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Low-income tenants' housing accessibility and affordable housing provision barriers. The case of Kigali, Rwanda

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Dedication

This thesis is dedicated to the people who have supported me throughout my education.
Whose invaluable contribution made me see this adventure through the end.

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ABBREVIATIONS

AHP	Affordable Housing Program
BNR	Banque National du Rwanda
BRD	Banque Rwandaise de Développement
CBD	Central Business District
CBO	Community Based Organisation
CDC	Community Development Corporations
COK	City of Kigali
DLGS	Dresden Leibniz Graduate School
EICV	Enquête Intégrale sur les Conditions de Vie des Ménages
GDP	Gross Domestic Product
GGGI	Global Green Growth Initiative
GOR	Government of Rwanda
ISUS	Informal Settlements Upgrading Strategy
KCMP	Kigali City Master Plan
LIHTC	Low-Income Housing Tax Credit
MFIs	Micro-Finance Institutions
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Economic Planning and Finance
MINERENA	Ministry of Environment and Natural Resources
MININFRA	Ministry of Infrastructure
MOH	Ministry of Health
NGO	Non-Governmental Organisation
NHP	National Housing Policy
NIE	New Institutional Economics
NISR	National Institute of Statistics of Rwanda
NST1	National Strategy for Transformation 1
OECD	Organisation for Economic Cooperation and Development
PPPs	Public-Private Partnerships
PROECCO	Promoting Climate Responsive Building Material Production and Off-farm Employment in the Great Lakes Region
PSF	Private Sector Federation
RCA	Rwanda Cooperative Agency
REMA	Rwanda Environment Management Authority
RHA	Rwanda Housing Authority
ROR	Republic of Rwanda

RSSB	Rwanda Social Security Board
RWF	Rwandan Franc
SACCO	Saving and Credit Cooperative
SDC	Swiss Agency for Development and Cooperation
SPV	Special Purpose Vehicle
UK	United Kingdom
UNCHS	United Nations Commission for Human Settlements
UNDP	United Nations Development Program
UN	United Nations
US	United States
US\$	US Dollar

ABSTRACT

While most cities in the developing world are undergoing a rapid urbanisation process, they are confronted with a heightened challenge to meet the housing needs of low-income populations. In these cities, millions of urban households are compelled to live in precarious conditions and sub-standard housing structures since they can hardly find better alternative housing that is decent and affordable. In Kigali in Rwanda, the scarcity of affordable housing has turned into a persistent crisis for income-constrained households. This thesis aims to find out how the affordable housing problem is addressed and why responses have been slow even if the government has portrayed the issue as a priority. The literature has mainly focused on describing the local housing needs or establishing links between urbanization trends and housing unaffordability. As a result, this dissertation applies a holistic approach to the affordable housing sector to examine the perspectives of key actors directly affected by the lack of or those involved in affordable housing responses. This way, the specific objectives for the study are to: (1) explore how housing affordability for tenant family households has evolved in recent years in Kigali city, (2) examine key actors in the affordable housing sector and how the underlying institutional framework supports their interests, objectives and strategies for affordable housing provision, and (3) identify institutional constraints hindering key affordable housing providers given the institutional environment.

An institutionalist approach was adopted to guide the empirical study. More precisely, the New Institutional Economics conceptual tools of institutions and transaction costs form the theoretical basis for the study. Given the nature of the study and the research questions it raises, a case study research design was suitable. Kigali city in Rwanda was selected as a holistic single case study to investigate the phenomenon. Empirical data was gathered through semi-structured interviews with key actors in the affordable housing industry, documents and secondary data consisting of two household surveys.

For research objective one, the changes in housing affordability for tenant family households between the 2010 and 2017 periods are analysed. The study found that the share of family households able to afford a standard two-bedroom house unit decreased by 1.1% during the same period considering a 30% rent-to-income affordability ratio. Besides this, the study also found that the share of tenant family households living in overcrowding conditions increased by 9.4% during the same period. Drawing on tenants' perspectives, the difficulties to secure affordable housing are low income and informal employment conditions, regulatory challenges, and inability to afford and access houses provided under the state-funded affordable housing program.

Concerning research objective two, the key actors, institutions and rules governing affordable housing provision were identified and analysed. The study found that the affordable housing sector attracts multiple actors aligned to the public, private and third sectors. The public sector ensures the industry's coordination and regulation. In contrast, the private sector leads the building of affordable housing, which is in light of policies postulating the sector as an area with investment potential, yet hardly exploited. However, the state retains a strong influence on decisions thanks to hierarchical governance structures in place. Although policy acknowledges different strategies to deliver affordable housing, private sector-led housing remains the favourite approach by which the government is persuaded to achieve the best possible outcomes. Nevertheless, the disjuncture between policy and reality does not lure sufficient private investments, further undermines some fringe actors and, more importantly, diminishes the prospects of some strategies to have more impact and new solutions to emerge.

Thirdly, the institutional constraints hindering interventions of the key affordable housing providers are examined. On the one hand, formal institutions-related constraints stem from legislations and policies that are either stringent, ambiguous or absent. These affect the smooth running of the housing building process, from registering housing cooperatives, land acquisition, acquiring building permits, and post-construction management. As a result of the above constraints, housing providers encounter different forms of transaction costs during the housing development process, namely: negotiation costs, information costs and enforcement costs that affect private developers, cooperatives, and public and private housing providers, respectively. On the other hand, informal institutions in the form of values and practices held in connection with house building negatively impact the marketability of developer-built houses. In this way, the alienation to single-family detached housing, susceptibility to unfamiliar construction materials, and prevalence of the self-building practice undermine developers' endeavours in affordable housing provision.

Overall, this thesis offers a fresh perspective about local institutional difficulties in responding to a global challenge of meeting the affordable housing needs of low-income populations. Applying a case study approach with mixed methods in Kigali city, the dissertation aims to contribute recommendations on how affordable housing policy and practice can be improved in other contexts with similar urban experiences and to the scholarly debates on the affordable housing institutions nexus.

CHAPTER 1

INTRODUCTION AND PROBLEM STATEMENT

1.1 Background to the research problem

The world is becoming more urbanised as time elapses. The global urban population share grew from 43% in 1993 to 55% in 2016 and is projected to reach 60% in 2030 (UN-Habitat, 2016b). Although it is regarded as a global phenomenon, urbanisation unfolds disproportionately across regions, and so do its effects. Reports indicate that urbanisation occurs faster in African, Latin American and Asian cities (UN-Habitat, 2016b). These regions hosting most developing countries alone account for 70% of the world's urban population (Collier and Venables, 2014). Heightened rural-urban migration is at the centre of this process, with cities representing and offering better economic opportunities to incoming migrants (Tacoli et al., 2015; Brueckner & Lall, 2014). Although the world becoming more urbanised has been treated to some extent as an opportunity (OECD, 2006; World Bank, 2009), it also raises much concern due to circumstances under which urbanisation occurs in cities of developing countries. These cities, let alone have to cope with the challenges resulting from the spontaneity of urbanization processes (Glaeser, 2014), many already are confronted with persistent problems of poverty, resource scarcity, and institutional deficiencies (Brueckner & Lall, 2014). Thus, faced with the imperative to overcome their status quo, one of the critical challenges for these cities consists of how to ensure the availability of affordable housing to both current and future populations.

Affordable housing is an essential element in social and welfare policies for many governments (Bengtsson, 2001). However, in regions referred to earlier as fast urbanizing, housing provision falls behind the needs of existing residents and incoming migrants. Declining housing affordability is mainly seen as a significant threat to the welfare of urban populations related to the fact that access to decent housing plays a huge role in determining households' access to various social and economic opportunities (Swartz and Miller, 2002). Despite such linkage, many people are left with no choice but to live in precarious conditions in slums—urban areas characterized by some combination of weak house structures, overcrowding and lack of access to adequate water and sanitation services. In this situation, the most affected are the disadvantaged poor urban residents who lack alternative housing options matching their income levels in the market. As of 2018, 23.5 % of the global urban population lived in slums (United Nations, 2020). The global slum population grew by 1 billion between 2000 and 2014, of which three regions, namely: South and Eastern Asia, Sub-Saharan Africa and Central and Southern Asia,

accounted for 80% (United Nations, 2020). In this context, if the Sub-Saharan Africa region is considered, formal housing production accounts for less than 15%, implying the expansion of slums and informal settlements in most cities and towns (Bah et al., 2018).

Against this background, different attempts have been made to explain the multi-faceted housing challenge in fast urbanizing cities. First, it is argued that the scale of urbanization has been so vast and rapid that any attempts to provide improved housing and basic infrastructure have been insufficient to meet the need, albeit governments' commitment and policy interventions (Tiwari and Hingorani, 2014). Alternatively, the same has been interpreted as primarily the problem of institutions governing how housing is produced, allocated and consumed. UN Habitat (2003) contends that the incidence of slums results from failures of housing policies, laws and delivery systems, and national and urban policies. Furthermore, poor housing outcomes have been linked to institutional constraints and inertia (Buckley and Kalarickal, 2005; Ram, 2014; Taruvunga, 2019). With many studies paying more attention to tracing the origin of the problem, evidence gaps remain regarding how institutions address such pressing issue and why responses have had a limited impact so far. Therefore, this dissertation examines what accounts for the limited affordable housing provision in Kigali (Rwanda). This city has been confronted with limited affordable housing for the last three decades. Beyond the contribution of rapid urbanization, questions regarding the implications of the institutional setting on affordable housing provision deserve relevant attention. With such issues not comprehensively addressed in the current research, filling this knowledge gap in Kigali constitutes the aim of this doctoral dissertation.

1.2 Problem statement and justification

The housing problem in developing countries: A historical perspective

In developing countries, the housing problem has manifested in diverse ways throughout history, and so did housing policies and responses. From slightly earlier and in the aftermath of the independence period during 1950-60s, state-built housing emerged as urbanisation rates began to rise (Jenkins et al., 2007). At this period, most urban low-income populations lived in private rented informal housing whose expansion flourished under laissez-faire policies (Ward, 2012). In the Western world, public housing emerged in response to deteriorating housing conditions earlier in the industrial city and later in post-war reconstruction (Madanipour, et al., 2018). In the developing world, public housing interventions dominated the government housing agenda mainly owing to the modernisation process and functionalism ideology that dominated the planning practice (Ward, 2012). To this end, beyond housing production, the strategy was also expected to boost the employment sector and hence contribute to the economy (Jenkins et al., 2007). However, in the wake of a sustained rise in urban populations and government shortcomings such as ineffective planning regulations and poor enforcement, all have made public housing inadequate vis-à-vis growing demand and spread of slums and squatter settlements (Pugh, 2001).

Slums and squatter settlements contravening the strict land use plans were primarily seen as regressive to the modernist urban visions dating from early post-independence governments (Gilbert, 2008). As a result, they were subject to eradication in many cities in the developing world. For instance, in some Asian countries where governments were concerned more about disruptions to their progressive agenda, slums were perceived as unhealthy and a contrasting picture to the depicted modern urban lifestyle (Wakely, 2016). In response to deteriorating urban housing conditions, internationally streamlined programmes were introduced to clear slums and develop on-standard public housing in the form of high-rise blocks (Jenkins et al., 2007). At the same time, the failure of public housing interventions to meet the housing needs of the urban poor implied that resources have had to be redirected to other priority sectors (e.g., poverty alleviation). Thus, in the 1960-70s, a new strategy emerged intending to reduce construction and management costs incurred in public housing. This strategy entailed learning from the informal housing process of the urban poor, whereby beneficiaries were actively involved in the housing development process (e.g. labour contribution) (Wakely, 2016). This approach drew extensive support from the World Bank and UNDP in what became primarily known as 'self-help' housing strategies (World Bank, 1983; Tibaijuka, 2007).

