

Spatial Planning and Land Administration Issues in the Lagos Megacity

Agunbiade, Muyiwa Elijah

*Department of Urban and Regional Planning
University of Lagos*

Abstract

The four functions of land administration are intricately linked due to the motive for land holding, especially with regard to the physical uses of land and properties as well as the socio-economic considerations. However, these roles currently lack effective coordination. This lack of coordination affects the value of land. Conversely, land values are also shaped by regulations for land-use planning, which are often set by zoning plans. Over the years, connections between different land administration functions have been challenged by the institutional arrangement. There is a need for parcel-based information to enhance the institutional role of spatial arrangement of settlements framed by land-use regulation within the context of land administration systems. This paper examines the broad overview of the concept of land administration and its impact on spatial planning in the Lagos Megacity. This is structured to review existing knowledge by exploring some of the dominant requirements of integrating spatial planning and land administration while focusing on the approaches to addressing the challenges.

Keywords: spatial planning, land administration, Lagos megacity, land administration system, land use planning

1. Introduction

Spatial planning is analogous to land use planning, the logical location of appropriate uses through zoning, and the allocation of adequate spaces to support specific developments (Acheampong, 2018). Albrecht (2006) describes this as 'the process of allocation, forming, sizing and harmonising space (land) for multipurpose uses'. The primary focus of land use management forms a significant and essential part of land administration systems. As observed by Williamson, Enemark, Wallace, and Rajabifard (2010), land administration evolved out of cadastre¹ and land registration fields, previously focusing on taxation but later ownership and security of tenure. Subsequently, land administration became a discipline and has recently expanded to include four essential functions: land tenure, land value, land use, and land development. A deeper understanding of how these functions is related and interconnected can be clarified through the land management paradigm². This approach examines how the government is involved in the planning, creation, and oversight of the Land Administration System (LAS).

This leads to the combination of efficient land markets (land tenure, land value) and effective land-use management (*land use and land development*). Considering the level of development in Nigeria, it is

critically important that we address the issues of land tenure and the registration of people's interest in land in the form of cadastral mapping, which is the *logical basis* for proper planning. However, as planners, the main idea is to focus more on land use and development to achieve sustainable development while providing mapping, cadastral surveying, and land registration as bases for effective land use management. To achieve this, the organisation or entities responsible for managing the interrelationship of these functions must be multipurpose, flexible, and robust (Williamson et al., 2010). Usually, there are some issues involved in bringing all these together. This paper looks closely at these issues and explores the interrelationship between land use/spatial planning and land administration. The paper concentrates on the role of planning and land-use regulation within the context of LAS. It also highlights the *need for parcel-based information to execute the corresponding role*. It starts with a broad overview of the concept of land administration and how this impacts spatial planning within the Lagos Megacity. This is followed by exploring some of the major challenges of integrating spatial planning and land administration and the approaches to addressing the challenges.

¹ It usually includes a geometric description of land parcels linked to other records describing the nature of the interests, ownership or control of those interests, and often the parcel's value and improvements. It may be established for fiscal purposes (e.g., valuation and equitable taxation), legal purposes (conveyancing),

to assist in the management of land and land use (e.g., for planning and other administrative purposes), and enables sustainable development and environmental protection. FIG, 1991.

2. Broad Overview of Land Administration and Spatial Planning

The concept of land use planning, interchangeably used as spatial or physical planning, should be introduced with planning control systems guided by both statutory and strategic planning systems. Essentially, the design of adequate systems to deliver effective land-use control and land development should be viewed from the broader perspective of designing modern LAS. It is anticipated that this should be based on a robust *parcel-based information*². This view held that LAS sits within a land management paradigm that encourages the integration of processes, policies and parcel-based data targeting sustainable development agenda. The paradigm can be used by the government to design, construct and monitor LAS. The core idea is that the processes of understanding the land market and developing land management strategies need to be approached holistically and strategically, considering each country's context, for example, the Lagos megacity context, to assist in delivering the four land administration functions.

