planning process, potentially leading to decisions prioritizing political interests over effective land use management and compliance with regulations. The majority of experts believe that national industrial policies lack sufficient sectoral integration. The mean value of 3.71 indicates that, on average, the experts' perception leaned toward agreement with the statement. This perception highlights a concern that industrial policies may not be adequately aligned or integrated with various sectors, potentially leading to inefficiencies and conflicts in development planning and implementation.

Dukem city administration informant confirmed, *"Industries have been located without considering cities' spatial plans, resulting in transportation inefficiencies, and limited access to markets and labor"*. To improve the industry and urban spatial nexus, institutions can facilitate the development of effective industrial policies and strategies. This would involve collaboration between



**Fig. 5** Galan and Dukem cities in 2010 (left) and 2022 (right) using Google Earth Pro image

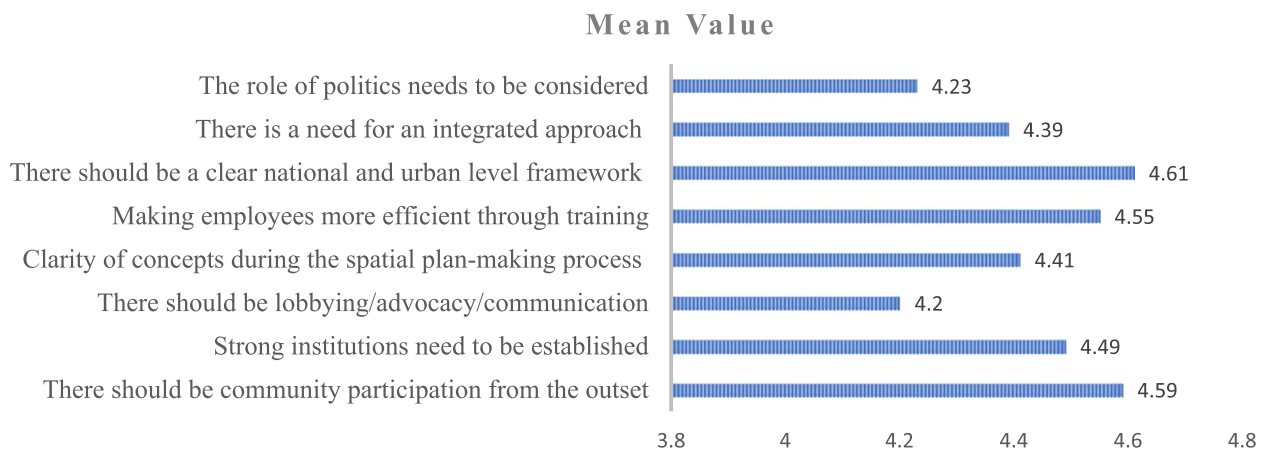
**Table 4** Experts perception of institutions and policy items

Items	Likert scale					
	1	2	3	4	5	Mean
Legal rules and regulations for industry developers are conducive	7	39	16	1	6	2.24
Business community (investors) interest contributed to urban land use violation	3	15	10	28	13	3.48
The urban spatial plan provided enough clarity and transparency regarding industrial development	5	28	5	13	18	3.16
Political interference during the preparation of the urban spatial plan has contributed to land use violations	0	16	9	16	28	3.81
National industrial policies lack sectorial integration	1	14	12	19	23	3.71
National industrial policies excluding urban spatial plan issues (land uses etc.)	1	13	15	25	15	3.58
There are discrepancies in regional and federal government interest in industrial development	1	10	16	13	29	3.86
There are inconsistencies between macroeconomic policies and urban spatial plan	4	9	8	25	23	3.78

government agencies responsible for industry, and urban planning. Industrial clusters or special economic zones near urban centers can encourage agglomeration effects, promote industry collaboration, and enhance the linkages between industry and urban areas (Abera, 2020). Institutions play in tackling this challenge through robust governance mechanisms and policy frameworks. This involves establishing clear regulations, incentives, and support systems for industrial growth.