Despite sustained support, self-help strategies have achieved mixed results (Mitlin, 2012). Although self-help strategies were successful in some contexts, they have also failed in others due to labourers' lack of experience (mainly in self-help housing programmes) or underestimated the importance of location in sites-and-services programmes. Whereas, in other places, such projects suffered from the imposition of high planning and building standards (Burgess, 1992; Marcus, 1992). From the 1980s onwards, housing policy and practice experienced a shift away from the conventional participatory approaches for housing provision and saw a return of government support to the private sector.

Nevertheless, government-built low-income housing and slum clearance programmes remained on the agenda, albeit undertaken on an ad hoc basis (Wakely, 2016). During previous decades, the rapid growth of urban populations had outweighed the state capacity to meet the increasing demand for housing after both conventional and self-help housing strategies had presented limitations (Mitlin, 2012). Under the significant influence of neoliberalism and accompanying World Bank-led structural adjustments, the market enabling approach emerged, implying a change of the state's role in housing provision. This change underscored the state's support for the formal institutions that control and maintain the private sector market with housing rather regarded as a commodity. This approach sought to enable the private sector to reach down to lower, but not the very lowest, income groups. While this approach proved less costly for governments, it did not serve housing needs of those in bottom-income segments (Fiori and Ramirez, 1992). Moreover, this strategy was criticised for over-emphasis on private markets and excluding alternative/complementary channels of housing provision (Keivani and Werna, 2001a).

Problem statement

In Kigali, the affordable housing crisis has been a persistent drawback to urban development over the past three decades. In 2012, a Kigali city-commissioned study reported that 54% of demand for new housing falls in the affordable housing category, while 78% of that demand concentrates in the lowest income quintile¹(COK, 2012). The affordable housing shortfall is a challenge that grew in tandem with rapid urbanisation. For instance, Kigali grew at an annual rate of 4% during 2002-2012 rising to 7.5% during 2011-2014 period (Bower *et al.*, 2019). As a result, Kigali alone accounts for nearly half of Rwanda's entire urban population. As a result of this situation, the country undergoes the phenomenon of urban primacy.

But, while the population of Kigali grew steadily, little was done to match the subsequent increase in demand for shelter with sustainable ways of delivering affordable housing. Consequently, informal settlements have proliferated, serving as substitutes for largely unaffordable formal housing (Manirakiza, 2015). Reports indicate that housing provided through the formal market is not accessible to three-quarters of the population in Rwanda (ROR, 2015c). As a result, a common coping mechanism for most residents entails procuring housing out of formal channels such as informal settlements and illegal self-building.

Since the early 2000s, a wave of urban policy reforms was introduced. Most of the new policies were integral to the national economic development strategy, known as 'vision 2020'. As a first attempt to overcome the problems associated with previous decades of uncoordinated urbanisation, this reform has envisaged improving housing quality and affordability for a large share of income constrained urban population. Some new policies directly connected to housing included the Kigali Conceptual Master Plan² (2008), land expropriation law in 2009 (amended in 2015), land law in 2013 (amended in 2019) and notably, the national housing policy (NHP) in 2008 (amended in 2015). Through NHP, the government of Rwanda acknowledges housing as a basic right for all citizens³ (ROR, 2015c). The same policy also designates affordable housing as a critical problem requiring maximum policy attention. After the affordable housing problem had been officially recognized and included in the policy agenda, institutional responses also followed. From

¹ Lowest income quintile includes households that earn RWF 300,000/month and less. The same study also reported an annual deficit of 30,000 house units(COK, 2012).

² The conceptual master plan was conceived by a US based firm OZ Architecture in 2008, whereas the Singapore based Surbana was hired to conceive a complete version of Kigali city master plan that came into force in 2013. The latter also undertook revision of KCMP later in 2018.

³ The government of Rwanda recognizes that access to housing as basic right in line with the Istanbul Declaration on human settlements of June 1996.

the onset, new legal instruments were adopted to facilitate the private sector's participation in affordable housing development. In these policies, the government offers financial support to interested affordable housing developers, which can only be obtained upon meeting predetermined conditions (ROR, 2017b). The government support can include funding to cover the cost of providing basic infrastructure at the affordable housing site, corporate tax discounts and bureaucratic support during land acquisition.

Whilst the endeavours mentioned above were made anticipating positive outcomes, interventions in affordable housing provision have remained limited on the ground. For example, as of 2019, only 500 house units in the affordable housing category were completed. In light of these contrasts, an important question arises concerning why affordable housing projects in Kigali have stalled even if it is an established need and a policy priority. Unfortunately, there is no trace of an answer to that question within the existing body of literature. Instead, prior studies investigating closely related themes in Kigali city have emphasized issues of poor access to affordable housing (Uwayezu and Vries, 2020), the extent of housing need (Bower *et al.*, 2019) or urban policy effects on displacements and shelter availability (Durand-Iasserve, 2007; Manirakiza, 2014; Nikuze *et al.*, 2019). Thus, undertaking institutional analysis of the affordable housing provision situation in Kigali constitutes an indispensable avenue for research.

Context: Urbanization and housing trends in Kigali city

Kigali extends over 730 square kilometres. The city's area has increased from 314 square kilometres following countrywide administrative reforms of 2000 and 2005 (REMA, 2013). In Kigali, the urbanized area covers only 12.1% of the entire administrative boundary, while the rural area covers 87.9% (Nduwayezu, 2015). The urban core accounts for 73.8% of Kigali's population, in contrast to 26.2% for the rural area (NISR, 2018b). Within Kigali's urban area, residential forms the most extensive use covering 9.2% of the total area. Other important land uses include commercial, industrial, and government infrastructure (Table 1.1). On the other hand, agricultural land use covers the most considerable portion of Kigali's rural area accounting for 60.5% (REMA, 2013). The latter mainly consists of the area annexed to the city during the 2005 review of administrative boundaries.

Table 1.1 Land use proportions in Kigali city

Land Use Type	Area (Sq.km)	Per cent (%)
Public facilities	12.2	1.67
Commercial	2.7	0.4
Government	4.2	0.6
Forest	77.2	10.6
Agriculture	442	60.5
Industry/Quarry	2.9	0.4
Residential	66	9.2
Mixed Use	0.2	0.03
Recreational/Vacant space	10	1.4
River/Lake	1.6	0.2
Infrastructure	20.5	2.8
Wetland	91.6	12.5
Total	730	100

Source: Adapted from (REMA, 2013, p. 7)

The urban population growth in Kigali is attributed to natural population growth and rural-urban migration (World Bank, 2017b). However, Kigali also serves both roles as the administrative capital city and a commercial hub, thus attracting many enterprises and employment seekers and further enhancing its superiority in the national urban hierarchy. To this end, Kigali alone accommodates 48% of Rwanda's urban population (UN-Habitat, 2014). Besides, the demographic explosion after the genocide against the Tutsi of 1994 has mainly exerted further pressure on already depleted urban housing stock (Manirakiza, 2015), thus triggering a faster outer growth of the city (Figure 1.1). For example, the population of Kigali in the early 2000s was two times what it was in the 1990s (Table 1.2).

Table 1.2 Populations and area changes in Kigali city (1916-2018)

Year	Area (in sq. km)	Total population
1916	0.08	357
1962	2.5	6,000
1970	70	57,400
1978	70	115,990
1991	112	234,664
2002	314	765,325
2012	314	1,132,686
2018	730	1,631,000

Source: Manirakiza (2015); NISR (2018b); Bower *et al.* (2019)

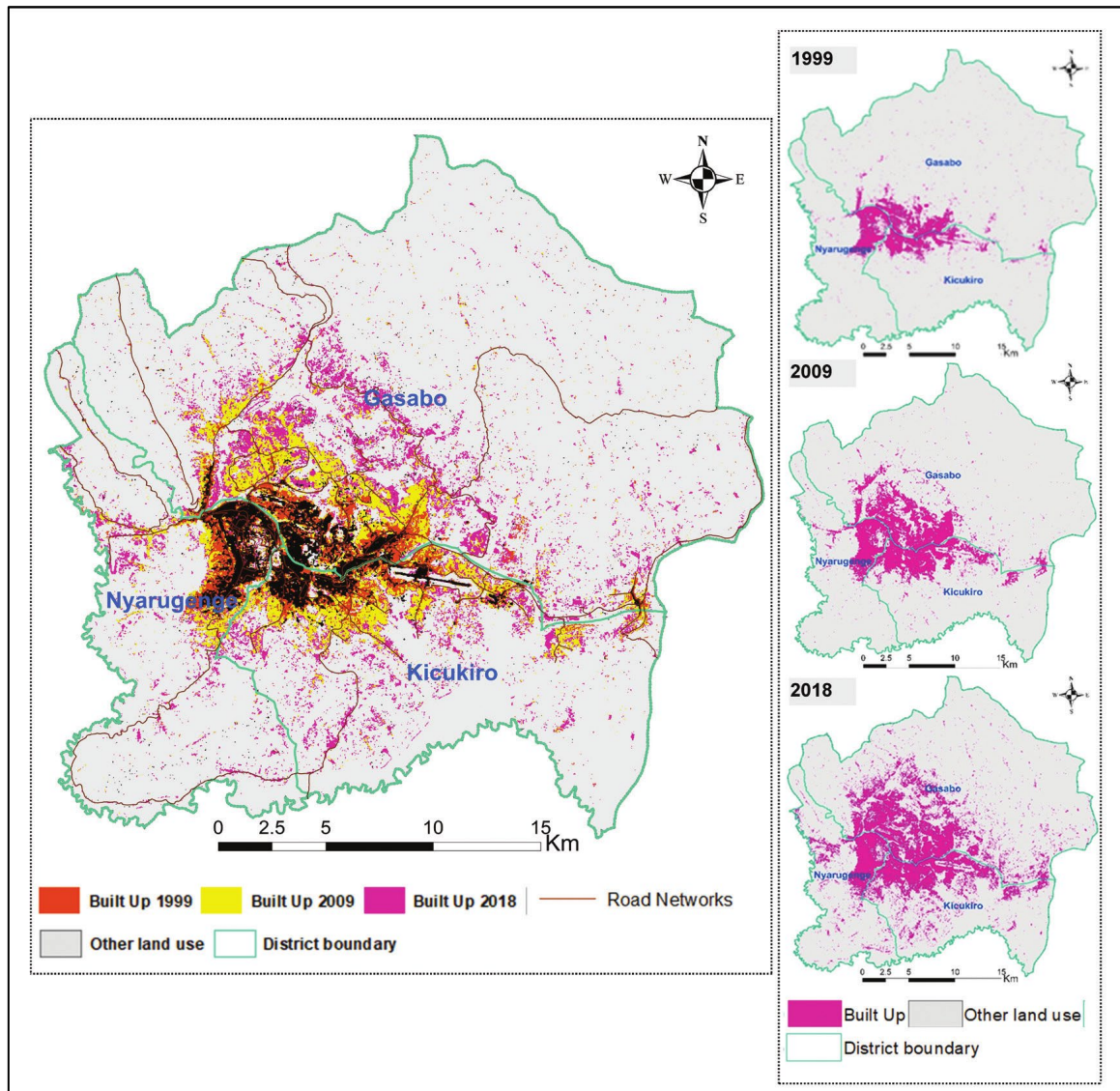


Figure 1.1 Expansion of built-up area of Kigali (1999-2018).
Source: Nduwayezu (et al., 2021,p.142)

Confronted with fast-track urbanization, the housing supply in Kigali could not keep up with an increasing demand for shelter, and it became increasingly difficult to access decent and affordable housing. Meanwhile, the formal housing supply has primarily targeted middle and high-income beneficiaries (COK, 2012). In contrast, most low-income groups cannot afford the costs in the formal housing market. According to the Centre for Affordable Housing Finance in Africa, the cheapest newly built house cost RWF 18 million in 2019 (CAHF, 2019), which could be afforded by less than 2% of households taking into consideration of the underlying conditions to secure housing finance (Table 1.3). As a result, more than 70% of residents still live in unplanned settlements (NISR, 2018b). Although these settlements have been described as unappropriated based on limited amenities and poor physical conditions of houses. As a result, a substantial share of the housing stock (48%) requires upgrading or rebuilding (Bower *et al.*, 2019). But those

informal settlements also remain a crucial source of comparatively affordable housing for many low-income households against the backdrop of lacking affordable housing options from the formal channels.

