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Use of High-rise Apartments as an Urban Densification Policy: Lessons from China, Egypt and Ethiopian Condominiums

KUDZAI RIMAI¹, BEATRICE HICKONICKO² AND RAYMOND MUDEHWE³

Abstract

The article is based on a study that discussed the use of high-rise apartments as an urban densification policy, drawing lessons from China, Egypt and Ethiopia. Urban growth has seen the sprawling of cities along with the new demands for housing due to population growth. Cities continue to have housing backlogs as people continue to have improved life expectancies around the world. The problem in the study is the affordability and accessibility challenges created by high-rising apartments due to the liberalisation of land development policies. The research uses a qualitative research methodology with a bias towards the case study research design. The study employed secondary information as the data collection method using Google Scholar articles. The research used thematic data analysis. The study findings reveal that densification can create solutions to urban sprawl, while unaffordability issues can arise for low-income earners. The findings also indicate that densification can suffer from the commodification of housing which can lead to housing backlogs of low-income earners. The study concludes that privatisation of land development makes densification a time bomb waiting to blow in the face of low-income earners. It recommends the nationalisation of

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housing projects to improve accessibility and affordability of housing for low-income earners.

Keywords: nationalisation, development, low-income, affordability, commodification, liberalisation

INTRODUCTION

The compact city approach is, since the 1990s, the main planning strategy to cope with the fierce competition between land uses as a result of global urbanisation (Pont *et al.*, 2020). The main areas affecting the preservation of growth potential for future generations, in the doctrine of sustainability, include problems related to urbanisation (Pelczynski and Tomkowicz, 2019). The growth of human population and civilisational transformations require an increase in the volume of buildings and urban areas which is an inherent part of development (Nilsson, 2014). The problem of urban sprawl occurs globally not only in regions with high and increasing population density, but also in regions with declining populations (Attia, 2015). The growth of urban areas across the world has created issues of sustainability causing the search for lasting solutions in transformative land use.

Uncontrolled expansion of cities reflects an inappropriate and unsustainable way of using the environment and its resources (Pelczynski and Tomkowicz, 2019). This is not only depleting the earth's natural assets and reducing ecosystems, but also adversely affecting people's quality of life, health and contributing to social problems (Chen *et al.*, 2015). There are negative impacts of urban sprawl that include consumption of land, which can lead to loss of highly productive agricultural land (Pont *et al.*, 2020). The problem of urban sprawl is forcing many cities to grapple with rapid population growth and preserve the land for future generations. Densification has been presented as a means to achieve sustainable urbanisation by securing compact, mixed and area-effective use of

urban space (Alawadi, 2017). In the process of handling growth, one aspect of the urban planning compact city model seems to have a hegemonic status among many planners (Skrede and Berg, 2019). The planning of cities based on high-rise buildings has become a solution to provide sustainability on land use to preserve land for future generations.

Densification is a two-faced approach that may provoke unfavourable consequences such as deteriorated place identity and threatened cultural heritage (Skrede and Berg, 2019). Stenbro *et al.* (2016) argue that the development of high-rise buildings will be out of character and in violation of place identity. The development of vertical cities has grown around the world as a solution to urban sprawl and the need to sustainably use the land. However, Graham and McCoy (2024) argue that these spectacularly vertiginous new additions shun the local housing needs in favour of providing what has been described as eyrie-like refuges for the world's super rich. Atkinson (2019) asserts that the condominiums and high-rise buildings around cities have missed the point on densification as they fail to capture the housing needs of the poor to prioritise the rich. The study answers the question of urban sprawling by presenting the use of high-rise apartments in countries with growing urban populations. The problem in the study is the housing development that has been driven by intensifying housing financialisation without considering the poor. The densification and high-rise buildings through vertical cities can create housing problems as most condominiums are unaffordable for the poor. The verticalisation of cities can create housing backlogs with the poor dominating these backlogs due to the unaffordability of condominiums.

The main aim of the research is to assess the options for use of high-rise apartments as an urban densification policy in addressing housing urban challenges due to population growth. The objective of the study is to identify the options for use of high-rise buildings by

analysing the equality and inequality issues surrounding the strategies. The study examines the solutions provided by densification to housing accessibility and affordability. It is significant as it can present a picture on the affordability and accessibility of housing under urban densification policies. The research is important as it can add to the existing literature on urban densification through verticalisation of cities. The study is important for policy-makers and development practitioners in developing countries as it can inform them on policies that can help reduce housing backlogs. The study outline follows an introduction, conceptual framework, a literature review, which is followed by a methodology section, then the findings, followed by a discussion, conclusion and recommendations are presented. It is against the background of the intensification of the housing financialisation that the study undertakes to understand the implications of densification on the housing backlog for the poor.