The political economy conceptual framework is linked with how the decision of politicians to amass industries along the corridor without adequate urban and regional integrated planning. Political economy also links how the

political stuff led to Ethiopia’s industrialization initiative a geography ignorant scheme. A case in point is an academian pinpointed that “Often government has not taken into consideration space in macroeconomic planning such as industries development”. The EPRDF, which exclusively dominated Ethiopian politics for almost three decades, had a heavy hand in controlling every level of the tier with highly centralized decision-making authority which passed to all tiers very tightly (Ayele, 2014). To summarize, having an institutional and robust administrative framework are crucial assets that empower a city to continue its operations despite political shifts. Conversely, the absence of stable institutions and administration has



**Fig. 6** Experts’ suggestion for a better urban spatial planning and implementation process

been responsible for the failures of policies and strategies designed to tackle cities’ complex challenges (Mahiteme, 2008).

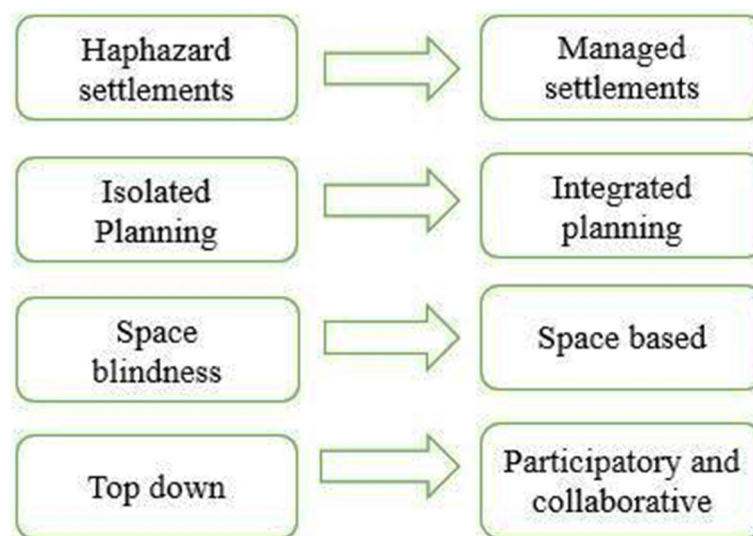
**4.6 Urban spatial planning and industrial development practices: bridging gaps for better outcomes**

There should be an ongoing commitment for those concerned about shaping cities’ future (Marcuse, 2016). Urban spatial planning and industrial development practices are integral to shaping and managing cities. There is a call for participatory urban spatial planning and industrial development approaches (UN-Habitat, 2009). Questions regarding participation and competence are closely related to the issue of capacity building. Capacity building, which involves developing a community’s collective ability to address problems, directly impacts the sense of social togetherness (Fischer, 2016). For the planning process to promote democratic urban governance, it must function to include citizens rather than exclude them from participating in the process (Davidoff, 2016). Dukem City’s key informant stated, “*In principle, a master plan is a legally binding document that regulates land use, and infrastructure development. Nonetheless, in many instances, the cities developed before or during the plan approval*”. Another area that requires attention is the relationship between industrial development and urban spaces. Industrial zone integration within urban areas can enhance efficiency, minimize transportation needs, and create synergies between industries and surrounding communities (Kumera & Woldetensae, 2023b).

All suggestions score a high mean value above 4, indicating the participants’ level of agreement with the suggestions (Fig. 6). Hence, the participants strongly agreed that community participation should be integral to the urban spatial planning and implementation process right from the beginning. Community participation is

crucial because it involves residents and stakeholders in the planning. Their insights, needs, and preferences are valuable for identifying relevant issues, setting priorities, and ensuring that the planning aligns with the requirements and aspirations of people living and working in the area. Incorporating community participation from the outset fosters transparency, inclusivity, and ownership of the planning decisions, leading to more sustainable and widely accepted development outcomes (Zheng & Zheng, 2022). It helps avoid potential conflicts and enhances the chances of successful implementation by ensuring that the plans address the genuine needs and concerns of the people affected. The experts also strongly agreed that strong institutions are essential for effective urban spatial planning and implementation. Strong institutions provide stability, continuity, and accountability in planning, leading to better decision-making and more successful implementation.

