Cities that Work

IGC

POLICY BRIEF

Economics meets urban planning: Developing effective land use plans in fast-growing cities

This policy brief highlights the importance of considering land and labour market dynamics when developing urban land use plans. It also outlines the three fundamental questions faced by policymakers when it comes to urban planning: the division between public and private space; what use to assign to public space, particularly concerning public good provision; what regulations to impose on private space, including rights and obligations.

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JULY 2023

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DIRECTED BY

LSE UNIVERSITY OF OXFORD

FUNDED BY

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Economics meets urban planning

Land is the most valuable asset in a city. Effective urban land use planning creates a platform from which city inhabitants can cluster together to access basic services, productive jobs and social networks; and where firms benefit from opportunities to scale and specialise.

However, as many low- and middle-income cities in developing countries rapidly expand, there is a risk of land becoming occupied without supporting infrastructure and services. This can lead to urban sprawl, informal settlements, congestion, pollution, and other issues – which, in turn, exacerbate inequality and poverty. The result is an urban development that is inefficient, unliveable, and environmentally unsustainable.

To avoid or mitigate these issues, cities need to plan ahead. This entails making important decisions around land use on public and private space. On the former, governments need to proactively allocate land for the provision of public goods, including roads and public transit, water and sanitation infrastructure, and adequate open space. On the latter, policymakers need to leverage various tools to regulate, tax, and empower private decision-making.[1]

It is also vital to acknowledge that, while planning is important, implementation is where most cities fail. To ensure the best chance of success, plans need to be tailored to local realities, account for local enforcement capacity, and be clearly focused on few, achievable goals.

Importantly, urban land use plans should balance the constant tension between the long-term predictability needed to guide core investments, and the required flexibility to adapt to ever changing economic realities, which often cannot be fully anticipated and therefore covered in plans.

Key messages:

1 **Poor implementation is often a greater constraint than poor planning.** Plans therefore need to be tailored to local realities, account for local enforcement capacity, and be clearly focused on few, achievable goals.

2 **Land and labour markets are important drivers of urban development.** The dynamics of these markets should be embedded in planning decisions aimed at improving spacial connectivity; facilitating the clustering of firms and formation of neighbourhoods; and ensuring the right to affordable housing.

3 **Governments should allocate public space, as well as regulate and tax private space, to optimise the public good.** Public space must be allocated for the provision of public goods, and the anchoring of private investment in housing, and commercial and industrial activity. Private space can be optimised for the public good through improvements in land rights, zoning and density regulations, and land value capture tools.

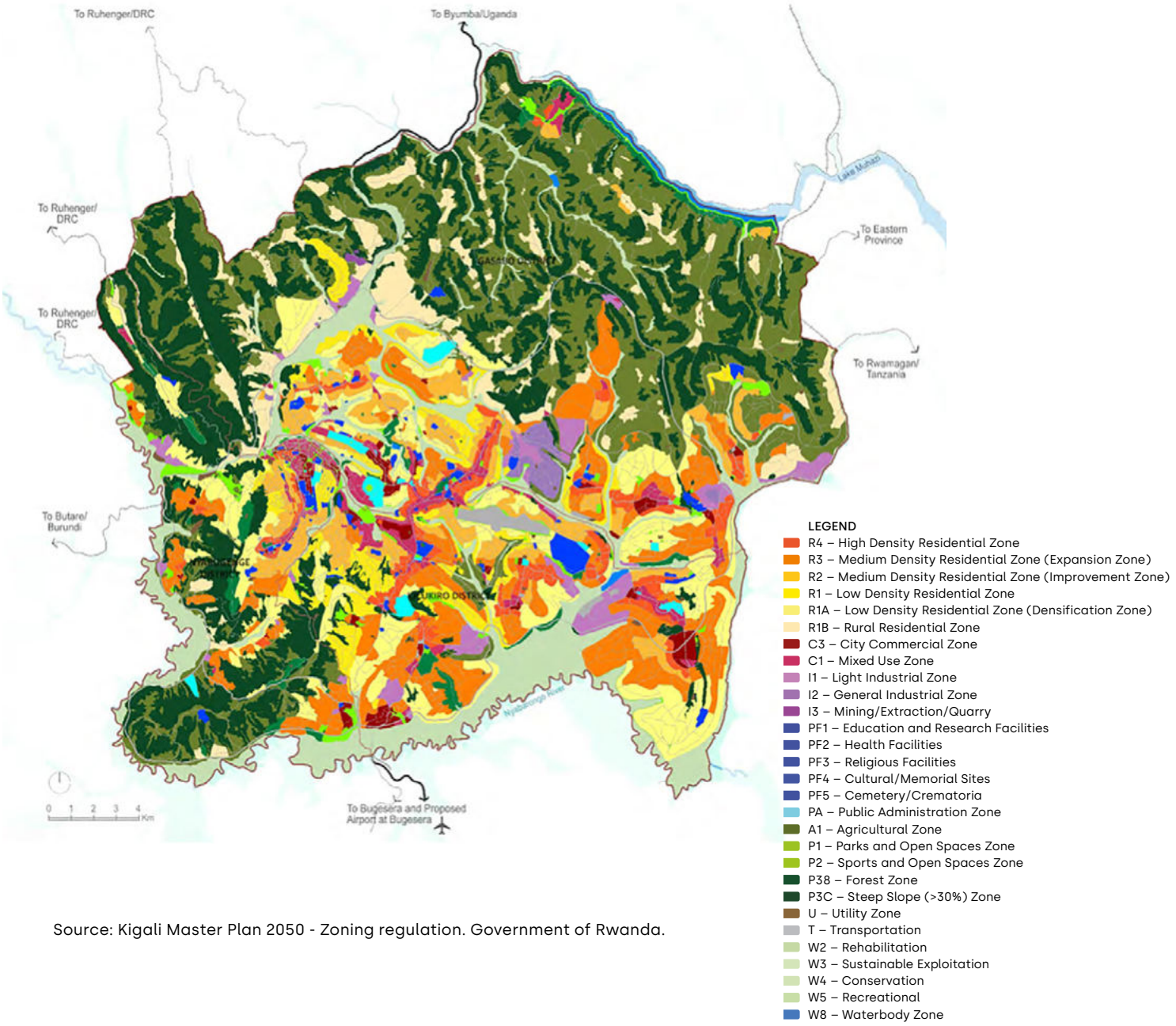
4 **Urban land use plans should be constantly revised to ensure they remain suitable and fit-for-purpose.** This includes moving away from viewing plans as static blueprints and recognising the dynamism of cities. Regulations should undergo periodic revisions, so they remain responsive to the city's current and evolving needs.