Table 1.3 Affordability of housing units in Kigali

Unit price		Monthly repayment		Affordable to households
US\$	RWF millions	US\$	RWF	%
50,000	43.5	780	710,000	0.1
25,000	21.8	390	336,000	0.7
15,000	13.1	234	201,000	2.0
10,000	8.6	156	134,000	4.0
5,000	4.3	78	67,000	11.7

Source: CAHF (2018)

Note⁴: These figures are calculated based on the following assumptions considered standard in the Rwandan context: (1) a mortgage interest rate of 17.3% on the loan amount (or 80% of house cost/price), (2) a 15-year mortgage term, (3) the borrower is required to pay 20% of the loan amount as a deposit to qualify for the mortgage credit.

In an attempt to mitigate the informal urban growth in Kigali, a new regulatory framework for urban planning was introduced in the mid-2000s. This framework has sought to fill the legislation vacuum for urban spatial development on the one hand (ROR, 2008). On the other hand, these reforms, alongside modernisation of infrastructure, were expected to incentivize real estate investments as one way to accelerate development and achieve Vision 2020 and its primary objective of making Rwanda a middle-income country by 2018 (ROR, 2000). Some elements of this reform particularly relevant for Kigali's urban development included the master plan, which embodied the city's development aspirations. First, the Kigali Conceptual Master Plan in 2008 set out prototypes of spatial development envisaged by 2040 (Oz Architecture, 2007). Later in 2013, it was developed into a detailed master plan and enforcement on the ground. However, a few years later, in 2018, another review of the master plan was initiated, with the updated version expected to be published in 2020.

⁴ Based on the lending data provided by the Development Bank of Rwanda, 2016 and processed by Centre for Affordable Housing Finance in Africa (CAHF, 2018).



Figure 1.2 Artistic impression of Gahanga Suburb in South Kigali as illustrated in the Master Plan of 2013. Source: COK (2014)



Figure 1.3 View of a residential quarter in south Kigali in 2019
Source: Author

Implementation of the Master Plan has relied on piecemeal urban redevelopment projects. These have been aimed at retrofitting strategically located informal settlements into modern-looking spatial configurations, as illustrated by the master plan (Figure 1.2). Evidence on the evolution of building footprints that paralleled the urban policy reforms shows a drop in the share of rudimentary buildings (mainly located in informal settlements) from 82.8% to 79.6%, whereby around 5,300 buildings were demolished over the period from 2009 to 2015 (Bachofer and Murray, 2018). Nevertheless, measures to cater for households affected by this exercise have been limited. On the one hand, land/house owners, at least, are entitled to a 'fair compensation'—an indemnity equivalent to the value of land and improvements found on the property (ROR, 2015b). With claims on payment delays and unfair compensation often raised (Mireille, Masengo and Knox, 2014; Uwayezu and De Vries, 2019), it does not help affected households to find affordable housing in other locations. In addition, tenants are confronted with even more difficulties since they are not eligible for any form of compensation. Therefore, the housing stock constantly lost without replacement means lower prospects to find alternative housing options at similar cost levels. This situation further illustrates the compounded housing affordability challenges facing low-income households.

The government has passed different policies and programmes in response to the deteriorating housing situation. In this respect, the former national housing policy (2008) was reviewed and updated in 2015. The revised policy sets a framework for meeting housing needs for all income groups (ROR, 2015c). Besides that, a couple of new legislations were passed backing the private sector-led solutions to the housing problem. Thanks to these legislations, affordable housing developers are entitled to a range of incentives, as already highlighted earlier. The government has often abstained from direct housing provision, though social housing is an exception. Nevertheless, some government subsidiaries have remained active players in the housing and real estate sector, although they have been primarily engaged in premium housing (Bower *et al.*, 2019). Most of the recent planning and housing-related policy interventions claim to support affordable housing development in well-located areas. However, by far, the outcomes in terms of the number of affordable housing projects completed remain unsatisfactory, with signs of an enduring affordable housing problem in Kigali. In light of these contrasts, it is worth paying attention to why the affordable housing provision situation has not improved despite government enthusiasm at supporting the affordable housing provision cause.

In reference to the current housing challenges worldwide, Habitat III stressed the need to ensure a continuum of affordable housing through a variety of mechanisms valuing other stakeholders (including socially produced, community-led housing projects) beyond the dominant private sector and the need to accommodate the current housing needs through diverse housing tenure choices (UN-Habitat, 2017). Therefore, it is essential to address the role of various stakeholders in housing delivery and determine factors that enable/undermine their success in housing production processes. In this respect, an in-depth examination of stakeholders' responses to the affordable housing problem and encountered institutional constraints in Kigali city is deemed valuable.

1.3 Research questions, objectives and propositions

Aim

This research aims to assess facets of the affordable housing problem in Kigali city by examining institutional constraints hindering the affordable housing delivery process. Drawing on an empirical approach and backed with theoretical underpinnings, the study will contribute knowledge to the limitations of policies and how they affect interventions to deliver affordable housing to those in most need. The study poses the following research questions.

Research questions

This dissertation poses the main research question: **what accounts for the limited affordable housing provision even if the need for low-income housing is established in Kigali city?** To answer the main question of the study, three (3) sub-research questions are formulated:

(1) Has housing become more affordable for tenant family households in recent years in Kigali city?

To answer this question, the study relied on two datasets of household surveys to analyze changes in housing affordability among tenant family households between two periods (2010/2011 and 2016/2017). This analysis helps paint a picture of housing affordability evolution in recent years. In addition, we analyze interviews with tenants to examine the factors constraining the process to secure affordable housing in Kigali.

(2) How does the underlying institutional framework support key actors' interests, objectives and strategies for affordable housing provision?

While answering this question, a stakeholders mapping is conducted to identify the key, primary and secondary actors based on what roles they play and how they participate in responses to the affordable housing problem. After that, the analysis proceeds only focusing on the key actors only. In this respect, the framework of formal rules governing affordable housing provision is examined, alongside provision strategies. Finally, we review policies relevant to the affordable housing issue to identify approaches adopted and roles of the government and other key stakeholders, which in turn are assessed in relation to the observed practices. At this stage, the purpose is to determine the institutional configuration of affordable housing provision and how it affects the outcomes.

(3) What are the constraints affordable housing providers face given the institutional environment?

While answering this question, we assess the nature of constraints facing key affordable housing providers during their interventions. It is assumed that some constraints emerge in connection to the various forms of institutions in place. These institutions could be formal rules (e.g., regulations, policies) and informal institutions (e.g., traditional practices, values), which could hinder (or enable) the process of affordable housing provision. Additionally, we assess the conditions required to advance affordable housing provision in Kigali city based on the perspectives of the key actors involved.

Research objectives

In order to achieve the research aim, this study sets three independent research objectives. Specifically, it seeks to:

- (1) Explore how housing affordability for tenant family households has evolved in recent years in Kigali city.
- (2) Examine key actors in the affordable housing sector and how the underlying institutional framework supports their interests, objectives and strategies for affordable housing provision.
- (3) Identify institutional constraints hindering key affordable housing providers given the institutional environment.

Research propositions and hypothesis

First, the study assumes tenants constitute a substantial share of the urban low-income population in developing countries. Despite the evident need for decent and affordable housing, both for owner-occupation and renting, securing it is often not easy for some end-users. On the one hand, those aspiring to own a house encounter major constraints, including income level, restricted access to finance and planning regulations (Chitengi, 2018; Anacker, 2019; Andreasen *et al.*, 2021). On the other hand, tenants suffer from tenure insecurity, lack of quality and affordable rental housing resulting from policy neglect and limited investments (Gilbert, 2008; Gunter and Massey, 2017; Lima, 2020). The study places a particular emphasis on the tenants since they are the end-user group targeted by affordable housing interventions. As such, their experience is relevant when examining the difficulties to access affordable housing. Second, in contexts where the market enabling approach dominates the housing policy, private sector actors receive preferential treatment when undertaking housing programs independently or in partnerships with governments, implying that alternative strategies are underexploited (Cao and Keivani, 2014). Third, housing development is a complex process subject to various forms of institutions and transaction costs, which act as constraints for the main actors in the affordable housing delivery process (Ram, 2014; Lai and Tang, 2016).

1.4 Thesis structure

This dissertation is organized around eight chapters. It begins with an introduction to the topic under investigation in chapter 1. In this chapter, discussions focus on elaborating the background to the study and on stating the research problem and justification. Chapter 1 attempts to establish the motivation for undertaking this study in the context of Kigali city in relation to the identified research gaps. In addition, it articulates the research aim and objectives. This chapter as well provides a description of the study assumptions and propositions.

Chapter 2 covers the literature review in line with the key concepts of the study. The chapter features a conceptual definition for affordable housing and affordability. At the same time, it reviews the international debates on links between institutional factors and the affordable housing Challenge. Also, it discusses common strategies for the delivery of affordable housing in a global context.

Chapter 3 discusses the theoretical and conceptual frameworks relevant to the theme of the study. First, it overviews different theoretical perspectives applied in the analysis of housing. Then, chapter 3 establishes the rationale for adopting the New Institutional

Economics conceptual tools of institutions and transaction costs as the analytical framework. It also discusses the adaptation of the NIE conceptual tools in Kigali's affordable housing context.

Chapter 4 presents details of the research design and methods employed in the study. It discusses the basis for adopting a case study research design. Also, it highlights the sources and types of data used. This chapter outlines and explains the procedures followed to collect and analyze data based on individual research questions. Discussions are extended to the aspects of integrity, trustworthiness, and ethical consideration during the conduct of the study. Finally, chapter 4 investigates the limitations and challenges encountered during fieldwork.

Chapter 5 opens the empirical chapters. It presents findings from analysis of housing affordability for tenant family households based on two household surveys and those from the analysis of perceptions of tenants' constraints to accessing affordable housing in Kigali city based on interviews.

Chapter 6 presents findings of the analysis of key actors' interests, objectives and courses of action, affordable housing strategies and the underlying institutional framework governing the affordable housing provision.

Chapter 7 focuses on findings for analysis of institutional constraints informed by the NIE framework. It discusses the interrelationships between them and how differently they may affect key housing providers in the process of housing provision. Also, chapter 7 highlights the key actors' perspectives on the conditions necessary to facilitate the more effective provision of affordable housing in Kigali city.

Chapter 8 concludes the dissertation. It summarizes and synthesizes the study's main findings into a framed discussion. Also, the chapter draws conclusions and implications for policy and further research.