Experts agreed with the importance of lobbying, advocacy, and communication in urban spatial planning and implementation. Effective lobbying and advocacy efforts can raise awareness about urban planning issues, gain support for specific projects or policies, and influence decision-makers to consider sustainable and equitable development strategies. Open and effective communication channels foster better understanding, trust, and collaboration between different stakeholders, which can lead to more informed and well-rounded planning decisions (Foley, 2000). A study by Tanku (2018) confirmed that one of the reasons behind the failed attempt at integrated planning between Addis Ababa and Oromia region special zone was the lack of effective lobbying and advocacy. There is an increasing recognition that citizen participation should be based on more comprehensive and diverse principles, institutions, and methods. These principles begin with a more equitable distribution of



**Fig. 7** Shifting the planning approaches based on empirical evidence of the study

political power, a fairer allocation of resources, and the decentralization of decision-making processes (Fischer, 2016). Plans should be created in consultation with the target population. However, it is important to note that the existing population should not have sole authority over the area. Citywide considerations must also be taken into account (Fainstein, 2016). The involvement of participatory urban planning enhances the quality, credibility, and overall effectiveness of planned development, encompassing social, economic, and environmental aspects (Melesse et al., 2022).

In conclusion, while urban spatial planning and industrial development practices have undergone significant transformations, there is always room for improvement. By continuously striving for better practices, cities can be more resilient, livable, and equitable for their inhabitants while minimizing negative environmental impacts. “Inclusion” goes beyond simply allowing citizens to be heard. It also entails enabling them to be well-informed about the underlying reasons behind planning proposals and to respond to them in the technical language of professional planners (Davidoff, 2016). While citizen participation is valuable, it should also be acknowledged that local governments’ capacity plays a significant role. Capacity-building programs can enhance local officials’ skills and knowledge, enabling them to address urban challenges (UN-Habitat, 2009). Based on the empirical evidence from the study, the following shifts in planning approaches are recommended: (see Fig. 7):

Shifting from haphazard to managed settlement planning results in more efficient land use and infrastructure utilization (Fig. 4). Transitioning from isolated to

integrated planning allows for a more comprehensive and coordinated approach to urban development, optimizing resources and services. Instead of a one-size-fits-all approach, space-based planning enables cities to preserve natural assets, protect the environment, and promote sustainable growth. Finally, moving from top-down to participatory planning fosters greater community engagement and social inclusion, resulting in more equitable and responsive urban development. These planning shifts are not mutually exclusive and often complement each other. Incorporating these methods into urban planning can create more resilient, sustainable, and livable cities, benefiting present and future generations.

It is clear that a holistic approach, encompassing industry, urban livelihood, political governance, and institutional frameworks, is necessary for achieving sustainable and inclusive growth. Addressing the challenges and harnessing the opportunities, possible to strive for balanced development across all cities. Above and beyond, industrial projects should undergo heightened scrutiny and be obligated to offer direct advantages to individuals with low income. These benefits should encompass employment opportunities, public amenities, and fair wages. Additionally, when public subsidies are provided, involving public participation allows for project profit sharing (Fainstein, 2016). The considerable challenge of non-compliance with urban plans and the absence of community involvement in urban planning have been prominent concerns. Nearly all key informants have emphasized the issue of plan infringement. According to regulations, plans must undergo local consultations, receive technical evaluations by the OUPI, and obtain approval from the



**Table 5** A summary of challenges and alternative planning approaches

Major challenges	Consequences	Alternative approaches
Lack of coordination and collaboration between sectorial offices	This leads to inconsistencies, overlapping jurisdictions, and a lack of holistic planning	Adopting an integrated and participatory approach
Weak enforcement and regulation	This leads to unauthorized constructions and violations of land-use regulations	Developing robust monitoring and enforcement mechanisms
Weak integration between industry development and urban spatial planning	This leads to imbalanced growth, with industries concentrated in specific areas	Ensuring integration between industry development and urban spatial planning

local council to be legally binding for a specified period, typically around 10 years (MoUDH, 2018). However, this is frequently disregarded and not adhered to. A key informant highlighted, *“Insufficient regular oversight of plan implementation by both the public and higher authorities has resulted in unnoticed and unaddressed plan violations”*.