1 Collier (2016).

Designing urban land use plans to be *implemented*

Cities make use of different land use planning tools at varying spatial scales – from long-term masterplans to more frequent neighbourhood plans. Their goal is to ensure that the city is growing in a productive, non-hazardous way. Fundamentally, they serve as a roadmap which helps guiding public and private decision-making on issues that span transport to housing provision. **Figure 1** shows an example of a long-term land use plan from Kigali (Rwanda).

Figure 1: Kigali's long-term land use plan



Source: Kigali Master Plan 2050 - Zoning regulation. Government of Rwanda.

Often, however, urban land use plans overlook important factors, inhibiting how practical and effective they might be. For example, the importance of **contextual knowledge and ownership**. Over 80% of masterplans of large cities in Africa are developed by international consultants.[2] While this can bring much needed capacity, they are not always aligned with local realities, often creating unrealistic visions of futuristic 'smart cities'. Furthermore, many plans still hold unsuitable regulations developed during colonial times. These are often completely at odds with current needs and **local enforcement capacities**.

A truly implementable plan will **prioritise a few core issues**, setting clear and achievable goals, rather than trying to tackle everything at once. The city will then make progress incrementally, building momentum as it goes.

Importantly, planning decisions around land allocation and regulation should acknowledge the role of **land and labour market dynamics** in shaping urban form and driving structural transformation. As explored in the page below, these have a direct impact on the effectiveness of solutions designed to address the many urban challenges. The dynamic nature of cities means they are always changing and adapting to citizens' decisions and market forces. Plans need to account for this, allowing for adaptation as the city evolves.

2 Harrison and Croese (2022).

Land markets: The price of land as an urban shaper

Cities are fundamentally shaped by land prices. As the urban population grows, the demand for floor space increases, particularly in locations closer to jobs and amenities. To afford the price increase, land parcels need to be shared among more people (for example, through taller buildings or smaller apartments), leading to higher densities in certain areas. **Figure 2** helps illustrating how this dynamic plays out differently in each city.

Figure 2: Population densities in Istanbul, Mumbai, and Johannesburg

Notes: Height of the bar represents population density (people per square kilometre), not necessarily building heights.
Source: LSE Cities.

This market mechanism means that urban form, such as cities' average building heights, is not only driven by planning preferences, but fundamentally by individuals' financial decisions guided by the supply and demand of urban land. Similarly, a city in which shacks predominate typically reflects low household incomes, low land values, and a lack of infrastructure.[3]

Land markets also help shape urban form by sending price signals when land is underused, or its use is unsuitable for its location.[4] Embedding these dynamics into planning decisions is therefore important to supporting structural transformation in developing countries, as well as recognising when markets alone cannot lead to an optimal land use.

Labour markets: Cities as places to work

Beyond places where people live, cities are also large labour markets and engines of economic growth, enabling the economic transition towards higher value-add manufacturing and services activities.[5] A well-connected labour market brings together people with varied but complementary skills. This process drives innovation and helps attract even more diverse firms, jobs, and cultural amenities to the city. The larger the labour market, the greater the specialisation permitted, as well as the greater opportunities for firms to scale up and add value.[6] Urban land use plans are thus critical for enabling a cohesive labour market – one that allows workers to efficiently sort themselves across the different job opportunities in the city at large.

3 Collier (2017), and Jedwab and Barr (2023).
4 Bertaud (2018).
5 Tsivanidis (2022).
6 Collier (2017).

Three core objectives of urban land use plans

To achieve productive, liveable and environmentally sustainable cities, policymakers in developing countries need to focus on:

- **Improving the spatial connectivity** of people across the city at large.
- **Facilitating an efficient clustering of firms** and **formation of liveable neighbourhoods**.
- **Ensuring the right to affordable housing** as the demand for floor space increases.

These should be understood in the context of dynamic land and labour markets, as described in the previous page.

1. Improving spatial connectivity

A failure to invest in connectivity can trap the city in poverty.

Urbanisation at its core is about spatial connectivity. Connectivity, in turn, is the backbone of a productive labour market, and a city's overall economic and social prosperity. Because productivity is reflected in incomes, a failure to invest in connectivity can trap the city in poverty.