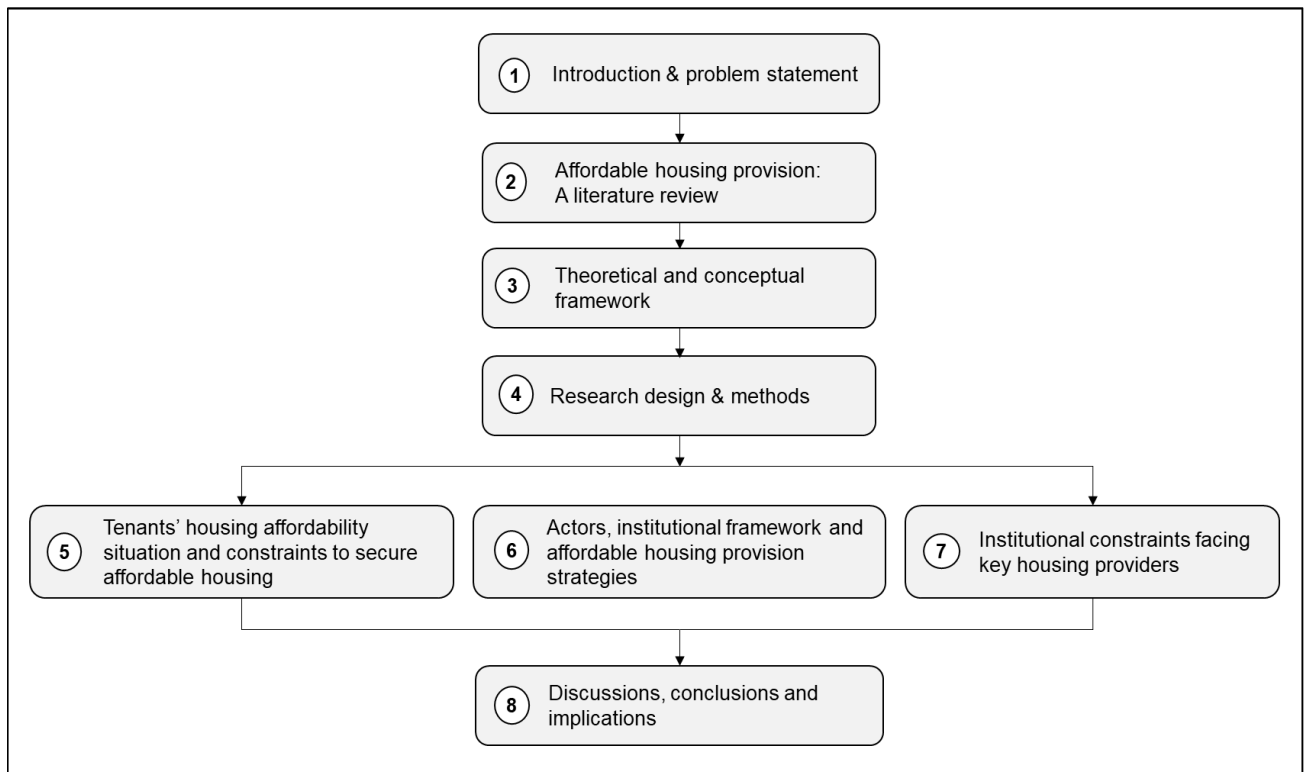


Figure 1.4 Thesis structure
Source: Author.

CHAPTER 2

AFFORDABLE HOUSING PROVISION: A LITERATURE REVIEW

2.1 Introduction

The purpose of this study is to assess facets of the affordable housing problem in Kigali city by examining institutional constraints hindering the affordable housing delivery process. This chapter covers the literature review. In this chapter, the main objective is to discuss concepts and factors to the affordable housing crisis and explore common strategies adopted to ensure affordable housing provision. The first section covers a discussion of definitional challenges associated with affordable housing (affordability) concepts. It draws on Czischke's rental market segments framework (Czischke, 2018) to develop definitions guiding further discussions in this research. Section two discusses the importance of housing, focusing on how housing unaffordability negatively affects many aspects of human and community life. Following this will be the turn to trace the causal factors for the affordable housing crisis in section three. In the final section, we also explore the prominent strategies used to provide affordable housing, drawing on the international debates on responses to low-income housing needs.

2.2 Defining affordability and affordable housing

Concepts of affordable housing and housing affordability are commonly used across several countries. In line with their extensive use, these terms also carry different meanings from one context to another. Literature on the subject has stressed lack of consensus regarding how affordability should be defined and measured (Hulchanski, 1995; Stone, 2006; Gan and Hill, 2009), with different camps struggling to impose their perspective and basis for measuring affordability (Gabriel *et al.*, 2005). In this respect, frequent contrasting views also reinforce the perception of 'affordability' as a subjective concept. Although housing affordability has been a common priority issue in the welfare policies of countries for several decades, differences remain in terms of what is considered to be adequate responses (Bramley, 2012). Such differences may make sense, considering that interpretations given to these concepts are also inconsistent.

For many years, many scholars have contributed to defining the concepts of affordable housing and affordability amid lacking conceptual clarity. In one of the early attempts, Bramley (1990) defined affordable housing as housing that meets well-established norms of adequacy at a net rent, leaving occupants with enough income to live without falling below some poverty standards. Very close to Bramley's definition, Hancock (1993)

suggested that any rent would be affordable if it leaves the consumer with socially acceptable standard of housing and non-housing consumption once paid. In later years, other definitions emerged but did not diverge from the central idea in prior interpretations. Gilmour and Milligan (2012, p. 58) define affordable housing as ‘housing that is provided at a rent or purchase price that does not exceed a designated standard of affordability. From a slightly different perspective, affordable housing is also described as ‘accommodation allocated outside of market mechanisms according to need rather than the ability to pay’ (Oxley, 2012a, p. 75). Also following Oxley’s idea, Czischke and van Bortel (2018) offered a more elaborated framework that conceptualizes affordable housing as one segment along a rental housing continuum:

The concept of affordable housing refers to housing for a broader range of household incomes than social housing. The affordable segment includes the gap between the traditional social and public housing segments and the level of expenditure that is still affordable for moderate-income households or that are not able to buy a home and cannot afford to pay full market rents. (Czischke and van Bortel, 2018, p. 5)

Based on the previous description, the framework of rental housing segments defines affordable housing according to rental prices. This way, affordable housing is supposed to command a higher rental price than social housing, but at the same, lower than full house units provided at a full market rent rate. Whereas, if narrowly defined, affordable housing refers to housing for moderate-income households neither eligible for social housing nor able to pay full market prices (Czischke and van Bortel, 2018). From a broader perspective, the affordable housing concept is used to reflect the challenge of providing affordable housing in general without necessarily referring to rental segments (Figure 2.1).

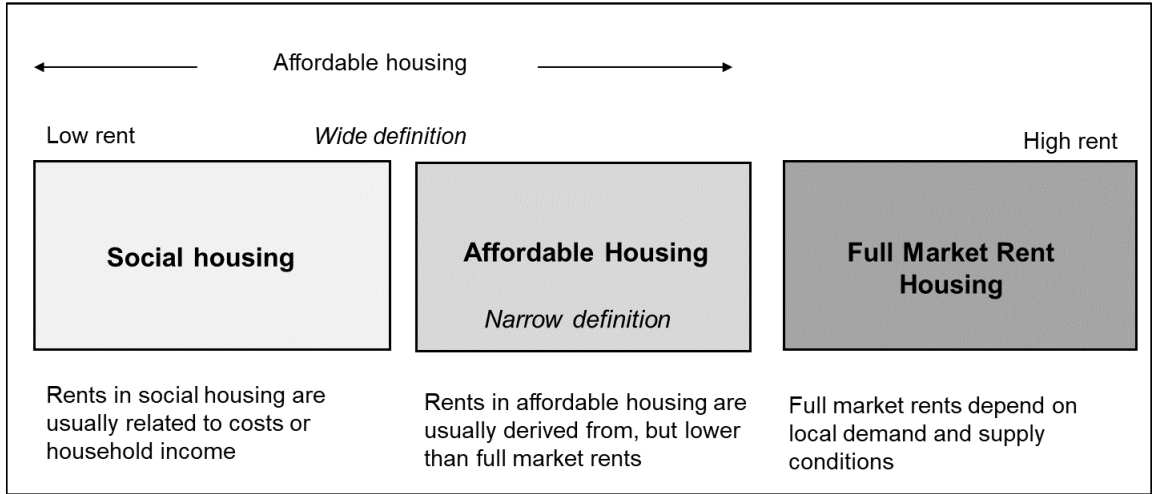


Figure 2.1 Rental housing segments
Source: Adapted from Czischke and van Bortel (2018, p. 4)

Most of the interpretations for affordable housing have pointed to a standard measure to establish whether a house could be labelled “affordable” and who should be the end-user. The latter gives rise to the concept of housing affordability. In simple terms, Howenstine (1983, p. 20) defined affordability as ‘the ability of the household to acquire decent accommodation by the payment of a reasonable amount of its income on shelter’. Other authors (see Stone, 1993; Freeman, Chaplin and Whitehead, 1997) have asserted that affordability entails the ability of households to meet the costs of housing (rent and utilities) without imposing constraints on living costs. The latter clearly extends on Howenstine’s definition, introducing the notion of non-housing costs in the interpretation of housing affordability. In another attempt to provide an improved definition, Maclennan and Williams note:

Affordability is concerned with securing some given standard of housing (or different standards) at a price or rent which does not impose, in the eye of some third party (usually government) as unreasonable burden on household incomes. (Maclennan and Williams, 1990, p. 9)

Housing affordability has been widely interpreted in terms of the relationship between a specific household’s expenditure (or house end-user) on housing and how much it earns. Gilmour and Milligan (2012, p. 58) argue that a common approach used to define affordability involves ‘measuring whether housing costs exceed a fixed proportion of the household income and/or whether household income is sufficient to meet other basic living costs after allowing for housing costs. Elaborating further on previous definitions, Woetzel and colleagues contend that ‘affordability generally includes a financial component (share of income devoted to housing), a standard for what constitutes socially acceptable housing and a clear idea of what income groups are affected’ (Woetzel *et al.*, 2014, p. 1).

Like the definition, measuring housing affordability also remains a highly contested topic. In some instances, contentions reflect varying priorities and assumptions held by researchers from different disciplinary backgrounds (Gabriel *et al.*, 2005). For example, sociologists are generally concerned about social inequality and the capacity of housing affordability research to capture ‘real’ household experiences of housing stress (Bramley, 1990, 2012; Stone, 1993, 2004). This perspective gave rise to the widely applied technique that assesses housing affordability based on the ratio of housing expenses in relation to occupants’ income. On the other hand, neoclassical economists stress the need to measure affordability with objectivity. According to the neoclassical consumption theory, ‘rational consumers attempt to maximize utility with respect to different goods and services, including housing, they can purchase within the constraints imposed by market prices and income’ (Megbolugbe, Marks and Schwartz, 1991, p. 382). This way, asking

people if they can afford housing they need, as such, sounds problematic. Another challenge is that two or more people are more likely to have different views about housing and non-housing needs, making subjective measures hard to interpret.

The objective assessment of affordability seeks to determine whether households' finances become stretched due to unavoidable housing costs. In this respect, objective outcomes such as overcrowding and the adequacy of income relative to housing and non-housing expenses can be assessed using different indicators. Economists treat affordability in connection to many other factors, not necessarily captured in the normative measures, such as distribution of housing prices, the distribution of housing quality, the distribution of income, the ability of households to borrow, public policies affecting housing markets, conditions affecting the supply of new or refurbished housing, and the choices that people make about the consumption of housing relative to other goods (Quigley and Raphael, 2004). But these factors could not be discussed within the scope of this study.

As already highlighted, the ratio method is the most popular approach used to measure housing affordability. This method focuses on estimating the financial burden of housing costs by calculating the proportion of income spent on housing, which is expressed as house price (rent) to income ratio. While the ratio method is often favoured for its simplicity and reliance on readily available information, it also presents weaknesses as it fails to incorporate other factors influencing affordability and the household situation (Gan and Hill, 2009). For instance, Stone et al. (2011) complained that this approach does not recognise the trade-offs between low price/rent and affordable housing. In response to the weaknesses in the traditional ratio method, a residual method was introduced. The latter mainly pay attention to income left after incurring housing costs relative to poverty standards for non-housing consumption (Stone, 2006; Bramley, 2012).