**4.7 Urban spatial planning, industrial development and land allocation: alternative approaches**

Urban spatial planning requires accurate and comprehensive data on population demographics, infrastructure needs, economic trends, and environmental conditions. OUPI experts attested, *“The lack of reliable data and information hampers the ability to make informed decisions and develop effective urban spatial planning”*. As per OUPI (2017a, b), linear settlements along the main road affect the nature and urban shape of Galan and Dukem cities, contributing to an unbalanced distribution of urban services. Galan and Dukem, city administration officials, argued that limited opportunities for meaningful engagement and insufficient public awareness often exclude community perspectives and undermine the legitimacy of planning decisions. Public participation is crucial for inclusive and responsive urban planning (Watson, 2003). Cities need strong governance structures and transparent institutions to effectively manage resources, implement development plans, and promote citizen participation.

A collaborative governance model that involves multiple stakeholders such as government agencies, urban planners, architects, community representatives, and private sector actors (Healey, 1997, 2007). This approach ensures that diverse perspectives are considered and promotes coordination and integration in planning (UN-Habitat, 2009, 2014a). Consideration for public–private partnerships in urban politics and planning; and the spatial consequences of the privatization of planning (Shatkin, 2016). MUI expert pinpointed that *“Implementing data-driven decision-making processes by utilizing advanced technologies such as Geographic Information Systems (GIS), remote sensing, and*

*data analytics tools can provide accurate and up-to-date information about the urban environment, population dynamics, and infrastructure needs, enabling evidence-based planning”*. Davidoff (2016) states that expanding the scope of planning to encompass all areas of government concern would imply that city planners must have a more comprehensive understanding of the structure and forces influencing urban development. Some existing considerations for privatization of planning may help to implement efficiently. The privatization of planning refers to the shift of responsibility and power from the public sector to private actors in terms of envisioning urban futures and taking social action for urban change (Shatkin, 2016).

The capacity and authority of local governments to enforce zoning regulations and building codes. This can be achieved through training programs for local officials, establishing monitoring mechanisms, and providing adequate resources for enforcement activities (UN-Habitat, 2009). Planning education should be redirected to offer specialized channels in different areas of public planning and a central focus on the planning process. The professional planning association should expand its scope to ensure that city planners specializing in physical planning are not excluded (Davidoff, 2016). Community participation can enhance the efficiency of programs in terms of resource utilization and the effectiveness of projects in achieving their intended outcomes, in developed and developing regions (Fischer, 2016). The interviewed academician suggested *“Promoting closer collaboration and coordination between economic development agencies and urban planning departments. This can be achieved by establishing joint task forces or inter-agency committees to facilitate information sharing, align objectives, and integrate industry development plans with urban spatial planning strategies”*. OUPI, MUI, and Galan and Dukem city administrations interviewed experts who agreed on *“Implementing integrated planning frameworks. They attest that cities need to work together, and there should also be cross-sectorial collaboration”*. Key informant’s suggestions on major challenges and alternative approaches of planning are summarized in Table 5:

The importance of institutions is indispensable in urban spatial planning and implementation courses otherwise, the old problem of *'The Tragedy of the Commons'* likely applies in the planning exercise. An interviewed academician pointed out, *"Unless scarce urban land allocation for investors is accomplished through reliable institutions and regulations, the land is abused. On top of this "regulations with teeth" are required for regulating urban land allocation and urban spatial planning and implementation"*. The urban spatial plan primarily involves allocating land resources (Faludi, 1973). The long-lived and prevailing land shortages, the prominent price escalations, the diverse malpractices like corruption and illegal land occupations, and other ailments in the country's land sector have been widely spelled out by Yirsaw (2010) and Stebek (2015). According to the Marrakech Declaration, achieving sustainable land development entails an intricate interplay of political, legal, socio-economic, and ecological elements. Improving human living conditions in rural and urban areas relies on implementing a unified land policy and adopting a holistic approach to promote sustainable land management (FIG, 2004, p. 3).