Spatial connectivity can be achieved through smaller distances between firms and households, and improvements in transport infrastructure.[7] Thus, an urban land use plan that encourages densification, as well as demarcates land to be part of a city-wide transport network, has several benefits, including:

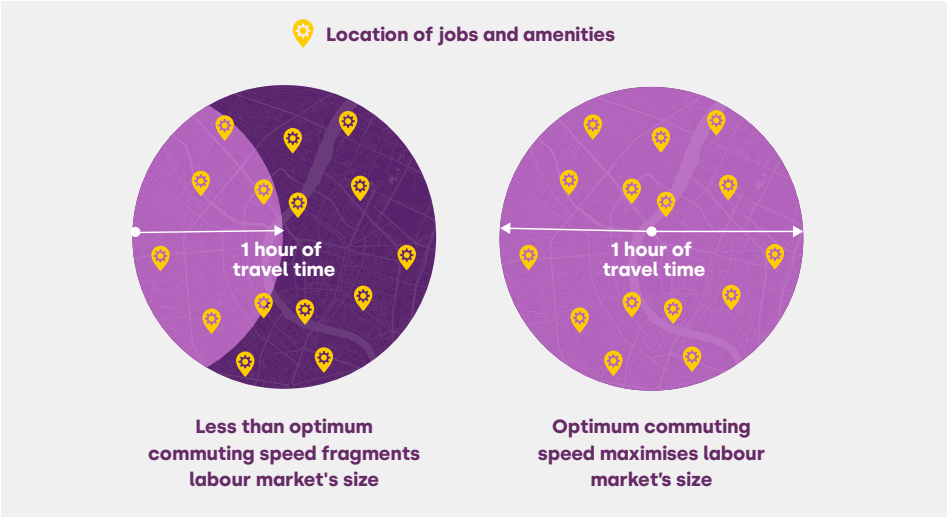
- **A quicker commute**, increasing the average number of jobs that workers can access within one hour. It also means more time for leisure activities and opportunities for social interactions.
- **Cost-effective infrastructure provision**, which typically relies on higher-density nodes to be economically feasible.
- **A reduction in per capita greenhouse gas emissions** of transport and other core public infrastructure. A better public transport network also reduces car dependency, and associated congestion and pollutant emissions.
- **Firm productivity gains**, as density encourages cross-firm learning and innovation, as well as potential for scale and specialisation in diverse activities.

In many low- and middle-income cities, however, pronounced urban sprawl and weak public transport systems are a common feature. **Figure 3** helps illustrate how less-than-optimum commuting speeds fragment the labour market, leading to fewer job opportunities, and an inefficient matching between firms and workers. In Nairobi (Kenya), for

7 Collier (2016).

example, 42% of the population walk to work, while another 28% take minibuses. In practice, the slow travel times mean that workers can only access respectively 11% and 20% of total jobs in the city.[8]

Figure 3: Commuting speeds and labour markets



Notes: The circle is a schematic representation of a city's built-up area. The area in light purple indicates the distance covered in 1 hour of travel time. Source: Adapted from Bertaud (2018).

2. Facilitating an efficient clustering of firms and formation of liveable neighbourhoods

Urban land use plans should account for the market forces that shape a city's economic geography, which is driven by complex trade-offs resolved by firms and households. Firms proactively decide their location based on the trade-off between clustering together or increasing the proximity to their consumer.[9]

- **Locally traded goods and services**, such as coffee shops and hairdressers, tend to be dispersed around the city, driven by the need for a walking-distance proximity to clients. Other shops, where demand is more specific or sporadic, such as furniture shops, can be found clustered in a particular street. This is because consumers place a high value on having multiple choices near each other, and businesses benefit from agglomeration.[10]

- **Internationally traded goods** will prioritise clustering near to similar or complementary firms to benefit from co-located inputs and service needs. For land-intensive manufacturing, for example, this is typically done on the outskirts of the city, where land is cheaper. Although these firms do not need to be near local customers, they need to have good access to transport arteries that link them to global markets, such as ports and airports.

8 Tsivanidis (2022).
9 Collier (2017).
10 Manwaring (2020).

- **Internationally traded services**, such as those provided by finance, accounting and law firms, access global markets through Information and Communication Technologies (ICT), but also benefit from clustering in central business districts (CBDs) where activity is concentrated.

Households, on the other hand, will proactively decide where to reside based on the trade-off between location (access to amenities and jobs), floor space, and rents.[11] For example, as land decreases in value the farther it is from the city centre, individuals who work from home, can afford to travel further to their jobs, or prefer to live in larger residences, may do so without occupying significant portions of valuable central land.[12]

The combination of low incomes, weak land rights, and poor planning decisions, however, hamper a more productive spatial distribution of firms and households. For instance, firms are unable to efficiently cluster together in a CBD, remaining scattered, small and informal. Informal settlements and transit options also arise, as households need to find alternative, quicker solutions to accessing jobs.

The combination low incomes, weak land rights, and poor planning decisions hamper a more productive spatial distribution of firms and households.

Box 1 unpacks how certain strategies to promote connectivity and the formation of liveable neighbourhoods can overlook the importance of firm clustering.

BOX 1: THE '15-MINUTE CITY': OPTIMAL CONNECTIVITY OR DAMAGING TO PRODUCTIVITY?

Some urban land use strategies formulated to reduce congestion and pollution, as well as enhance access to urban amenities, may end up fragmenting the labour market without addressing the fundamental issue of mobility.[13] This is the case of **15-minute city** concepts, which aim to ensure that residents can access daily needs, including work, within a narrow radius of a 15-minute walk or bike ride from their residence.