CONCEPTUAL FRAMEWORK

This section provides the conceptual framework that links urban policy and densification. Johnson *et al.* (2018) allude that global urban policy has been modelled around addressing a range of global problems, from education, gender to poverty alleviation. Robin and Acuto (2018) observe how the new global urban policy places emphasis on the role of cities in the implementation of the 2030 Agenda. However, local governments are ill-prepared to keep up with the policy. UN (2016) asserts that the urban policy has been modelled around the adoption of Sustainable Development Goal (SDG) 11 on inclusive and safe resilient and sustainable cities. Goodfellow (2022) notes that urban policy has been modelled around women and cities to address SDG 5 and SDG 11 so that women are not left behind in the sustainable cities. Cities have experienced rapid urban sprawl, making SDG11 impossible to realise. This has led to adoption of densification to reduce unsustainable urban growth.

To solve the challenges faced by cities due to population growth, the idea of compact cities with high-rising buildings has emerged as a long-term solution. Densification strategies often converge in the idea of the compact city (Berg *et al.*, 2024). Naess *et al.* (2020) argue that the compact city model, with area-saving urban structures, is preferable to urban sprawl, as far as environmental issues are concerned. Burton (2000) observes that compactness may improve public transport use, reduce domestic living space and reduce social segregation, while providing access to better city facilities. Densification can emerge as a solution to infrastructural and transportation problems experienced in the processes of urban sprawl. However, Skrede and Berg (2019) allude that densification can increase crime rates and lower the amounts of cycling and walking. The development of compact cities is in line with SDG 11 and inclusive development that reduces environmental degradation.

The new urban policy has been developed to address the demands of SDG 11, while maintaining inclusive development around the world. The use of SDGs in the development of urban areas represents a turning point, as it shows their significance, not just as development sites, but also as significant tools for global governance and international politics.

LITERATURE REVIEW

To craft the discourse for the study the study reviewed literature from the past in relation to urban densification. Urban sprawl can be defined as low-density development that is spatially expansive, yet inefficient and highly dependent on automobile for travel (avicchia 2021). In the modern context of city growth, North America has experienced vast consumption of space for residential purposes in a relatively short period of time (Debrunner *et al.*, 2020). The popularity of suburbia has wormed its way into the world of planning and has led to the creation of new urban paradigms like Smart Growth, New Urbanism and other innovative solutions (Cole *et al.*,

2012). Suburban developments and sprawl were, therefore, facilitated as a result of factors like rising incomes, growth of populations and advances in transportation (Behan *et al.*, 2008). The sprawl was caused by the need for segregation as most segregated communities gained access to the inner-city white communities on the periphery of the cities (Muller *et al.*, 2022). The growth of urban migration led to problems such as unsustainable use of land, challenging planners to come up with solutions to the growing problem.

High-rise vertical building is thought to have begun in the ancient civilisation of Egypt and the Americas with the construction of pyramids, temples and community structures (Gerber and Debrunner, 2022). The architectural challenges of constructing multi-storey residential buildings continued with the Roman Empire (Suurenbroek and Spanjar, 2020). The modern high-rise buildings began in the last century in the United States, China and India in response to booming populations and massive urban migration with some of these experiencing overcrowding (Mridha *et al.*, 2017). These areas were affected by high crime rates and the development of slums that has helped stigmatise the experience of living in high-rise apartments (Christian *et al.*, 2018). This stigmatisation was made worse by the calculated use of high-rise complexes to segregate disadvantaged communities (Toohey *et al.*, 2013). In the period between 1940 and 1980, projects such as the Robert Moses construction projects in Harlem and the Bronx and the Robert Taylor homes in Chicago housed segregated disadvantaged communities in high-rise boxes of poorly built residential complexes (Ng, 2017). The densification policies continue to provide disadvantages for the poor just as in the past as the high-rise apartments have become unaffordable to the poor, thereby creating housing backlogs.