Urban land, infrastructure, and service malmanagement are directly influenced by the interaction among policymakers, service providers, and consumers of services (Mahiteme, 2008). Urban plans in Africa do not consider finances, market dynamics and interests, social diversity, or differences among income groups (Freire et al., 2014; Lall et al., 2017). "Cities expand haphazardly without an effective land-use plan to guide and control new developments. This produces a patchwork of different developments, including businesses and high-density residential settlements, interspersed with the land that remains undeveloped and is held by its owners in anticipation of speculative gain" (Satterthwaite, 2007, p. 58). Given the complexities in Ethiopia, only some actions can channel urbanization onto a more sustainable and efficient path. Therefore, comprehensive, multi-dimensional land management and administration reform is needed, which would entail revising the current policies, laws, regulations, and practices (World Bank, 2015). Merrifield (2006) argued further to "manage" an unmanageable contradiction, a new crew of frauds enters the fray: planners and politicians, technocrats, and taskmasters. Healey (1999, p. 118) pointed out that place-focused public policy involves developing a viewpoint or system of meaning on place qualities and trajectories to the multiple conceptions of those who cohabit in an area. The existing state-centric monopoly toward the mono-route land-use market needs to be changed to non-monopolized multitrack land-use markets (Stebek, 2015).

## 5 Conclusion

The current OUPI urban planning practices are the traditional master, and comprehensive rational plans, which have proven inefficient in developing countries. A more integrated planning approach is imperative to fully harness the potential of available resources and planning expertise in the study of cities. In alignment with Kristof et al. (2016), I contend that there is no such thing as a flawless urban spatial planning system. However, it is essential to prioritize the well-being and livelihoods of local communities since, ultimately, planning is meant to serve the people. It is evident that fostering robust community involvement and integrating inputs from advocacy planning is imperative for effective urban development. The historical deficiency in citizen engagement, characterized by the notion of a "unitary plan," as identified by Davidoff (2016), underscores the significance of revitalizing the planning process. To address this, a crucial recommendation is to decentralize the role of the centralized planning entity, OUPI, by transferring its functions to the municipal level within cities. This shift towards decentralization will enhance local empowerment, enable tailored solutions, and promote a more inclusive and responsive urban spatial planning framework. It is essential to shift the focus from promoting a singular government agenda, such as rational comprehensive planning, towards embracing a multifaceted public interest approach, exemplified by advocacy planning. The urban planning practices within the study cities would greatly benefit from prioritizing diverse community needs and perspectives. To achieve this, a pertinent recommendation is to integrate advocacy planning principles into the urban spatial planning framework, ensuring that the voices of various stakeholders are acknowledged and incorporated. This shift will result in more resilient, inclusive, and sustainable urban development that effectively addresses the intricate challenges faced by these cities.

This article emphasizes that an unplanned allocation of investments and insufficient consideration of locations can hinder economy-wide growth, leading to haphazard growth corridors and urban expansion issues. The interconnectedness between industrial development and national policies underscores the importance of discussions surrounding the trade-offs between investment expansion and sustainable urban spatial consequences. As nations navigate the complexities of industrial growth and development, it is essential to acknowledge the interconnected nature of various policies. Recognizing the interplay between industrial development, urban spatial planning, and political and institutional frameworks is crucial. By adopting an integrated and participatory approach, strengthening institutions, and promoting

political stability, cities can bridge the divide and work towards sustainable and inclusive urban development that meets the needs and aspirations of their residents. Above all, government modus operandi must be based on urban spatial planning laws and principles.

The research solely relies on experts' surveys and insights gathered from interviews, precluding the opportunity for extensive quantitative analysis. Consequently, forthcoming studies should consider these limitations and aim to fill these gaps. Doing so could facilitate a more nuanced and holistic comprehension of the subject matter, easing more informed decision-making in urban spatial planning.

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#### Institutional Review Board statement

Not applicable.

#### Informed consent statement

Informed consent was obtained from all subjects involved in the study.

#### Authors' contributions

Melaku Tanku was solely responsible for all aspects of this work. This includes the conception and design of the study, data collection, analysis, interpretation of data, and the drafting and revising of the manuscript.

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#### Availability of data and materials

The raw data supporting the conclusions of this article will be made available by the author upon request.

#### Declarations

#### Competing interests

The authors declare no conflict of interest.

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