While walkability and easy access to basic services are desirable outcomes, certain economic activities benefit from clustering. This means that jobs are not (and should not be) evenly spread out across the city. Pursuing 'urban village' models leads to less job opportunities for the average worker, which is reflected in lower productivity and wages.

11 Bertaud (2018).
12 Collier (2017).
13 Collier et al (2019a, 2019b).

3. Ensuring the right to affordable housing

As cities grow and incomes rise, the demand for land increases. This, in turn, increases the price of purchasing or renting that land. To keep housing prices constant, developers need to increase the supply of housing per unit of land – either by developing vertically or producing smaller floor areas. However, the supply of housing often does not increase as fast as demand, resulting in rising housing prices.[14]

Policymakers should distinguish affordability problems caused by poverty from those which are exacerbated by restrictive regulations.

Policymakers should distinguish affordability problems caused by poverty (which may require supplementation of incomes, provision of housing units to the poorest, and other social assistance solutions) from those which are exacerbated by regulations restricting the supply of land and floor space. Furthermore, when part of the population cannot afford to comply with restrictive standards, such as large minimum plot sizes, dwellers are pushed out of the formal market. In many developing-country cities, informal settlements typically represent between 20% to 60% of the housing stock.[15]

It is therefore important to remove overly restrictive regulations from urban land use plans, making sure that they are suitable and fit-for-purpose. Other supply-side options include increasing the supply of developable land by ensuring faster, interconnected transport options; lowering the costs of construction by supporting the productivity of the building industry; and decreasing the transaction costs linked to building permits.[16]

14 Blake (2018).

15 For further discussion, see Bertaud (2018) and upcoming IGC policy brief on affordable housing.

16 Bertaud (2018).

Allocating and regulating urban land: A toolbox

Urban land use planning requires governments to make decisions around land allocation and regulation. On land allocation, cities must clearly distinguish public from private space – and, within public space, they must decide what land will be allocated for the provision of public goods. Investments on private space then needs to be empowered through land tenure security and development rights, regulated through zoning and density regulations, and taxed to ensure that a portion of rising land values are recouped for the benefit of the city as a whole.

Allocating land for public goods

The provision of public goods – such as roads, sidewalks, flood defences, sewer systems and parks – is essential for the well-functioning of cities. Plans should therefore earmark and designate land for the effective provision of these core infrastructure. Without proactively making room for these investments, land risks becoming occupied in a way that promotes over-crowding, congestion, and contagion, for example; and retrofitting the infrastructure after settlement has occurred is much more costly.

Investing in this infrastructure also provides a useful signal for firms and households on where to invest and settle. For example, unless individuals can be reasonably certain that water, electricity, and other core infrastructure are reaching a particular neighbourhood, there is little incentive for private real estate development. When it comes to commercial and industrial activity, often no business is willing to make the first move in risky, large-scale investments in a given location without assurance that others will do the same.

Credible masterplans and public 'anchor investments' in infrastructure help create this common knowledge in the city.[17] Once the structure is built, and because it cannot be easily reversed or removed, private investment starts crowding in. Increases in land value from these investments, in turn, generate common knowledge about the perceived value of a particular location, which helps guiding further investment.

Importantly, because of the relative inertia of spatial change, investments in urban structures today will determine cities' productivity, liveability, and environmental sustainability of tomorrow. For example, the lifespan of urban infrastructure and the building stock is estimated to be around 125 and 175 years, respectively.[18]

17 Collier (2016).
18 International Energy Agency (2020).

Box 2 explores how 'Sites and Services' projects earmark land for public goods and services ahead of settlement, while also providing direction for private investment.

BOX 2: SITES AND SERVICES ANCHORING EXPECTATIONS FOR PRIVATE INVESTMENT

Sites and Services projects aim to provide core urban infrastructure and ignite productive urban development in green field areas at the outskirts of developing cities. The idea of these projects is for the government to provide demarcated, serviced plots (typically with access to roads and water mains), and enable beneficiaries to incrementally build their homes over time in a coordinated fashion.

In Dar es Salaam (Tanzania), research has found that, compared to green field areas, places that were laid out with Sites and Services developed into neighbourhoods with larger and more regularly laid out buildings, as well as better quality housing. They were also better connected to electricity and more likely to have better sanitation – demonstrating crowding-in of private investment.[19] **Figure 4** shows one neighbourhood benefitted by a Sites and Services project, comparing the green field area as in 2001 (top) versus 2021 (bottom).[20]

Figure 4: Area benefitted by anchor investments in Dar es Salaam (Tanzania)

Source: Tanner Regan.

19 Michaels et al (2021).
20 For further discussion, see World Bank (2022).

Allocating land for private use and investment

While governments designate land for the provision of public goods, space also needs to be allocated to private investments in housing, and commercial and industrial activities. This requires rights to own or occupy the land. Land rights are thus the fundamental building blocks of effective urban land use strategies. Where possible and politically feasible, land rights should be secure, marketable, and legally enforceable to support a productive land use, as well as planning and taxation – particularly in central areas.[21]

Land rights are the fundamental building blocks of effective urban land use strategies.

- **Secure** land rights give certainty of future ownership, which is essential for investment. It also means that residents, especially women, no longer need to stay at home safeguarding the property. It is most effectively provided by the government.

- **Marketable** land rights ensure that land is transferred to its highest value use, encouraging urban transformation. It also enables collateralisation of this asset, facilitating financial inclusion.