Despite a lacking a unified view of affordable housing (affordability) concepts, there is also a conviction that 'affordable housing' should be defined nationally, regionally, or even locally based on specific needs and eligibility criteria (van Bortel and Gruis, 2019). Many countries have already established what they find as the accurate definition for affordable housing and affordability that better reflects local circumstances. For example, in the US, a house is considered affordable when one pays no more than 30% of income towards monthly rent and utilities and 35% of annual income when buying a house (Smith, 2012). In the UK, the affordability threshold is 20% or less for mortgage purchase and 25% or less for rent (van Bortel and Gruis, 2019). In Australia, in contrast, there is no precise threshold. Instead, affordable housing is described as 'housing that is appropriate for the

needs of a range of low to moderate-income households and priced so that low and moderate incomes can meet their other essential basic living costs' (Milligan *et al.*, 2007, p. 30). But one cannot also ignore the UN-Habitat's interpretation of housing affordability, which could be influential at the international scale. The UN-Habitat defines housing affordability applying the general 'rule of thumb' of housing expenditure of no more than 30% of household income to housing, ensuring a household has sufficient left for non-housing expenditure (UN-Habitat, 2009a; UN-Habitat, 2011a).

Based on the above discussion, concepts of affordability and affordable housing have been subject to reinterpretation both in time and space. Thus, one can argue that a uniform interpretation cannot be easily derived. At the same time, affordability and affordable housing are clearly two, though separate, intertwined concepts. Therefore, we define affordable housing as a housing typology designed to meet the needs of households who cannot afford housing at full market rent, based on a context-specific measurement indicator. Whereas affordability refers to how meeting housing costs (purchase cost or rent) for the minimum socially accepted house/apartment in a particular context does (does not) put a specific household under financial strain.

2.3 Importance of housing affordability

The importance attached to housing affordability is intrinsically connected to the centrality of housing in many aspects of human lives. Housing is regarded as a basic need. It is a place where human beings undertake their fundamental functions, including sleeping, production and various household and community activities (Majale, 2004). In this respect, King (2003) depicts housing as a freedom right because it serves as a fundamental right on which other essential human functions depend. Housing constitutes a social right in some countries, and the right to housing is safeguarded. Therefore, it elevates housing as a critical sector requiring special attention in welfare policies (Bengtsson, 2001). Furthermore, the ability of people to afford shelter has been formally recognized as a basic right. Both the United Nations Universal Declaration of Human Rights adopted in 1948 and the International Covenant on Economic, Social and Cultural Rights adopted in 1966 establish a link between housing affordability and why people have limited resources to afford housing (United Nations, 2015). In this regard, a human rights perspective assumes that housing is fundamental to ensuring the well-being of people and forms an essential source of livelihood (Smith, 2012).

The reasons why housing matters for people and communities are diverse, although they remain connected in some ways. Swartz and Miller (2002) emphasized that housing is a crucial factor influencing a family's ability to access economic and educational opportunities, protection against violence and environmental hazards and capacity to accumulate other forms of assets. Housing affordability further determines households' access to other essential aspects of quality living, including health, employment, services and network of support (Maliene et al., 2008; Whitehead, 2017). With housing being the single most significant expenditure for most households, it implies that deprivation or accessibility at unreasonable costs may disrupt household consumption and lead to poverty. In connection with this, Stone (1993) introduced the concept of 'shelter poverty' (Stone, 1993). He argued that if households are left with insufficient income to meet a basket of non-housing needs at the standard level of adequacy after paying housing expenditures, they are subject to poverty. In an attempt to emphasize the same point, Kutty (2005) also came up with the concept of 'shelter-induced poverty'. While Stone relied on the basket of goods to determine the minimum level of adequacy for non-housing goods, instead Kutty used poverty thresholds widely used to judge impoverishment (Kutty, 2005).

Nevertheless, the effects of housing affordability are not limited to financial consequences. According to Majale (2004), the composition of the housing stock has implications not only on lifestyles but also on the urban form. For instance, the proliferation of informal settlements and slums⁵, a characteristic urban form in many cities across the developing world, is partly linked to limited affordable housing options for incoming migrants (Turner, 1967; UN-Habitat, 2003b; Fox, 2014). Also, Kemeny (1992) underscores that the social organization of housing, mainly in terms of tenure and dwelling type, can similarly have significant effects on social well-being. In this respect, it can be understood that the significance of housing affordability goes far beyond individual households or communities.

Low affordability levels also negatively affect the social and economic development of cities and regions (Gabriel *et al.*, 2005; Schwartz, 2016). Housing affordability influences how resources are distributed within and between cities, regions and between individuals

⁵ According to John F. Turner slums emerges from complementary processes of modernisation and urbanisation. Thus, he described the phenomenon as an essential element within the process of modernisation (Turner, 1967). Based on the latter, slums exist because arriving rural migrants cannot afford decent affordable housing in cities, though with time, these become integrated in formal housing as their income rises and conditions improve.

and generations (Wardrip et al., 2011). For instance, a rise in rents and house prices beyond levels considered affordable to households earning low and moderate-income can push people away from their homes and places of employment (Schwartz, 2016). This way, if cities and regions have effective measures in place to maintain adequate stock of affordable housing, it could enhance their competitiveness. For example, cities with low housing affordability indexes struggle to retain young and creative workers, who tend to migrate to other places offering a comparative advantage in terms of choices and affordable costs to access housing (Ndubueze, 2009).

2.4 Factors influencing the affordable housing challenge

The affordable housing problem is a complex phenomenon. As such, it emerges from the interplay of several factors. Discussions aligned with market theories tend to split these factors into demand and supply factors. In the former case, the factors include changes in real incomes, employment, expectations of future price movements, purchasing power, changes in tastes and preferences, prices of other goods, and changes to the system of housing taxes and subsidies (Balchin and Rhoden, 2002; O'Sullivan and Gibb, 2003). The supply factors mainly consist of land and construction costs, strict development regulations, and cost of finance (Mayer and Somerville, 2000; Gyourko and Saiz, 2006). Using a different approach, Hawtrey (2009) suggested the factors influencing affordable housing without leaning on market theories, splitting them into four broad categories: spatial, economic, financial, and government policies.

Housing as a structure is fixed in the physical space. The house building process is subject to the influence of spatial factors such as urban density, dwelling design and geography (Hawtrey, 2009). These may impact affordability by making the housing development process slow and costlier, while in some cases, they could also determine where housing is most needed or most supplied. High urban density is widely associated with environmental benefits (Quastel, Moos and Lynch, 2012). For instance, high density-oriented planning is viewed as a plausible way to provide affordable housing (Newman, 2014), albeit this view is also contested in some cases. In this respect, some studies found a link between higher urban densities and higher incidences of housing shortages (Burton, 2003; Kallergis *et al.*, 2018). In terms of locational factors, it is argued that land use related regulations such as zoning rules and urban containment regulations affect the rates of development, leading to reduced housing supply in specific localities. Studies on U.S cities have established a close relationship between zoning restrictiveness and lower housing affordability (Warren, 2009; Gyourko and Molloy, 2015; Lens and Monkkonen, 2016). However, other studies could not detect that correlation (Malpezzi, 1999). Moreover, in

cases where developers have faced holdout problems during land assembly in inner-city areas, the development cost increased (Miceli and Sirmans, 2007). This situation could lead to intensified building activities at the urban periphery where land ownership is less fragmented—a process seen as a significant contributor to the urban sprawl (Duranton and Puga, 2014).

In terms of economic factors, variables such as the labour market, inflation rates, household incomes, and migration affect housing affordability. For example, some authors argued that in larger cities, thanks to the potential of enhanced productivity of the labour force, high demand for housing drives up rents and housing prices (Rosenthal and Strange, 2004; Galster and Lee, 2020). In turn, the exorbitant housing expenditures leave low-income residents overburdened. In other cases, households' income and household growth also raise concerns about the affordability of houses. In his study, Malpezzi (1999) found that higher housing prices were correlated with higher incomes and faster population growth in some cities across the U.S. The latter somewhat corroborates Worthington and Higgs (2013) study, which similarly showed that economic and population growth affected housing affordability—albeit only in the short run. In terms of employment, Hawtrey (2009) emphasized that the dynamics associated with the sector, such as the emergence of new working modalities (e.g., casual and part-time employment styles), do not necessarily guarantee easy qualification for housing finance. Therefore, not every kind of employment can shield one against affordability problems.

Finance is another critical factor to housing affordability. Access to a reliable source of finance is a precondition for housing producers to deliver and for consumers to acquire houses. The main reason is that housing constitutes a major purchase, which requires long-term finance— This way, how financial systems function determines the provision of long-term finance and hence the affordability of housing. Warnock and Warnock (2008) contend that countries with more substantial legal rights for borrowers and lenders (e.g., through collateral and bankruptcy laws), sufficient credit information systems and more stable macroeconomic environments have well-functioning housing finance systems. In contrast, in countries with weak financial systems, it is also challenging to produce housing at affordable costs, and it constitutes a significant factor in the precarity of housing conditions (Rolnik, 2013). In contexts where such problem prevails, interest rates and other mortgage underwriting conditions have been a huddle to potential home-buyers (Steele, 2012b). Mortgage interest rates and mortgage payments affect housing market cycles and affordability, albeit these vary from one country to another. Financial deregulation is also another factor in making banks and financial institutions more prudent

about long-term credits such as housing finance. According to McCord and colleagues (2011), the increasing caution in lending practices among financial institutions amidst the liquidity challenges weakens recovery in the residential property market. The same situation also had direct effects on purchase affordability. In developing countries, housing finance holds a crucial role in the growing affordable problem. For example, the absence of credit finance flexible to accommodate low-income borrowers constrains access to formal housing in India (Smets, 1999). In other cases, finance variables such as interests on the mortgage, loan-to-value ratios, and nature of mortgage instruments that do not reflect borrowers' economic status weakened housing affordability, as studies on cities in Ghana and Kenya indicated (Boamah, 2011; Kieti and K'Akumu, 2018).

Finally, government policies also matter. With governments increasingly concerned about the welfare of their citizens, policies serve as an entry point for different forms of housing assistance and interventions. In this respect, state policy factors affecting affordable housing include subsidies, taxes, and regulations. Regulation of the market remains one significant responsibility of the government nowadays, in the wake of its progressive retraction from the role of a housing builder (Angel, 2000). In this light, the state as a builder of housing has become less common in recent decades, with more governments increasingly turning to intermediary roles in delivering housing solutions. In this respect, government indirect interventions may target beneficiaries through vouchers and subsidized rents or housing producers with tax breaks and subsidies (Gilmour and Milligan, 2012).

Existing in different forms across various contexts, the above have also had mixed results. Even if such interventions are established mainly with a noble intention, evidence shows that they could also reinforce unaffordability. In India, for example, Patel and colleagues (2018) claim that building regulations significantly reduced housing affordability of the urban poor households. In Indonesia, regulations were similarly found to impact housing production (Monkkonen, 2013). Further evidence from Brazil, Zambia and Cameroun indicated that regulatory frameworks for housing development made access to land more difficult, generated transaction costs and reinforced factors contributing to informal housing expansion (Njoh, 1995; Biderman, 2008; Chitengi, 2018). The central theme for this dissertation is to explore the implications of institutions on the affordable housing challenge, which remains underexplored in some contexts like Kigali.