Today, people choosing to buy or rent high-rise apartments are attracted by many intrinsic and extrinsic qualities, although location

and cost are usually the deciding factors (*ibid.*). Extrinsic factors include perceptions about neighbourhood and other residents and proximity to public transport, education and workplace (Yau, 2018). The pull factor for most residents is the need to feel secure through the securitisation of high-rise apartments through the notion of gated-communities. For some, it is also about social facilities and night life (Buy and Miller, 2012). Desirable extrinsic qualities include not having to maintain house or garden. Desirable intrinsic qualities which may increase resident's quality of life include the design of the building, the layout orientation and the size of apartments (Keams *et al.*, 2012). The majority of high-rise apartment complexes are also less expensive for developers to build than detached homes (Seo, 2016). However, the rent in these apartments is costly due to the need for security and other amenities, making it impossible for the poor to reside in these areas. This creates huge housing backlogs in developing countries cities.

Gentrification is the transformation of working-class neighbourhoods into middle and upper-class residential neighbourhoods through re-investments (Cohen and Glass, 1973; Rosen, 2017). Smith (2002) alludes to the fact that the world has seen gentrification transform into the rehabilitation of 19th century housing through construction of condominium towers to attract local and not so local tourists. This has seen the growth of gated communities with high-rising condominiums with the proliferation of wine bars and boutiques (Lippert and Steckle, 2016). Gentrification has become a global developmental phenomenon in urban policy, seeing the transformation of inner cities. This has seen the growth of unaffordability and inaccessibility of housing for the poor.

Condominiums have played a critical role in urban geography. Their distinctive architecture has been seen as an accelerant of urban privatisation and securitised residential gating (Webb and Webber, 2017). The condo-backed urban privatisation accords with a

deepening urban neoliberalism and it produces gentrification (Rosen and Walks, 2013; Rosen, 2017;). This has been termed condoification is deemed, by some, gentrification's latest phase, prompting processes of displacement, urban segregation and polarisation (Lippert, 2019). The development of condominiums in urban development signals the growth of gentrification and urban segregation marked by securitisation of urban areas. This shows the loopholes in urban development through condoification, as it produces neoliberal urbanisation planning. Thus, the approach is associated with the intensification of housing financialisation which under-represents the poor.

The use of high-rise vertical housing has always been associated with disadvantages to the poor, because when they are poorly built, they are given to the poor. When high-rise buildings are well built, they are securitised to keep the poor away. The reviewed literature shows that most of urban development policies have been segregatory throughout history. Even in modern-day urban development, policies remain exclusionary segregating the poor as the creation of gated and securitised communities create few housing opportunities for the poor. The lack of housing policies that support the development of housing for the poor indicate the intensification of financialisation of housing and the exacerbation of inequalities.

RESEARCH DESIGN AND METHODOLOGY

This section of the study presents the methodology, i.e. the approach, data collection methods and the data analysis methods.

RESEARCH APPROACH

The study uses a qualitative research approach with a bias towards the case study research design. The allure of the qualitative approach is that it has a non-numerical strategy that allows it to understand social facts without reducing them into codes and

inferences (Busetto, 2020). The case study research design allows the study to understand multiple cases from different countries. The study employs secondary information as the data collection method. The study uses Google Scholar articles and website news. The appeal of the use of secondary information as a data collection method is that it provides a time-efficient and easy-to-obtain source of information (Serra, 2018). The study uses thematic data analysis to analyse the study findings and understand them place them in different categories. Anderson *et al.* (2020) observe how by generating themes and interpreting patterns of meaning across a data set, thematic data analysis allows researchers to uncover nuances and subtleties that might otherwise be overlooked.

FINDINGS

This section presents the findings of the study on the use of high-rise apartments as an urban densification policy drawing lessons from China, Egypt and Ethiopia on the use of condominiums.

HIGH-RISE APARTMENTS IN CHINA

Macrotrends (2025) indicates that China has a population of 1.411 billion people. The causes for densification are China's rapid urbanisation and population growth leading to a severe housing crisis for low-income earners (Hu, 2023c). Government's previous attempts to provide affordable housing have not succeeded as urban population has grown from 150 million in 1990 to 920 million in 2020 (Song *et al.*, 2021). Wang *et al.* (2024) allude that the commodification of housing in China, after the abolition of the welfare-oriented allocation system in 1998, led to the local governments profiting from housing. Wang *et al.* (*ibid.*) observe how urban planning policies place increased emphasis on reducing the sprawling form, promoting more compact form by increasing pedestrian-friendly urban design to encourage social interaction. Housing densification in China involves the construction of high-rise

buildings to increase the density of urban areas (Li and Sunikka-Blank, 2021). The densification in China has been created to change the urban density and reduce sprawling.