The view also held that there should be appropriate integration of the four functions of land administration: *land tenure*– which concerns land holding/ownership structure and land registration; *land value* – which focuses on the assessment of land value and the determination of land taxation; *land use* – that determines the appropriate use and allocation of land, and *land development* – that deals with the statutory requirements for planning permits to manage both existing and new developments adequately. While admitting that the execution of the four functions is in the domain of different professionals: land economists, surveyors, lawyers, valuers, planners, engineers, and developers, it is critically essential that there should be better coordination for better collaboration.

One of the strategies to make this work is to take into consideration the planning control systems of statutory and strategic planning that explore the interrelationships between the four functions, at parcel level and through the lens of urban and rural land-use planning and regulations, land consolidation and boundary readjustment, as well as sectoral land-use regulations.

This is complicated, however, when the scope and scale of Lagos's challenges are taken into account, as well as the inability to discern its physical,

administrative, and political extent. Lagos megacity comprises the contiguous urban part of Lagos state, which translates to the Eighteen (18) LGAs and an additional four (4) local government areas of Ogun State clearly out of the jurisdiction of each of the two states (Figure 1).



Figure 1. Lagos Megacity are– a combination of some parts of Lagos and Ogun state

To achieve effective strategic planning, it is essential to consider properly integrating processes, policies and spatial data within the framework of existing rules and regulations. It then becomes easy to translate these to some statutory requirements in a format that could be appropriately managed.

As illustrated in Figure 2, two functions, land use and land development, are grouped together as *effective land use management*. To expand the meaning of land use management, it is required that we fully contextualise land use planning and land development, both being components of land-use management. As described by [Williamson et al. \(2010\)](#), *land use planning* involves the processes and institutions that utilise government policies and regulations to manage land use, which could be described as strategic planning. It includes the implementation of these regulations, including the administration and decision of land-use conflicts. On the other hand, land development is described as the processes, policies and institutions involved in granting planning permissions to facilitate new development, change of land use and the building of physical infrastructures

²This corresponds to the *cadastre*, which usually contains up-to-date land interest records (i.e., Rights, Restrictions and Responsibilities - RRR). The land parcel is the basic and smallest geographic unit of a parcel-based information system. This could

be described as a single piece of land determined geographically by its boundaries and held under relatively homogeneous property rights. It is the basic infrastructure to support different systems in land management([Enemark & Sevetdal, 1999](#); [Nations, 2004](#)).

and utilities, including acquisition or expropriation of land.

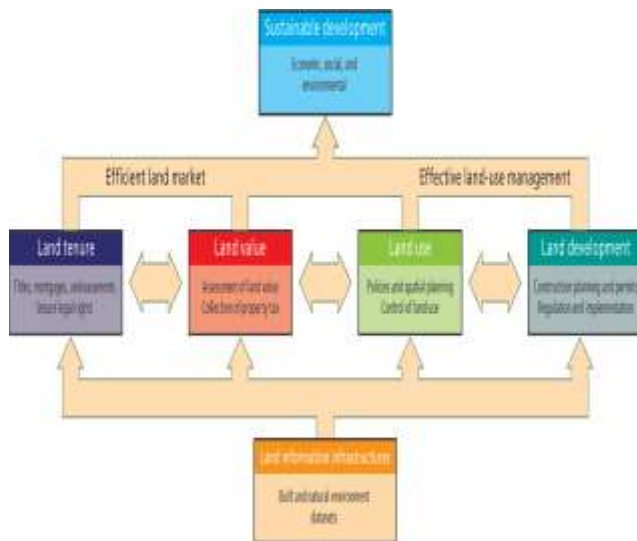


Figure 2: A global land administration perspective promoting efficient land markets and effective land management (Source: [\(Enemark et al., 2005\)](#))

Conceptually, it is argued here that all four functions are inevitably intricately linked due to the motive for land holding, the socio-economic and physical uses of land and the improvements on such lands. These impact land values, while land values, on the other hand, are also influenced by land-use planning regulations, as might be determined by land-use zoning plans. Invariably, they all impact the types of activities that can be permitted as guided by the overall municipal policies or planning framework to regulate future land development.

The primary unit of space for land use planning is the parcel, although this is often mistaken as property. For clarity, it is essential to distinguish between the concepts of parcel and property. A property could be considered a legally defined term for ownership of land units. In this regard, a property may consist of one or several land parcels or plots. A parcel or plot could be considered the smallest unit that can be represented or plotted as equivalent to how the land is represented in the land registry and, by extension, how it is used or managed. The representation of land parcel and the exclusion of *parcel-based information* and documentation often presents some challenges for spatial planning.