2.5 Key strategies for affordable housing provision

Housing development overall entails the involvement of different types of actors. Affordable housing being widely regarded as a social issue, the necessity to address the lagging provision becomes a pressing concern for institutions, administration, and stakeholders. That way, the cross-cutting nature of the affordable housing challenge justifies the existence of different mechanisms used to reach ideal provision responses (Pawson et al., 2019). In the aftermath of World War two, the state was largely responsible for delivering affordable shelter to citizens since housing was an essential element in state-driven welfare objectives. However, beginning in the 1970s, a move to delegate that responsibility (or at least partly) to non-state actors has rather become a norm in many parts of the world (Jenkins, Smith and Wang, 2007). Therefore, the task of delivering housing has tended to change hands on several occasions. To this end, different approaches have been in use over time, albeit they bear some resemblances across some cities and regions (Milligan and Gilmour, 2012). While some strategies reflect the substantial role actors play in a specific sector, others have thrived on synergies among actors from diverse sectors. Based on a review of the literature, four common strategies for affordable housing provision are identified and categorized as the public sector, private sector (i.e., market actors), public-private partnerships and cooperatives housing strategies.

Public sector

State intervention in housing provision can be traced back to the 19th century. However, production of public housing at a large scale became more prominent after the Second World War (Robinson et al., 2016). Before the 1950s, the state's role in housing was minimal, limited to providing accommodation for some specialized clusters of public servants such as the military (Wakely, 2016). Later, the increased role of the government in housing aimed at strict control of the private sector by imposing various standards (e.g., rent controls). However, many city authorities could not enforce them, while housing remained unaffordable to low-income populations (Jenkins et al., 2007). At the same time, the state intervention in form of public housing was allegedly done in the interests of public health, safety and amenity hoping to maintain decent living conditions (Jenkins et al., 2007). After the Second World War, declining welfare conditions marked a turning point whereby many states resorted to taking housing building and allocation into their own hands. As a result, state institutions directly intervened in mass public housing production, which was an integral element of welfare state policies across many European cities at the time (Madanipour et al., 2018).

One of the basic tenets of the public sector intervention in housing relates to the notion that shelter is a basic human need. In other words, housing is a merit good essential to uphold the well-being and social stability that cannot alone be provided by the free market' (Cigdem and Wood, 2012, p. 200). But also, there are concerns that if housing needs are not met, negative externalities will arise (e.g., illness, homelessness, etc.). Therefore, the view of housing as a 'merit good' forms a compelling case for the government's role to ensure that it is accessible for all. Besides the direct public housing provision strategy, government interventions have taken different forms over time (table 2.1). Under the influence of neoliberalism, since the 1970s, the state mandate for housing has shifted. Many governments gave up the approach requiring the state to build housing, convinced that markets are the best vehicle to ensure delivery of housing that meet different needs (Cigdem and Wood, 2012). As a result, the following decades were marked by a global housing policy shift towards dominant market-based solutions. In this respect, strategies such as direct public housing and regulatory interventions (i.e. rent controls) were ditched to give way for new choice-based approaches, for example, the "right to buy" strategy in the UK (Hawtrey, 2009), housing vouchers programme in the US (Galster and Lee, 2020). With direct public housing schemes lacking efficiency, they were abandoned over growing concerns that they undermined individual choice and could even threaten private investment in the housing sector (Cigdem and Wood, 2012).

Table 2.1 Examples of government strategies for provision of affordable housing

Category	Strategies	Objective	Contexts
<i>Direct provision</i>	Public housing	To provide housing to the urban low-income groups; to improve well-being and social stability after World War 2; to eradicate slums and sub-standards housing (Jenkins, Smith and Wang, 2007; Wakely, 2016)	A less common strategy nowadays, except some countries such as Singapore, China (especially in Hong Kong), South Africa (Milligan and Gilmour, 2012)
<i>Subsidies</i>	Housing allowances	To help low and moderate-income households occupy better quality accommodation they would otherwise not afford and improve tenants' mobility to lower-poverty areas (Kemp, 2012; Steele, 2012a).	Housing vouchers in the U.S, rent assistance in Australia
	Cross-subsidies	A common form consists of subsidisation coming from developers whereby the state require them to supply a certain proportion of affordable housing as a condition to secure planning permission (Oxley, 2012b)	US, UK
	Serviced sited (or sites & services)	To share the responsibility for providing decent, affordable housing between the state and the people, whereby the state provides serviced sites and allocates land to individuals to build their homes (Mitlin, 2012; Wakely, 2016)	Adopted in many developing countries as part of self-helping housing approach
	Capital subsidies	To stimulate demand by offering subsidies to poor households and rely on the market to increase the supply of affordable housing (Paul and Harry, 2001; UN-Habitat, 2011a)	A popular strategy in some developing countries between 1970-90s (e.g., Chile, Costa Rica, Colombia, South Africa)
<i>Taxes</i>	Low Income Housing Tax Credit (LIHTC)	It uses tax breaks as incentives for private investors to build new affordable units with rents set at 30% of local salary levels (Milligan and Gilmour, 2012).	Established in the U.S in 1986
<i>Regulations</i>	Right to buy	UK's Housing Act 1980 allowed council housing tenants the right to buy their house units. It led to the decline in council renting and rise in homeownership (Conway, 2000; Clapham, 2005)	UK
	Rent controls	Established to control inflation and pressures on wages and help low-income, but they have led to market distortions and decline in investment in rental housing (Gilbert, 2012a; Ward, 2012)	Many developing countries and some developed countries

Source: Author

In developing countries, public interventions in housing have followed almost a similar trajectory as in most Western countries. First, direct public housing in the form of high rise blocks became common in many cities in the late 1950-60s (Wakely, 2016). Newly independent nations were enthusiastic about the modernisation ideals and impatient to emancipate from poverty. However, in light of one of several development challenges at the time, they had hoped that the public housing approach would help accommodate the fast-rising urban populations and therefore be a solution to the alarming incidence of slums (Gilbert, 2012b). Over the years, new policies were adopted, and others were mainly abandoned in line with shifts in global political and economic ideologies and practices (e.g., the rise and fall of Keynesianism in the western world). Besides state-built housing, Gilbert (2012) maintains that strategies such as rent controls, serviced sites, cross-subsidization of essential services (e.g., water), and capital subsidies for the urban poor are also common government housing strategies in the developing world.

A substantial literature paid attention to the processes and outcomes of public housing interventions (Erguden, 2001; Whitehead, 2003; Nygaard et al., 2007; McKee, 2008). Public housing interventions raised concerns over costs and benefits mismatch, inaccessibility, poor services, and substandard construction of public affordable housing schemes (UN-Habitat, 2011a). If public housing schemes have seldom held positive evaluations, it includes how they have rendered justice to the poor and socially vulnerable groups (Gooding, 2016; Jonkman and Janssen-Jansen, 2018). Beyond that, they were rather associated with shortcomings in several contexts (Watt and Smets, 2017). For instance, the social orientation of public-led housing schemes was doubted without a clear distinction from market housing, which further raised questions over whether governments exercised sufficient caution when allocating subsidies (MacLennan and More, 1997). In the UK, council housing has been subject to problems such as poor conditions of housing stock, deteriorating estates, low demand and a negative image, and these have reinforced the perception of council housing as a 'social problem' and 'tenure of last resort' (McKee, 2008, p.186). In Hong Kong, Chiu (2010) insisted that public housing is economically inefficient and inequitable. In North America, public housing has been linked to racial segregation, crime and higher poverty rates (Carter et al., 1998). In developing countries, public housing interventions have been criticized for not reaching the poorest, quality of housing produced and for poor location choice of such schemes (Gilbert, 2012b; Obeng-Odoom, 2015).

Private sector

The question of whether the state or the market should provide housing has generated tensions among scholarly debates. In this case, two rival conceptual perspectives are at the origin of discord. The first asserts housing as a 'basic human need' (Bengtsson, 2001; Yung and Lee, 2012). The second considers housing a 'commodity' (Pattillo, 2013; Soederberg, 2017b). Pro-market arguments are grounded in the idea that a free market would constitute the most appropriate channel for efficient resource allocation within the housing sector (Ndubueze, 2009). In addition, free interaction of supply and demand forces enhances efficiency under the market system, unlike when governments interfere with market operations, which is susceptible to causing distortions. Over the past decades, public interventions, both direct public housing development and rent controls, have been regarded as a threat to the functioning of housing markets (Buckley and Kalarickal, 2005).

The role of private actors in housing has become more prominent at the advent of neoliberal approaches to housing and aligned political and economic systems. Neoliberalism as a concept is grounded in the proposition that 'efficient production and distribution of goods and services is best achieved through the operation of markets' (Cigdem and Wood, 2012, p. 200). The market approach to housing rose fast to the peak following failures in government interventions during preceding decades. Thus, neoliberalism has reinforced the need to restrict the government's role in housing to the minimum in favour of deregulation of the market, whereby the private sector should be supported to produce housing at prevailing market rates (Soederberg, 2017b; Sengupta, 2019). However, the state remains an important agent as it must ensure free-market operation and assist the poor and disadvantaged citizens in accessing market-provided housing. As a result, the 'enabling of markets' strategy has become mainstream across many countries under the notable influence of the World Bank. This move has instigated reforms to harmonise pro-market national economic systems alongside sectoral pro-market policies in which housing was no longer treated as a stand-alone sector but rather as one closely linked to the broader economy (World Bank, 1993). Consequently, many states have embraced gradual retraction from direct housing provision accompanied by a change in strategies with attention then shifted to policies supporting the demand-side to improve choice and housing affordability in sharp contrast to the public housing era (Cao and Keivani, 2014).

Of significance to the above is the sustained influence of pro-market housing policies. These have turned the private sector into a leading residential housing provider—a system still dominating many countries' housing policies nowadays (UN-Habitat, 2016b). This situation underscores the importance of the market institutions and market actors in complementing governments' objective of ensuring households' access to decent and affordable housing. The private sector housing delivery entails a process led by enterprises of different sizes that play different roles with respect to the underlying market conditions and institutional arrangements. The housing building involves construction companies, large contractors, and mortgage finance institutions (Yates and Milligan, 2012). Whereas, management of finished houses in recent decades was marked by a transition from the public rented-housing to increased levels of homeownership and the rise of the third sector organisations in taking over state's management duties in former public housing in Western welfare states (Nygaard, Gibb and Berry, 2007; Clapham, 2018). However, housing management tasks have also largely become a major responsibility of individual private house-owners or collective ownerships (i.e., condominium associations) with the possibility to outsource services to property management firms (Londerville, 2012).

In Western countries, the rise of the market approach instigated the transfer of significant public housing stock to non-government entities. This process was largely documented in the UK (Gibb and Nygaard, 2006; Tsenkova, 2008). In addition, other strategies were put forward to incentivize the private sector's involvement in affordable housing provision. For instance, in the US, the Low Income Housing Tax Credits (LIHTC) entailed tax breaks to help private developers remain engaged in affordable housing (Bratt, 2019). On the other hand, housing vouchers were another common strategy to improve effective demand (Galster and Lee, 2020). In the UK, finance facilities were initiated to help developers access funds through private debt finance and bonds since the late 1980s (Milligan and Gilmour, 2012). Beyond the countries highlighted above, Germany is another example where the private sector maintained a crucial role in the affordable housing sector, whereby strategies such as private finance and demand-oriented policies have been in use just like in many Western counterparts (Hansson, 2019).

In developing countries, the dominance of private sector provided housing was similarly sustained. In many countries, market housing falls into two categories: formal and informal modes of private housing providers. Formal private housing provision entails that processes inherent in housing development meet all regulators' requirements (Acioly and French, 2012). On the other hand, informal private housing provision is an alternative source of housing for most low-income households unable to afford formal housing. In light of spreading informal settlements, it is argued that commodification of housing production processes, which is inevitable under the 'market enabling approach', has reinforced further unequal access to housing in many cities of developing countries (Cao and Keivani, 2014; Sengupta *et al.*, 2018). As a result, housing produced through formal channels has mostly benefited middle and high-income groups (Mukhija, 2004). In the past, private sector strategies in housing have taken different forms ranging from self-building (on owned or leased land) to hiring a contractor to build an individual house or purchasing a finished house built by a private commercial developer (table 2.2). With formal housing not being accessible to everyone, informal modes of private housing provision have remained the most popular source of accommodation for low-income groups (Keivani and Werna, 2001; Acioly and French, 2012).