China has introduced a large number of housing demolition and relocation programmes to improve people's quality of life in cities (Hu and Ye, 2024). From 2008 to 2017, a total of 38.96 million units of shantytown relocation housing were built nationwide, helping around 100 million people move from shantytowns to buildings' (Liu, 2019). Li and Sunikka-Blank (2021) observe how local governments opted to use a market-oriented approach to regenerate dilapidated areas. High-rise apartments have led to a shift in how residents use their space and interact with each other as residents have become more private with limited use of communal facilities (Wang *et al.*, 2018). The densification processes have increased fragmentation of urban land. Jiang (2020) observes that due to limited residential land, massive high-rise building projects are inevitable in China.

Chen *et al.* (2016) allude that the densification in China has created challenges of overcrowding due to the need for profiting in local government housing schemes. The commodification of housing has created profits for local governments in China than creating affordable and accessible housing. Densification in China has shown to impact mental health due to reduced living space and increased congestion. He *et al.* (2022) observe how densification in China has created problems associated with overcrowding, inadequate infrastructure, housing affordability and traffic congestion. Wang and Shaw (2018) allude that in China, densification has created conflicts regarding land use and property rights due to rapid urbanisation. Hu and Ye (2024) note that the redevelopment process has led to difficulties in developing some of the worse peripheral areas, while gentrifying the central urban space, creating greater residential inequality.

HIGH-RISE APARTMENTS IN EGYPT

Macrotrends (2024) observes that Egypt is country in North Africa with a population of 116.5 million people. Due to population and economic growth, rapid urbanisation, the demand for housing units and the limited available land for housing development in Egypt has forced administrative boundaries on urban sprawl (Abdrabo *et al.*, 2021). Bakhaty *et al.* (2023) asserts that rapid urbanisation and lack of governmental support to create low-cost and affordable housing has led to the rising of informal settlements. According to the Organisation for Economic Co-operation and Development (OECD) (2024), Egypt's population increases by at least 1.6 million people each year and Cairo has 23 million people and urban sprawl is pushing the current boundaries further, necessitating densification.

Yousry (2010) asserts that the densification in Egypt has been privatised as the government, since 1990, embarked on the selling of large portions of public land to the private sector. This led to the development of unaffordable housing units that were expensive for the poor. Adly (2023) asserts that the commodification of housing led to the development of condominiums which range from middle-class to high-end distinctive and luxurious villas. These are opposed to the conventional new town master-planning principles, as these reflect market-driven forces rather than standard orthodox public interest norms (Mahmoud *et al.*, 2023). In 2023, the government adopted a new National Urban Policy (NUP) that seeks to tap into urban clusters to reduce urban sprawl. Eldardiry (2020) observes that the densification urban policies in Egypt have failed to provide affordable housing for the public as the houses delivered have been for the middle-class, resulting in the growth of slums. The Egyptian urban development policy has been affected by the privatisation of land ownership, which has led to profit-oriented housing development. This has caused a failure in the housing development with low-income housing backlogs.

HIGH-RISE APARTMENTS IN ETHIOPIA

Worldometer (2025) observes that the population of Ethiopia is 133.8 million people. Sunikka-Blank *et al.* (2021) state that densification of high-rise apartments in Ethiopia refers to the strategy of building tall apartments in urban areas to maximise housing units per land area, addressing the country's growing population. This has resulted in addressing housing shortages by utilising vertical space rather than spreading out horizontally through the Integrated Housing Development Programme (IHDP) (Mutsomuto and Crook, 2021). This aims to create high-density housing developments with high-rise apartments, particularly in cities like Addis Ababa (Digafe *et al.*, 2023). Using IHDP, the government of Ethiopia has produced 400 000 subsidising condominium units targeted at middle-and-lower income people in response to the enduring housing crisis (Huang *et al.*, 2023). The densification in Ethiopia has been developed to respond to the need to address the rapid population growth.

Due to rapid urbanisation, Ethiopia faces a significant housing deficit and building high-rise apartments is seen as a way to efficiently accommodate a large number of people on limited land (Sunikka-Blank *et al.*, 2023). Mutsomuto and Crook (2021) observe how the densification in Ethiopia has been facing affordability challenges as private developers primarily target high-income households. This creates the low-income housing deficit in Ethiopia as developers continue to pursue profit-oriented development initiatives.