- For security and marketability to work in practice, land rights must be **enforceable**. This also enables governments to impose obligations on landowners, such as property tax, which help finance the provision of public goods.

When land markets cannot function properly, urban land use plans cannot remain responsive to city needs. For example, in many low- and middle-income cities, valuable central land often remains vacant because of weak land rights, and subject to speculation because of ineffective taxation, further fragmenting the city. In Maputo (Mozambique) and Harare (Zimbabwe), around 30% of land within 5 kilometres of the CBD remains unbuilt.[22]

While economic research on property rights has traditionally highlighted the benefits of formal land titling, empirical evidence has cautioned seeing it as a one-size-fits-all solution. There is an increasing recognition of a spectrum of different land tenure options, such as customary land holding or collective ownership.[23]

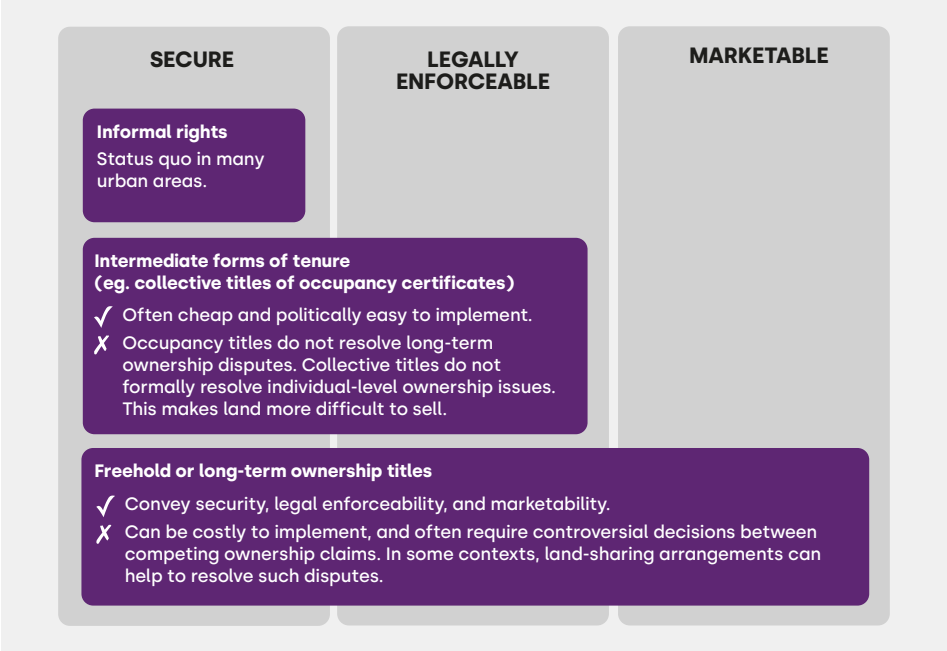
For example, formal land titling has often failed to make owners feel more secure than long-established customary systems and is unlikely to unlock significant collateralisation until financial markets are far more developed.[24] Indeed, tenure security under informal land tenure may be perceived as more secure than under a weak and corruptible formal tenure system.

Given the politically challenging nature of land tenure reforms, inertia has been a common policy response. But certain intermediate forms of land rights, such as short-term occupancy certificates or collective

21 For further discussion, see Collier et al (2018b), and Besley and Ghatak (2010).
22 Lall et al (2017).
23 Blake (2017).
24 Payne and Durand-Lasserve (2012).

ownership titles, are often relatively easier to implement, and enable ownership to be legally enforced. These options, as shown in **Figure 5**, should be explored in a contextually appropriate way.

Figure 5: Land tenure systems that allow ownership to be secure, legally enforceable, and marketable.



Source: Collier et al (2018b).

Reassigning space through land acquisition and readjustment

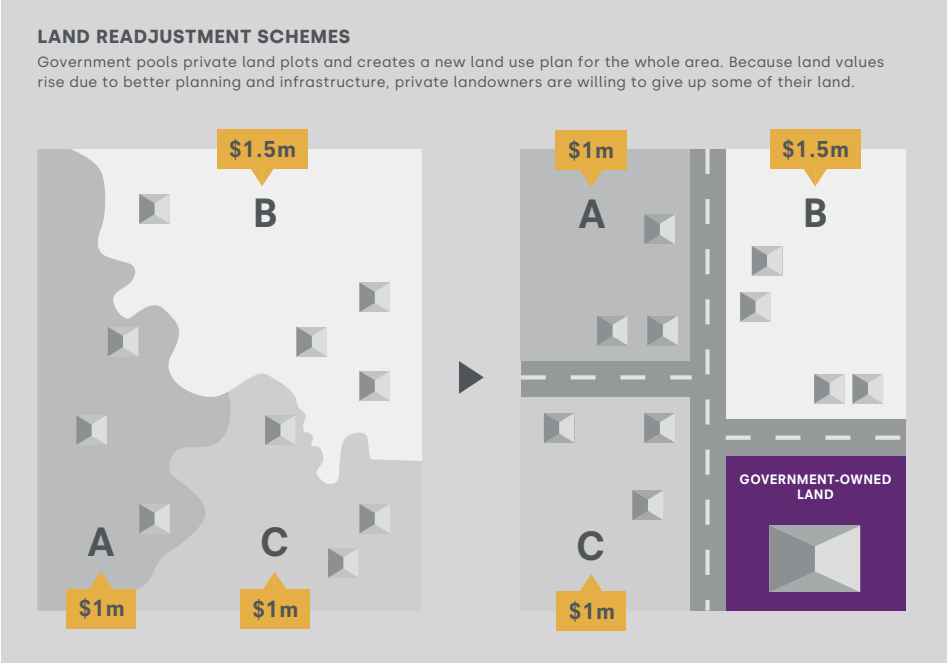
Governments may need to reassign space to ensure the effective provision of public goods.