Major challenges of integrating spatial planning and land administration

One of the major challenges is the *limited understanding of the meaning, scope and practice of*

spatial or physical planning ([\(Acheampong, 2018; Allmendinger & Haughton, 2010; Harris & Hooper, 2004; Nadin, 2007\)](#)). There are always those critical questions: What is spatial planning, and how should it be practised? These are the two critical questions that planners must sufficiently answer to effectively deal with spatial planning and land administration issues while sufficiently interrogating innovative approaches to enhancing urban planning in Lagos. Understanding the nature of a subject is a prerequisite for devising effective strategies to address it. *If we do not have a destination, every road is the way!*

There are potentially several possibilities and perspectives regarding what physical planning is or is not. It will be beyond the scope of this paper to attempt to define physical planning. It will just be sufficient to describe it. One thing is clear: Planners have a custodial role in the built environment. In other words, the proper integration of the four functions of land administration should be the priority of planners if they must adequately position themselves to manage the issues involved in the built environment.

Notwithstanding, planners cannot claim to be the master of everything; for example, it could be argued that *‘if planning is everything, then it is nothing’*. Nevertheless, some have argued that *‘plans are nothing; planning is everything.’*

‘From old American cities to British new towns, from the richest countries to the poorest, planners have difficulty explaining who they are and what they should be expected to do. If they are supposed to doctor sick societies, the patient never seems to get well. Why can't the planners ever seem to do the right thing?’ ([\(Wildavsky, 1973\)](#))

While it will be challenging to have a consensus on this matter, nobody has ever been able to provide a generic definition of spatial/physical planning. We could at least conceptualise and contextualise spatial planning such that we will recognise our level of development and make conscious attempts to improve our situation. The first approach is to accept that spatial planning ideals and coverage can be likened to a continuum or spectrum; in this case, it runs from the very technical aspect to the socio-anthropological perspective ([\(Gamst, 2015\)](#)), where it is almost difficult to think of it as spatial planning. Equally important is the issue of scales and information content, which could be classified into general and detailed plans. General plans offer a broad perspective on the issues of pattern and structure, focusing on the spatial arrangement of developable and non-developable primary land uses, including but not limited to residential, transportation and utility ([\(Beykaei et al.,](#)

2015). Detail spatial plans, however, deal with issues of zoning, density, and building ratios to open space, amongst others. Spatial planning extensively uses geospatial and non-spatial information, both essential at different stages- preparation for the presentation of spatial plans. If spatial planning is well articulated, it responds to natural disasters, economic planning and environmental planning (Galderisi & Colucci, 2018; Taylor, 2010).

Therefore, simply described [not defined], planning is any endeavour with a spatial dimension considering social, economic, political and environmental issues and structuring these into *strategic* and *statutory* planning. For this discussion, it will be useful to provide guidance in differentiating the two forms of planning: *strategic* and *statutory*.

Strategic Planning requires an integrated and holistic approach to predict, plan and shape the living environment. The scope focuses on medium to long-term use, management, and land development. The desired outcome is identifying and achieving communal objectives while preserving the environment. Statutory Planning or development control is the process of implementing strategic plans by the responsible planning authority, with the ultimate goal of controlling plans, policies, and guidelines for informed decisions about development.

It should be realised that planning systems are a mixture of institutional framework, legislative and governance arrangements. These fundamentals are reinforced in a range of policy documents like strategic plans or development plans to direct precise decisions. This provides opportunities to set rules and guidelines to simplify the practical application of policy documents. This then finds expression in developing guidelines, codes and regulations that form the bedrock of a sound development assessment system.

Approaches to spatial planning vary considerably from one national jurisdiction to another, reflecting past and present socio-economic developments as well as geographical peculiarities. Four major traditions of spatial planning have been recognised in Europe. These include a regional economic planning approach, comprehensive, integrated approach, a land use management approach, and an urbanism approach' (European Commission, 1997).