Table 2.2 Examples of private-sector affordable housing strategies in developing countries

Strategy	Characteristics
<i>1. Formal private housing provision</i>	
Self-building	An individual takes the initiative to construct own home or hire an external professional to carry some construction works. Also, the owner often uses her savings, borrow from friends with formal housing finance, challenging to access (Bredenoord and van Lindert, 2010; Hamiduddin and Gallent, 2016).
Commercial private developers	Business-oriented enterprises undertake affordable housing development, often with some form of indirect government support. In Thailand, for example, this strategy focused on condominiums, which has increased homeownership. However, the same strategy also prompted the rise of land prices and led to slums eviction with minimal impact to low-income groups (Baken and Linden, 1993).
Small scale developers and landowners' collaboration	Strategy is commonly used in the speculative formal housing development situations, where small-scale private developers, short of finance, seek the collaboration of landowners to undertake a housing project (Baharoglu, 1996) jointly.
Developer and community cooperation	Private developers and low-income households cooperate in the provision of affordable housing. This approach often involves building in stages, allowing some flexibility to low-income end-users (Keivani and Werna, 2001b). Related housing interventions in some contexts, like in the Philippines, developers are both housing builders and loan originators helping end-users' communities raise construction funds (Llanto, 2007).
<i>2. Informal private housing provision</i>	
Squatter settlements	They entail the illegal occupation of land for their shelter purposes. Also, housing structure contravenes building and land use regulations and land use regulations (UN-Habitat, 2003b; Porter, 2011).
Informal land subdivisions	Private developers (or individuals) illegally appropriate and subdivide suitable public land. Such land is then sold to low and middle-income households for housing purposes (Porter, 2011; Goytia and Pasquini, 2016; Huchzermeyer and Misselwitz, 2016).
Informal low-income rental housing	Used mainly by low income and new immigrants to urban areas, who neither have the capacity for an informal subdivision plot nor the necessary social connections to join a squatter settlement as owner-occupiers (Gilbert and Varley, 1990; Rakodi, 1995; Keivani and Werna, 2001a)

Source: Own compilation

Despite the instrumental role of the private sector in responding to the affordable housing challenge, the strategy has also known shortcomings. Some of the limitations emerge because the outcomes are mainly contingent on the dynamics in the broader economy. An example is the global financial crisis of 2008, which exposed the weak side of market-oriented housing interventions. Against the backdrop of increasing difficulties to secure finance for both developers and end-users of housing, the viability of such schemes to provide genuinely affordable housing units in the long term has raised concerns (Elsinga, 2015). Thus, some governments have had to reclaim their role and, in some cases, were compelled to increase funding for affordable housing (Sengupta, 2019). In developing countries, private sector housing is confronted with many challenges, including limited access to finance, inadequate infrastructure and regulatory environments (Tan et al., 2017; Chitengi, 2018; McGaffin et al., 2019). More to this, the enabling approach is far from being a perfect solution to the under-provision of affordable housing. Some people argue that the market strategy could not produce housing, which is realistically affordable to the urban poor (Gilbert, 2012a). Whereas others claim that the same approach has failed to address economic stagnation, quantitative and qualitative housing shortages, unrealistic affordability thresholds and lack of access to formal credit they were intended for (Sengupta *et al.*, 2018).

Non-profit sector

The participation of social-oriented groups in affordable housing provision has a long history in many countries. In the wake of industrialisation in the Western world and associated welfare problems, with many governments' unable to fulfil social welfare demands, non-profit organisations played an essential role in improving the deteriorating housing conditions (Kemeny, 1995). Towards the end of the nineteenth century, various forms of non-profit organisations such as housing trusts and other charity societies emerged, and through donations had started to produce affordable rental housing in the United States and Western Europe (Milligan and Gilmour, 2012). In the 1970s, due to the increasing government retraction from direct public housing, the number of non-profit led housing schemes have surged as a result, in some instances taking over government responsibilities in overseeing former public housing stocks. In Britain, for instance, this shift has led to the rise of a particular typology of non-profit housing organisations primarily known as 'housing associations' whose operations remained under government funding (Nygaard et al., 2007). In the US, similar types of organisations received public funding in the program that also was known as the 1974 Community Development Block (Bratt, 2019). The same public assistance also stimulated the growth of community development

corporations (CDCs), another strategy whose main objective was to respond to affordable housing problems for under-served populations (Milligan and Gilmour, 2012).

Apart from the approaches mentioned earlier, housing cooperatives constitute another long-established non-profit housing provision model. These organisations can be found in many places worldwide. However, they hold different meanings and exist in different structures across countries. According to Clapham (2012), most organizations under the cooperative arrangement share some features, including collective responsibility for all tasks linked to ownership and management of house unit(s). Housing cooperative strategy has established itself as an indispensable alternative source of affordable housing for moderate-income urban residents across many Western countries such as Austria, Germany, Scandinavian countries, the US and the UK (Ganapati, 2010; D. Clapham, 2012; Lang and Stoeger, 2018; Sørvoll and Bengtsson, 2018). According to Balmer and Gerber (2018), housing cooperatives as a collective strategy to fund and build housing is historically rooted in the civil labour movements. The authors maintain that these entities have sustained their importance even within the contemporary social housing systems (Balmer and Gerber, 2018). From the onset, housing cooperatives were seen as an attempt by the working class to overcome housing shortages and as a strategy that provide members with more autonomy over access to housing. While housing cooperatives have been associated with homeownership in several contexts, cases of those engaged in rental services are also not uncommon, particularly across Europe. In Sweden, for instance, housing cooperatives date back in the 1940s, and over the years, some of them have diversified into the management of municipal rented housing stocks or building services for commercial purposes (Sørvoll and Bengtsson, 2018).

In developing countries, the role of non-profit organizations in low-income housing delivery rose out of the self-help mechanisms (Wakely, 2016). Enthusiasts of the self-help approach promoted the idea, drawing on a rights-based perspective. This postulates that if the state can guarantee a conducive environment, people have the potential to build their own houses that meet safety standards while also responding to their needs and aspirations (Turner, 1967, 1976; Pugh, 2001). Hence, from 1970 onwards, the World Bank and UN-Habitat are two major multilateral and donor agencies that have firmly supported adopting self-help housing strategies in developing countries (Wakely, 2016). A rationale for the self-help approach was grounded on acknowledging the contribution of the informal housing building processes to availing alternative shelter options to the urban poor (Bredenoord and van Lindert, 2010). As such, the potential and capacity of self-builders were highly commended and would later be the foundation of community mobilisations and interventions in housing. In the same vein, housing cooperatives were conceived as

community self-help networks built on sharing resources and labour tasks so that low-income residents can develop their own housing (Ganapati, 2014). However, this approach later became rather more prominent among middle-class groups, which induced expansion of income-segregated settlements (Clapham, 2012).

Against this background, non-profit entities have emerged as crucial agents in spreading self-help housing solutions. In some instances, Community Based Organizations (CBOs) would support the collective efforts of residents by facilitating housing building in many ways ranging from fund mobilisation to offering technical assistance (Bredenoord and Van Lindert, 2014). Of significance among these community organisations are housing cooperatives. In most cases, landowners use these networks to mobilise resources necessary to build houses primarily for their occupation (Keivani and Werna, 2001a). Like in Western countries, housing cooperatives were also established through workplace mediums or labour movements across many developing countries (Ganapati, 2014). For example, housing cooperatives aligned to various professional networks such as trade unions and ministries are common in countries like Nigeria, Ghana, and Iran (Keivani and Werna, 2001a; Tajudeen and Basirat, 2017). In India, Sukumar (2001) contends that housing cooperatives have evolved in tandem with democratic socialism. Also, non-profit housing is a well-established approach in many contexts, whereby it has been integral to the formal structure of affordable housing delivery. While housing cooperatives are diverse vis-à-vis organisational form and operations, their rise is contingent on the local housing market and institutional framework (Sukumar, 2001). However, their intentions in the affordable housing sector remain closely related. Table 2.3 illustrates some examples of non-profit housing initiatives in developing countries.

Table 2.3 Examples of non-profit housing interventions in developing countries

Modality of non-profit housing interventions	Characteristics
Cooperative housing partnerships	Cooperatives organise themselves (often with support from NGOs), save, obtain land from the government and construct houses either communally or individually.
Community settlement upgrading and resettlement	Community-based upgrading and/ or resettlement; with support from NGOs, local government and/or international funding providers
Legally established community groups	Legally recognised community groups – supported by NGOs – apply for public funding and develop housing on self-management, mutual aid and assisted self-help building processes.

Source: Adapted from Bredenoord and Van Lindert (2014, p. 62)

Non-profits have been commended for their impact in extending access to housing and linked services to low-income groups and for revitalizing deprived neighbourhoods (Ganapati, 2014; Bratt, 2019). For instance, drawing on cases of Germany and Switzerland, Lang and Stoeger (2018) argued that thanks to the positive reputation of housing cooperatives in recent years, they have emerged as a significant provider of low-cost rental housing and have been vital in addressing affordable housing needs. While in the US, community-based development organizations (such as CDCs) have reportedly responded to local social needs through their dedication to the production of low-cost housing (Bratt, 2008). In developing countries, efforts of non-profit enterprises in housing have similarly been recognized. In Nigeria, Tajudeen and Basirat (2017) indicated that housing cooperative societies have improved members' access to housing loans, enabling them to buy their own houses. Furthermore, the housing cooperatives supported urban low-income to overcome difficulties in securing housing thanks to the collective land ownership and saving capacity in Mexico and Brazil (Fruet, 2005; Escobar and Grubbauer, 2021).

Despite their contributions, the non-profit housing strategies have also experienced drawbacks. For example, although housing cooperatives have been a popular alternative channel of affordable housing provision, Elster (1989) argued that these have been subject to institutional constraints in a capitalist context. In this respect, housing societies and cooperatives have been constrained by several factors, including bureaucracy to access finance, land use restrictions, lack of supportive legislative and policy framework, limited autonomy or government neglect, low income of members and limited

organizational capacity (Keivani and Werna, 2001a; Fruet, 2005; Ganapati, 2014; Huba, 2016). In other cases, the progress of these entities has been hindered by internal structure deficiencies (Ganapati, 2010). Moreover, given that cooperative association is a concept built on the principle of sharing risks (and benefits), it increases the external perception as less sustainable structures. From a practical perspective, Bredenoord (2016, p.8), referring to cases in developing countries, notes: 'the establishment of housing cooperatives in numerous countries is promising, but so far cooperatives have not been developed on a large scale'. Also, considering that the progress of housing cooperatives depends on their relationship with the state; thus, the limited support may explain the mixed outcomes in the cooperative housing approach. Drawing from lessons from India (Sukumar, 2001) found that institutional framework and housing market conditions affect the functioning of housing cooperatives.