When governments fail to proactively coordinate investments and settlement in advance of urbanisation, or when plans need to adjust to changing economic environments, governments may need to reassign space to ensure the effective provision of public goods. In cities where state-ownership of land is prevalent, land can be legally repossessed by government at the end of leases as part of urban renewal projects. In other contexts where private ownership of land is permitted, this process can be achieved through land acquisition or readjustment.

Land acquisition is ideally negotiated through voluntary transactions, with deals that are mutually beneficial for landowners and government as land is put to higher value use. When voluntary transactions fail – either due to coordination or real estate speculation – compulsory land acquisition may be justified. However, this should only be considered when associated investments are essential for the city's future prosperity, adequate compensation is given to those displaced, and a just appeals process is observed.

Land readjustment is a far less costly alternative which may also be politically and administratively easier to implement. Under these schemes, governments pool together privately held plots to make space for the necessary infrastructure, coordinating private exchanges between owners to allow for more contiguous ownership. These schemes minimise displacement of communities and are effectively financed by owners voluntarily agreeing to give up some of their land in return for receiving a smaller but higher-value land plot, with better planning and infrastructure access. This is illustrated by **Figure 6**.

Figure 6: Representation of an area's land readjustment



Notes: Government-owned land may be secured to provide essential infrastructure, such as intermodal transport nodes, schools, hospitals, etc. Source: Collier et al (2018a).

In both cases, strong administrative and legal institutions are needed, such that owners are willing to contribute their land; and title transfers and land valuation, before and after, are fair and efficient. There is also a minimum level of consent that is needed to initiate these processes, which depends on local laws and whether government or landowners initiate it.[25]

Zoning to coordinate efficient land use

Zoning regulations designate specific areas of urban land for specific types of use – typically divided into permitted, conditional and prohibited land uses. They are enforced by city governments through the issuance of permits and inspections. Several zoning strategies can be used in every city, and the optimal mix will be unique to the specific city context and its economic structure, evolving and adapting over time.

25 For further discussion, see Collier et al (2020).

The optimal mix of zoning strategies will be unique to the specific city context and its economic structure.

- **Mixed-used zoning** allows for a combination of land uses, such as residential and commercial uses, in one area. It grants the flexibility for firms and households to select locations that best meet their current and future needs. It also improves liveability and inclusivity by improving access to amenities, and enhances security by encouraging high levels of activity and vibrant street life.[26]

- **Single-use zoning** separates residential, commercial, and industrial land use into different zones. This may be appropriate to encourage intensive clustering of certain types of industries to improve productivity and to mitigate negative externalities of one type of land use on another. For example, it separates large-scale polluting industrial sites from areas where people live.

- **Zoning to encourage conservation and protection of certain ecosystems**, such as wetlands, or **prevent development on land in flood plains or subject to natural disasters**, should also be implemented. This could be extended to include the protection of **cultural heritage**. Often, promoting the repurposing of historical structures can allow for economic activity to take place alongside cultural preservation efforts.[27]

Regulating for well-managed density

Density regulations are typically included under broader zoning regulations. Cities achieve their population densities - defined as the number of inhabitants per unit of land - through three dimensions:

1. **Vertical development**, measured as the total residential floor area divided by total area of residential plots, or **floor area ratio (FAR)**. Associated regulations include **maximum building heights**.

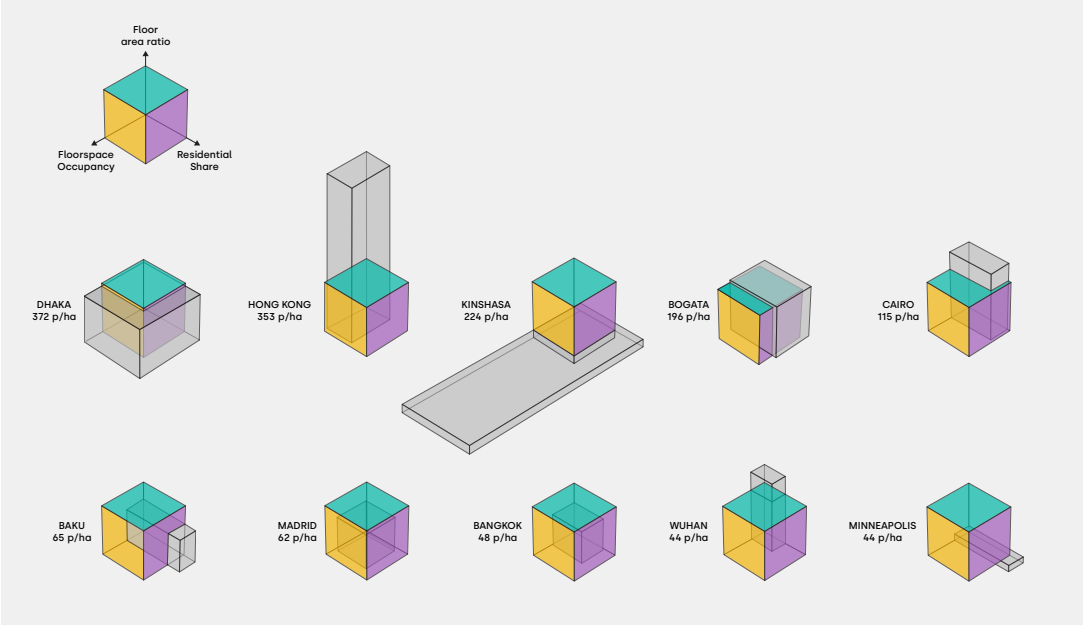
2. **Horizontal development**, measured as the total area of residential plots divided by total area of the urban footprint, or **residential share**. Associated regulations include **minimum plot areas**.