A closer look at the approach in Lagos, just like other cities in Nigeria, suggests that a comprehensive, integrated approach is being adopted. It then logically follows that where spatial planning is conducted through a systematic and formal hierarchy of plans with the principle that plans at lower levels must not contradict planning decisions at higher levels.

Currently, there are many gaps between higher-order and lower-order plans. In the last two decades, there have been significant efforts at preparing regional, master and model city (district) plans without corresponding efforts to translate these plans into operational planning tools. Considering this, it is difficult to justify or provide a basis for implementing statutory planning. In other words, the strategic plans should provide sufficient bases for the grant of development permits by stipulating clearly, at the parcel level, the rights, restrictions, and responsibilities of landholders with respect to the overall planning of the city. The implications are clearly evident in the overall planning and development outcomes as exemplified in Lagos's urban form and character.

A successful planning and development assessment system has three basic elements: *process*, *policy* and *people*. *The process* is focused on the legislative framework. This provides a structure and regulations for decision-making. It also helps determine and protect land and property *interests*. *The policy* could be written and/or illustrated. It includes strategic plans, planning codes and performance standards to guide decision-makers to operate within the legislative framework. *People* are the elements that adopt the legislation and the corresponding policy documents for decision-making.

Each of these elements needs to be effectively and intricately balanced and adequately resourced, considering that spatial planning is constantly challenged by the peculiarities and the circumstances of cities. If this cannot be guaranteed, successful operational planning will be significantly impaired, as is the case in Lagos and generally in Nigeria.

This ranges from political, economic, and legal to communal and cultural issues. As it stands today, using Lagos mega city as an example in Nigeria, with all the previous interventions and good intentions, it has been struggling with providing effective pro-active planning strategies and legislations. What is currently in operation are the ad hoc measures, which are primarily random strategies that could be described as reactive planning. Significant in this consideration is the lack of coordination between geographic spaces administratively referred to as Lagos and Ogun states. Ordinarily, considering that there are practically no visible physical boundaries between the two states, it logically follows that there should be some kind of a system that will collaboratively and effectively plan this contiguous space divided by some imaginary boundary lines on paper.

Today, developments go well in advance of statutory control, while effective legislation follows at a far distance (Oladiti et al., 2018). Given the random

nature of physical growth as exemplified by Lagos megacity and the issues of capacity with regards to personnel – both quality and quantity – to effectively manage this development, it is essential for the government to have an excellent administrative structure and a well-structured intervention framework in the form of a consultancy arrangement if it desires effective solutions to a multitude of existing challenges.

It is apparent that the Lagos state government cannot effectively engage the number of staff and the required quality that will adequately provide the technical services needed to *plan, grant planning permits and monitor development* optimally. The challenge is further compounded by how land use is organised, especially the extent of discretion or flexibility in decision-making. As Vanessa (2017) described, this discretionary ability frequently permits development inconsistent with adopted planning regulations.

Specifically, the second major challenge is the *unintegrated land administration systems*. This involves coordinating the four functions: land tenure, land value, land use and land development. It is axiomatic to argue that everything, including every activity on earth, takes place on land, meaning that it could be spatially referenced, meaning that a specific activity is linked to a location on land at a particular point in time. Considering the competition for the use of spaces it explains the tension associated with the ownership and use of land in response to the ever-increasing population. In this regard, until land holding is well managed, it continues to be a major limitation to properly ordering land uses. Our present realities reveal that:

- i). Our cities are among the fastest-growing cities in the world, but they lack planning (Figure 3)
- ii). We tend to push back our challenges, anticipating that they will be resolved by themselves - the prevailing land tenure systems in Nigeria. Our land tenure systems look away from the realities of people-to-land relationships. It respects less the dynamic or wholistic interrelationships, leading to uncoordinated land use planning and the subsequent proliferation of slums.



Figure 3. Urban Growth per hour³

The third major challenge at the strategic planning level is the *non-inclusion of parcel-based information* to guide spatial planning adequately. In Lagos state today, more than 70% of existing developments have no land titles. This explains why there is no comprehensive cadastral map for the state. The current state of urban planning is influenced by the shortcomings of land registration systems, which have led to informal urban development, such as invasions and squatting. This situation encourages the illegal division and occupation of vacant state-owned or private land for informal housing purposes. Many of these developments disregard established planning regulations. Instead, there is an increase in unauthorised construction projects or substantial expansions of legally recognised structures (Potsiou & Ionnidis, 2006).