DISCUSSION

The article has discussed use of high-rise apartments as an urban densification policy. The study findings reveal that population growth and the need to reduce urban sprawling has led to the verticalisation of urbanisation. Urban development has been following the compact designs to encourage re-investment and changed land use policies. China has created densification through the demolition of dilapidated buildings in old neighbourhoods to create compact cities. The

densification policy in various countries reveal that local governments are trying to reduce urban sprawling to save the land for future generations. The densification approaches in China are the creation of high-rise buildings with amenities which people need, such as locating the apartments near the economic centres. The lesson that can be drawn from these findings is that the densification policies are providing solutions for various urban problems such as traffic congestion, by providing pedestrian-friendly urban designs that reduce congestion.

The study reveals that the densification approaches have been based on market-oriented approaches that commodify housing provision, causing problems in the cities. These approaches create problems for cities as they overlook the housing needs of the poor by creating gated communities for middle-class people. The housing policies are in contrast to the master-planning of cities as they reflect market-driven approaches, rather than public interest of clearing the housing backlogs. The creation of luxurious villas targeting the middle-class, indicates that public land must remain in the hands of the government rather than privatisation. The lesson that can be drawn is that densification cannot be achieved through private developers as these use a neo-liberal approach to development, rather than a national development approach. The governments need to drive policies to nationalise the housing provision for low-income housing seekers. The lesson that can be drawn is that the re-development process leads to inequalities in access to housing, in turn, leading to growth of slums and informal settlements.

The study findings reveal that high-rise apartments can be difficult for low-income housing as the facilities can be overcrowded leading to health and safety issues for the low-income households. Densification, through high-rise buildings, is applicable to middle-class housing projects as these can afford the securitisation of these areas. The overcrowding of people creates various problems such as

crime, prostitution and health concerns through the spreading of diseases. The privatisation of the provision of housing raises affordability issues for low-income earners as the private developers' charge market-driven prices. The lesson that can be drawn for policy responses to densification is that low-income housing provision needs to be understood in terms of accessibility and affordability of housing. This will help reduce issues of people ending up overcrowding due to their need for housing. The lesson that can be drawn from the findings is that privatisation of land-ownership results in the creation of densification policies which favour middle-class. This creates housing backlog for low-income earners showing the need for government-backed densification through national urban development policies. Concurrent with the findings of the study are Christian *et al.* (2018) who allude that high-rise low-income apartments are stigmatised and dominated by high crime rates, making the areas unsafe for raising a family. This reduces the commodification of housing and creates equality in access to housing rather than liberalism approaches.

The section of the study shows that densification has its merits in the vicinity of the reduction of urban sprawl while creating housing developments that respond to the population growth. Densification creates compact cities that reduce the spreading of houses across cities, thereby creating congestion. However, the study has shown that in as much as densification is promising to be the silver bullet against population growth and urban sprawl, it has potential to exacerbate the inequalities in housing accessibility.

CONCLUSION AND RECOMMENDATIONS

Use of high-rise apartments as an approach to urban densification policy has its advantages in terms of reducing urban sprawl, cognisant of the rapid urban population growth. Densification can create urban development through compact cities to reduce urban sprawl in pursuit of sustainable development. However, in as much as densification can create sound urban development policy, it can be

deleterious for low-income earners as most of the high-rise apartments are impossible to maintain. The poor end up suffering high crime rates and overcrowding in these apartments that can be neglected by local governments. The use of high-rise apartments as part of the urban densification policy can lead to the exacerbation of inequalities in accessing housing as most developers are market-oriented. High-rise apartments, as part of urban housing policy, can create affordability and accessibility challenges. It can then be argued that on paper, densification has its merits but, in practice, densification processes and policies have been hijacked by the neo-liberal agenda of commodification of services, leading the low-income earners crowded in poor projects. In a nutshell, densification can create sound urban development policy for the reduction of housing backlogs in developing countries if the programmes are nationalised to eliminate elitism in private development.

The research directs future studies to draw lessons from the past densification projects in Chicago and the Bronx to reduce negligence of low-income households. The study recommends the reduction of privatisation of housing projects as this creates commodification of housing. The study recommends policies that reduce inequalities in access to housing. The research directs future studies to look into government-assisted densification projects to understand their impacts and sustainability. The study is for the creation of densification policies that factor in climate change.

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