3. **Crowding**, measured as the total population divided by total residential floor area, or **floorspace occupancy**. Associated regulations include **maximum occupancy rates**.[28]

26 Collier et al (2020).
27 Collier et al (2020).
28 Angel et al (2021).

Figure 7 helps illustrate how a city's density is influenced by these different mechanisms. For example, Hong Kong gets its density from above average building heights; Kinshasa (Democratic Republic of Congo) from above average crowding; and Baku (Azerbaijan) from above average residential coverage.

Figure 7: The three dimensions of urban density



Notes: Size of the coloured box represents averages from the ten cities considered.
Source: Angel et al (2021).

The above regulations are put in place to help ensure city densities remain within a sustainable range. If density is too low – inhibiting investment in public transport – or too high – causing overcrowding and congestion – regulations can be adjusted to allow densities to respectively increase or decrease.

Fundamentally, however, densities will be driven by complex trade-offs resolved by firms and households, based on different preferences of land consumption, commuting time, and incomes.[29] Well-intended regulations that artificially restrict densities without taking these mechanisms into account can have very detrimental effects on urban development.

Fundamentally, densities will be driven by complex trade-offs resolved by firms and households.

Density regulations are often too stringent in practice, paralysing the formal property market and forcing the poorest into informality. In Dar es Salaam (Tanzania), for example, the minimum lot size is 375m^2, while in Philadelphia (USA) it was 28m^2 during its early stages of development. In New Delhi (India), the FAR of apartment buildings is usually 2. This is in comparison to Manhattan (New York, USA), where the FAR can be as high as 15, or Singapore, where FARs reach 25. It is no surprise therefore that citizens in these developing cities refuse to comply with such regulations.[30]

29 Angel et al (2011).
30 Lall et al (2017).

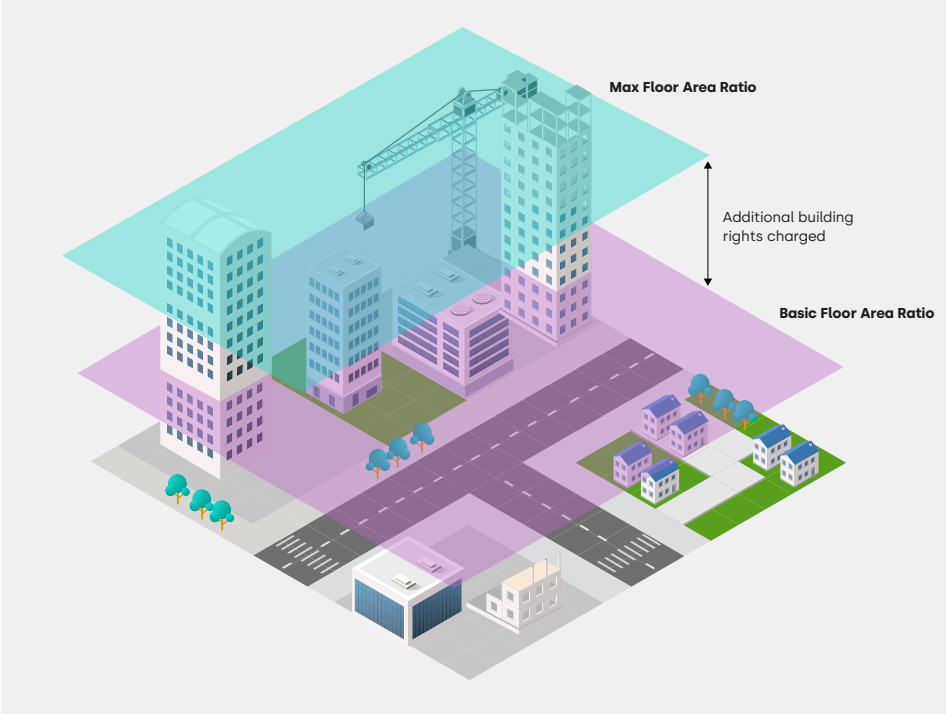
Leveraging land value capture tools to shape urban form

As cities grow, the wealth they create – often enabled by public infrastructure investments – is reflected in rising land prices. Governments should recoup some of this, enabling a virtuous cycle of reinvestment, whereby appreciating land values fund the public investments which make the city more productive, allowing for further investment. Land value capture (LVC) instruments include land and property taxes, development levies, land leasing and readjustment, among others.[31]

Land value capture tools alter the price of land and therefore also incentives to build and invest.

In addition to revenue generation, LVC tools alter the price of land and therefore also incentives to build and invest. This in turn shifts the land market, and the resulting shape and form of the city. For example, vacant land tax can be used to incentivise real estate development and avoid land being held solely for speculative purposes.[32] Similarly, allowing the sale of 'air rights' – referring to the space above or around a building on a specific lot – can incentivise a city's vertical development around CBDs or transit corridors. This is exemplified by **Figure 8**.