It thus becomes complicated for the state to have a coordinated and comprehensive cadastral map that includes parcel-level information. With this reality, it is almost impossible to have parcel-level planning information to facilitate well-coordinated spatial planning. In cases where records exist, land title and registration systems have predominantly remained in analogue format or, at best, in textual digital files without spatial capabilities. Additionally, the management of land administration functions has been isolated, with different professionals handling different aspects. This lack of integration among land administration functions has posed challenges. Consequently, this has significantly hindered effective planning processes.

It is essential to consider the identified challenges comprehensively by framing the issues involved

³<https://www.weforum.org/agenda/2015/11/the-worlds-fastest-growing-cities/>

through the lens of land management, especially the integration of land administration functions and policy considerations. It is anticipated that this will ensure proper land-use management, which will sufficiently coordinate statutory and strategic planning to prevent unauthorised or informal development. This will prevent future unintended consequences of inappropriate development at a later stage that might impose enormous costs on society. The following section discusses the possible approaches to resolving some of these challenges.

4. Proffered approaches to addressing the challenges

4.1 Conceptualising spatial planning

The strategy for resolving one of the challenges, mainly providing a suitable definition of spatial planning, is to situate planning within the new world order. This requires adaptation in response to changing technology and considerations for amenities by exploring new-age technology and concepts. In other words, the new planning paradigms have necessitated a significant shift in how we conceive physical planning problems and engage with such, especially when viewed from the perspective of land administration.

The first layer of intervention is to sufficiently adopt strategic planning processes of preparing appropriate levels of plans and statutory planning principles for operationalising the strategic plans. The second layer will direct energy towards the preparation of lower-order plans significantly. The era of relying on master plans or district/model city plans to chart low-density residential buildings in a residential neighbourhood is totally unforgiven and should no longer be encouraged. Strategic planning is done at the parcel level. This provides opportunities to prepare planning schemes and develop appropriate design guidelines for respective land parcels that consider each unique location's peculiarity. By doing this, our planning will respect the principle of land use location and adequate space allocation while providing an unambiguous and consistent context for decisions about the use and development of land.

Equally crucial for consideration is the practice of limiting spatial planning to the traditional technical layout design approach as pushed for by first-generation planners (Payne, 2000). While there is no problem preparing layout design in its right, this is necessary, but at a closer look, it could be argued that it is insufficient for modern-day planning. In modern planning, it is crucial to go beyond just the physical aspects and give significant attention to the socio-economic and environmental aspects of integrated planning. Spatial planning should acknowledge the necessity for and actively contribute to adjusting in

response to evolving technology, elevated standards of urban design and amenities, safeguarding environmentally delicate regions, and incorporating various land uses, including transportation networks. The third layer will be through innovation and exploring new-age technology and concepts (Griffith, 1999). A prerequisite for deploying appropriate technology is understanding the challenges, the environment, the motivation, and technological advancement. These are all based on some triggers. These triggers might include one or the combination of the following: challenges of achieving sustainable development goals, challenges of implementing the compact city concept, which can find expression in Transit Oriented Development (TOD) (Thomas et al., 2018), meeting the requirements for Smart City, technology and capacity to support, Internet of Things (IoT), enabling platform for Artificial intelligence (AI) (Singh et al., 2013; Habeeb, 2017), virtual recreation of real-life experience through Twins City concept (Mohammadi & Taylor, 2017).

Innovations are derived from problem-solving. Setting out to solve problems gives us the window of opportunity and impetus to trigger our imaginations and creativities. For instance, sooner than later, nations will be required to measure their level of achievement regarding the SDGs. One of the most significant challenges in Nigeria will be articulating all the elements and parameters to measure each of the land administration functions and their integration. Achieving this will involve working collaboratively with all the stakeholders while being guided by the principle of inclusiveness – *leaving no one behind* – especially the vulnerable groups: elderly, physically challenged, children and women.

4.2 Strategic coordination of land administration systems

Regarding the second challenge, *uncoordinated land administration systems*, it is crucial to develop a process to facilitate the integration of different LAS functions. It is significant to have a holistic ideology to facilitate integration. For example, from the strategic planning perspective, it might be desirable to create mixed-use neighbourhoods to deliver better access to services and facilities. To achieve these will mean a transparent land tenure system, the ability to effectively estimate both land and capital to improve the values of each property, the ability to assess the appropriateness of the land uses and determine land acquisition, appropriation, fragmentation and/or consolidation, as well as planning permit, being components of land development strategies.

The need for this type of integrated approach stems from the challenges associated with the current living and the dynamics of the household life cycle that have

combined to refocus planners' attention on the reality of modern living. This has drastically impacted the residential location choices, especially whether residents live closer to the city centre or in the suburbs. Currently, in most advanced countries, especially in Europe, attention has shifted from *greenfield*⁴ development to *brownfield*⁵ or *greyfield*⁶ development; hence, there is less emphasis on the land sub-division and more on land consolidation and proper documentation of titles. There is also more emphasis on the continuous assessment of both land value and the capital improved value to make better judgments of property recapitalisation.

This trend is being felt also in most developing cities where there has been an intense increase in population and long commuting distances to work. The desire to regenerate the decaying parts of the inner city is gaining momentum, thus leading to significant advocacy regarding land consolidation and high-density developments. This can only be achieved when all the land administration functions are considered as a system that should be viewed as a complete and interactive scheme and not be viewed as silos. In other words, land should be treated as a unified entity. This leads to another important consideration regarding securing a bank loan for development. Before a bank can grant construction loans to a developer or individuals, there must be a title document often used as collateral. So, the issues relating to land tenure and registration of land titles become very important.

Events of the past years have shown that innovations are masterminded by entrepreneurs, private people, and businesses outside of government. Against this background, the administrative framework must be set up to promote seamless development to accommodate the ever-increasing population. In this regard, proper coordination among different land administration functions will complement the efforts of the government in facilitating efficient and effective planning in Lagos as well as the other parts of Nigeria.

4.3 Parcel-based information for spatial planning

This section focuses on the need/benefits of adopting parcel-based information for spatial planning. It could be argued that the land parcel is the most essential component of the cadastre system. It is, therefore, required that this should be appropriately described and digitally represented. Until early 1980, most parcel-based information was paper-based systems

⁴Areas of land, usually agricultural or amenity land, which are being considered for urban development.

⁵Real estate property - usually abandoned factory sites or docklands, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

(Figure 4). Keeping information in this medium and format has presented some challenges in the past, especially regarding accuracy, reliability, and privacy. There is no doubt that to deliver information for coherent and collaborative land management; it will be necessary to shift the approach from paper/analogue-based to digital format in order to compile efficient and effective general statistics about the number of parcels, titles, and transactions. The adoption of computer has provided opportunities to build a holistic infrastructure that keep the records of the Right, Restrictions and Responsibilities (RRR) on land through the adoption of Information and Communication Technology (ICT), Spatial Data Infrastructure (SDI), and land information tools.



Figure 4: Timeline for developed LAS in most Western countries.

Source: [Williamson et al. \(2010\)](#)

The appropriate response to resolving the third major challenge, *inadequate parcel-based information*, is to intensify efforts at developing parcel-level information through strategic planning and statutory planning processes. By this, the RRR on each parcel of land can be adequately kept for informed analysis and planning permit decisions. This can only be made possible by first engaging in aggressive land registration and documentation that is digital and spatially enabled. These processes take time to evolve, as shown in Figure 4; the computerisation of land information started in the 1980s in most Western countries and has matured into spatially enabled governance today.

However, no matter how complex the process is, Lagos must develop an efficient land market and effective land development. Lagos Megacity's spatial planning must consider the ever-increasing population, that is, stimulating scarcity of land and triggering informal occupation of land with the attendant uncontrollable development and environmental degradation (figure 5). There is an increasing demand for secured and structured ownership with proper land registration. Considering that Lagos megacity spans two state jurisdictions, parcel-based information that clearly defines the

⁶Land that is underutilised as a result of economic obsolescence. Greyfield sites are: 'the ageing, occupied residential tracts of suburbs which are physically, technologically and environmentally obsolescent and which represent economically outdated failing or under-capitalised real estate assets' ([Newton, 2010](#)).

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