Figure 8: Charging for additional building or air rights



Notes: Schematic representation of air rights influencing a city's vertical development.
Source: Gislene Pereira.

31 For further discussion, see OECD and Lincoln Institute of Land Policy (2022), Germán and Bernstein (2018), and forthcoming IGC summary on land value capture instruments.

32 For further discussion, see Haas and Kopanyi (2017).

Designing *flexible* and *responsive* urban land use plans

Without a credible land use plan for the city, strongly underpinned by improvements in connectivity, firms are unable to coordinate investments; workers cannot access jobs; and homes are built on risk-prone areas, or areas needed for vital infrastructure. In the context of developing economies, urban land use plans can support cities in planning ahead to accommodate rapid urban growth.

It is important however to move away from centralised, top-down strategies for land use, which take little account of land and labour market dynamics; are unable to handle evolving contextual needs and realities; and do not reflect local enforcement capacity to enact plans. Citizens' small, daily decisions help creating cities from the bottom up, ensuring their sense of community, spontaneity, and innovative capacity. This should be supported by a network of physical and social infrastructure managed by the city government.

Local governments should focus on monitoring key 'bottleneck' indicators, ideally close to real-time estimates.

Rather than a static blueprint, urban land use plans should therefore be used as a permanent, participatory management tool. This implies constantly revising directives in consultation with key stakeholders to ensure they are responsive to the city's needs and changing economic environments.[33]

Local governments should focus on monitoring key 'bottleneck' indicators, ideally close to real-time estimates.[34] These include information on real estate markets (such as land prices and rents by different income groups) and average commuting times under different transport modes. When a warning threshold is passed, local authorities should respond quickly by adjusting land allocation and regulations accordingly.[35]

33 Bertaud (2018).
34 Wright et al. (2023).
35 Bertaud (2018).

References

Angel, S., Lamson-Hall, P., & Blanco, Z. G. (2021). Anatomy of density: Measurable factors that constitute urban density. Buildings and Cities.

Angel, S., Parent, J., Civco, D. L., & Blei, A. M. (2011). Making room for a planet of cities. Lincoln Institute of Land Policy.

Bertaud, A. (2018). Order without design: How markets shape cities. The MIT Press.

Blake, M. (2017). **Making the most of urban land: The role of rights and responsibilities**. International Growth Centre.

Blake, M. (2018). **Housing finance: Demand vs. supply side subsidies.** International Growth Centre.

Collier, P., Glaeser, E. L., Venables, A., & Manwaring, P. (2020). **Urban land use planning for economic growth**. International Growth Centre.

Collier, P., Glaeser, E., Venables, A., Manwaring, P., & Blake, M. (2019a). **Access to opportunity: Policy decisions for enhancing urban mobility**. International Growth Centre.

Collier, P., Glaeser, E., Venables, A., Manwaring, P., & Blake, M. (2019b). **Urban mobility: Policy decisions for connecting the city**. International Growth Centre.

Collier, P., Blake, M., & Manwaring, P. (2018a). **Making the most of urban land.** International Growth Centre.

Collier, P., Glaeser, E., Venables, A., Blake, M., & Manwaring, P. (2018b). **Land rights: Unlocking land for urban development**. International Growth Centre.

Collier, P. (2017). African urbanisation: An analytic policy guide. Oxford Review of Economic Policy.

Germán, L., & Bernstein, A. E. (2018). Land value capture: Tools to finance our urban future. Lincoln Institute of Land Policy.

Haas, A. R., & Kopanyi, M. (2017). **Taxation of vacant urban land: From theory to practice**. International Growth Centre.

Harrison, P., & Croese, S. (2022). The persistence and rise of master planning in urban Africa: Transnational circuits and local ambitions. Planning Perspectives.

International Energy Agency. (2020). Energy technology perspectives 2020.

Lall, S. V., Henderson, J. V., & Venables, A. J. (2017). Africa's cities: Opening doors to the world. World Bank.

Manwaring, P. (2020). **Location, location, and information: Firm clustering in Kampala**. International Growth Centre.

Michaels, G., Nigmatulina, D., Rauch, F., Regan, T., Baruah, N., & Dahlstrand, A. (2021). Planning ahead for better neighbourhoods: Long-run evidence from Tanzania. Journal of Political Economy.

OECD and Lincoln Institute of Land Policy. (2022). Global compendium of land value capture policies.

Jedwab, R. C., & Barr, J. (2023). Exciting, boring, and non-existent skylines: Vertical building gaps in global perspective. The World Bank.

Tsivanidis, N. (2022). **Creating virtuous circles between urban planning and urban transit**. International Growth Centre.

World Bank. (2022). Reconsidering Sites and Services: A global review.

Wright, C., Primo, V., Delbridge, V., & Fortuin, K. (2023). **Data and research as key enablers of city outcomes: A case study of the City of Cape Town (2000-2022)**. International Growth Centre.

Cities that Work

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Cities that Work is an International Growth Centre (IGC) initiative that seeks to translate economic research and practical insight into clear urban policy guidance. Cities that Work combines new evidence and analysis of urban economics with the hard-won knowledge of urban planning practitioners and policymakers. Our aim is to develop a policy-focused synthesis of research, and a global network of individuals with a shared vision for urban policy.

An earlier version of this publication was developed in collaboration with the UN-Habitat for the Global Future Cities Programme.

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