Public-Private Partnerships

Public-Private Partnerships (PPPs) constitute another well-liked strategy to deliver affordable housing. The fragilities inherent in the affordable housing delivery strategy led by the public, private and non-profit housing sectors have paved the way for a new approach that sought to capitalize on the strengths of combining different sectors in Public-Private Partnerships. According to Hawkesworth (2011), PPPs broadly entail relationships between the public and private sectors. From a more narrow perspective, PPPs would focus on specific aspects of risk-sharing and financial commitments (Hawkesworth, 2011). Since the early 1990s, PPPs have been widely used to deliver public services such as infrastructure (roads, bridges, hospitals) and affordable housing (Kalabamu and Lyamuya, 2017). PPPs also refer to relational arrangements in which public and private sectors agree to deliver a specific service under certain conditions (Hodge and Greve, 2005). When the service in question entails affordable housing, the World Bank proposes a more precise definition of PPPs as:

A partnership between the public and private sectors, established through a contractual relationship which seeks to access private sector finance, design, construction, commercialization, maintenance, or operational management for the delivery of affordable housing and, in some cases, ancillary services. The public sector contribution can be provided in the form of cash or equivalents such as land, development rights, revenues (rents/tariffs) generated from land, infrastructure and building assets, taxation relief and/or a share in the equity generated over a fixed period. The private party's remuneration is significantly linked to performance. (World Bank, 2020a, p. 20)

The rapid rise of PPPs has been located within the broader debate concerning modes of governance and coordination, whereby partnerships (and networks) have emerged as an alternative to hierarchies and markets (Brown and Yates, 2012). In this respect, Public-Private Partnerships became increasingly common in sectors where the government's collaborations with other sectors had proved to be paramount in achieving sectoral objectives. As such, being one of the channels to deliver public service, PPPs are posited as a by-product of neoliberal policies (Sengupta, 2006; Hearne, 2009). On the one hand, this was after the early public housing strategy had faced backlashes over a limited production scale amidst growing demand (Triple, 1994; Keivani and Werna, 2001a). Thus, it had become clear that weak public sectors would not deliver projects efficiently on their own, and neither would they be effective at monitoring private providers (Glaeser and Joshi-Ghani, 2013). On the other hand, the enabling markets approach that flourished in the advent of neoliberalism targeted improving the efficiency of the housing sector by focusing on certain aspects. For instance, it sought to address supply and demand constraints and ensure that pro-market strategies were not meant to be *laissez-faire* (Malpezzi, 1990; World Bank, 1993; Angel, 2000). This has triggered changes in the roles the public and private sectors play in the housing sector, hoping that PPPs would help both sectors to collaborate while delivering public services.

In the light of this shift, protagonists of the pro-market approach to housing provision stress that better results are achieved if each sector can focus on undertaking particular responsibilities in the housing provision process (UN-Habitat, 2006). This proposition reinforces the need for fostering synergy between different sectors. In this vein, public-private partnerships have been depicted as a strategy with comparative advantages over each sector working independently. From the onset, PPPs have been highly regarded as an effective mechanism to reduce and spread risks associated with an investment in affordable housing development (UN-Habitat, 2006; World Bank, 2020a). This is crucial considering governments' financial constraints and profit-oriented private investors' reluctance to participate in low-income housing provision. In this respect, it is argued that PPPs present potential in providing greater value for money through their ability to tap into the private sector's expertise and efficiency (Bah, Faye and Geh, 2018; Fainstein, 2021). However, there are also concerns that some actors' opportunistic behaviours would see them use PPPs to access resources and capabilities (initially not at their disposal) to develop housing out of reach to low-income beneficiaries (Bovaird, 2004; Scott, 2004).

PPPs have been adopted in both developed and developing countries. These were similarly introduced as part of the neoliberalization process (Hearne, 2009). In the UK, for example, the Conservative government established PPPs in 1992 (Payne, 1999; Hearne, 2009). Beyond the UK, PPPs have been extensively used to provide low-income housing in Canada (Griffin, 2004), the US and Australia (Armitage and Susilawati, 2004; Hawtrey, 2009). In the developing world, many countries followed the same trend adopting market enabling policies, in which the influence of international organizations, mainly the World Bank and UN-Habitat, is evident (UNCHS, 1992; World Bank, 1993). It is argued that if well implemented, PPPs could help to overcome infrastructure deficiencies in developing countries (Kavishe and Chileshe, 2019). Subsequently, many countries espoused PPPs in their national housing provision strategies for the same reasons (Sengupta, 2006). PPPs were adopted with enthusiasm, with many governments alone failing to meet the increasing demand for housing and other public services. This way, PPPs were asserted as advantageous in affordable housing schemes because they can relieve financial burdens on governments by benefiting from additional private sector resources (Abdul-Aziz and Kassim, 2011).

Against this background, PPPs have recorded some positive outcomes in housing provision in different countries. In developed countries, for example, Griffin (2004) reported that PPPs are an effective way to match public resources with housing development costs at the municipal level in Toronto, Canada. In India, Sengupta (2006) also reported that housing production under the PPP model led to impressive outcomes concerning cost-effectiveness and housing quality. However, she also pointed out that the same model failed on the quantitative results (e.g., number of house units produced). Furthermore, evaluation of PPPs schemes in countries such as Egypt and South Africa showed that they had a moderate impact on making land and housing accessible to low-income groups (Payne, 1999). It could be seen that where PPPs strategy in affordable housing provision has achieved promising results, there is a significant contribution of the public sector. For example, in the Philippines, the government made some concessions, including lowering housing standards to reduce housing construction costs and make housing affordable to low-income groups. At the same time, a portion of house units was also sold at a market rate allowing developers to retain some profit (UN-Habitat, 2006).

Despite successful experiences of PPPs in some countries, as shown above, evidence also indicates that the use of PPPs to deliver affordable housing led to poor results. PPPs encounter some challenges because they require creative thinking and a commitment from involved parties to work together to achieve a shared objective (Fullarton, 2005). Common limitations associated with the PPPs strategy include poor value-for-money and

service delivery, regression in public-sector capacity and democratic accountability (Pollock et al., 2002; Hodge and Greve, 2005). Moreover, PPPs are also seen as an indirect contributor to the growing inequality and poverty, a trend deep-rooted in the shift from welfare to the neoliberal state globally (Brenner and Theodore, 2002). As a result of these shortcomings, PPPs have attracted opposition from community civic organizations, mainly in democratic Western nations (Hearne, 2009).

Similarly, using PPPs to provide affordable housing has presented challenges in developing countries. According to UN-Habitat, PPPs have encountered several obstacles, but the most common are: opposing goals between the profit-oriented private sector and social-oriented public sector; limited negotiation capacity of local governments along with other competencies necessary to manage complex projects; weak governance; and lack of financing due to the high perception of risks related to housing projects, limited flexibility of PPPs contracts implying low guarantee for and increasing reluctance of private investors to participate (UN-Habitat, 2011b, pp. 6–7). As a result, affordable housing projects delivered under PPPs arrangements failed to meet expectations in some countries. For example, in Nigeria, PPPs did not improve housing affordability due to profit motivations amongst both public and private partners (Ukoje and Kanu, 2014). On the same country, Ibem (2011) adds that the lack of a comprehensive institutional structure further undermines PPPs strategy in affordable housing provision. Similar poor outcomes in PPP based housing schemes have also been reported in India (Sengupta, 2006; Ram, 2014).

2.6 Summary

In this chapter, we have reviewed key literature on affordable housing and affordability themes. In this respect, the literature review was organized into four sections. The first section paid attention to the definitional issues associated with affordable housing and affordability concepts. This study referred to several scholarly works (see for example, Bramley, 1990; Stone, 2006; Czischke and van Bortel, 2018) to define affordable housing as a housing typology designed to meet the needs of households who cannot afford housing at full market rent, based on a context-specific measurement indicator. Whereas housing affordability refers to how meeting housing costs (purchase cost or rent) for the minimum socially accepted house/apartment in a particular context does (does not) put a specific household under financial strain.

Secondly, the significance of housing affordability spans beyond enhancing households' social and economic stability, affecting aspects such as health, employment distribution, and livability of cities. But affordable housing shortages pose concerns in several cities globally, particularly those experiencing unprecedented urbanization in the developing world. In the third section, the major factors contributing to the affordable housing crisis were discussed. These were categorized as economic, spatial, policy, and financial aspects.

In the final section, the chapter has covered the key strategies used to deliver affordable housing. To this end, these strategies are public sector, private sector, non-profits and public-private partnerships modes of affordable housing. Each strategy emerged and rose under the influence of social and economic conditions and housing market peculiarities in specific times and contexts. Nevertheless, these strategies have also emerged and spread in tandem with the global shifts in political and economic ideologies— for instance, Keynesianism or neoliberalization of the welfare state. While most of the strategies (e.g., public housing, market enabling, PPPs) were conceived with high prospects, in practice, they have sometimes led to disappointing outcomes.

CHAPTER 3

CONCEPTUAL AND THEORETICAL FRAMEWORK

3.1 Introduction

The purpose of this study is to assess facets of the housing problem in Kigali city by examining institutional constraints hindering affordable housing provision process. This chapter presents and discusses the theoretical and conceptual framework for the study. In the first place, the chapter draws attention to different approaches applied in the study of housing, covered in section 3.2. By exploring the background to housing research, this part underscores the interdisciplinarity of housing as a study object. In this attempt, the chapter also intends to raise awareness about the complexity the unique nature of housing brings about in studying it. Then, in section 3.3, the chapter highlights the rationale for the theoretical choice (i.e., the New Institutional Economics perspective) and the underpinnings of its comparative advantage vis-a-vis other approaches. By building on the discussions in previous sections, section 3.4 operationalizes the conceptual tools of institutions and transaction costs in relation to the process of housing provision in the study context. In the end, the chapter closes with a summary in section 3.5.

3.2 Theoretical approaches to housing analysis

Housing research, to which affordable housing is a subset, is a broad field. As such, it addresses issues of cross-cutting relevance among various research areas (Clapham, 2018). Such interdisciplinarity makes housing a subject receptive to concepts and theories aligned to fields including economics, sociology, political science, geography and psychology (Dodson, 2007). Although this offers the possibility to examine and understand housing-related phenomena from multiple perspectives, it equally renders housing complex as the object for study (Lawson, 2006). O'Sullivan and Gibb (2003) also described housing as a difficult subject to hypothesise about, owing to its many unique characteristics. According to Gibb (2009), the features distinguishing housing from other goods include durability, immovability, heterogeneity, a joint good consumed along with the residential neighbourhoods, and its high price relative to income means that it generally necessitates mortgage finance.

In his discussion of the multi-dimensionality of housing, Kemeny (1988) argued that a comprehensive theory of housing cannot exist. Therefore, the analysis of housing must be grounded in existing frameworks, which implies that different conceptual tools are required to make sense of housing phenomena (Clapham, 2002). This view emerged following Kemeny's (1992) criticism that housing research was explicitly atheoretical and

overly empirical, with many studies reinforcing the government's perspective on the problem. Hence, he advocated that housing studies should apply existing social sciences frameworks (Kemeny, 1992). For example, he designated the actor-network theory and new institutionalism as two perspectives fostering context-sensitive and interaction-grounded analysis in comparative housing research (Manzi, Haworth and Kemeny, 2004). Besides, several other approaches have been applied in housing research. Clapham (2012a) synthesized these perspectives and categorized them as: (1) neo-classical and neo-liberal; (2) institutionalist; (3) social geographic interpretations, (4) social policy approach, (5) social constructionism, (6) structurally inspired approaches, (7) housing politics and political science and 8) people-environment approaches (Table 3.1).

This study seeks to address the question of how institutions impact affordable housing provision. It departs from the assumption that various strategies initiated to address the housing problem lie within the institutional structure, which, though given in any society, may act to constrain different actors taking part in the housing provision process. Thus, the study adopts New Institutional Economics (NIE) as the main theoretical perspective to inform the analysis. However, the assumptions of theories under some of the approaches described earlier (e.g., social geography, social policy, structure-based theories and political perspectives) may also be relevant. Of significance to choosing this orientation is the fact that, in the study context, affordable housing is mainly produced and allocated under market and quasi-market circumstances. Given the study's focus on institutions, the same being at the core of the NIE strand, it is worth applying this perspective.

Table 3.1 Summary of major approaches for housing analysis

Approach	Focus/assumptions	Exemplar references
Neo-classical and neo-liberal approaches	<p>Both are interlinked as neo-liberal ideologies have basis in neoclassical assumptions of market perfectionism.</p> <p>The basic neo-classical model sets out the necessary conditions under which markets operate efficiently and thus the issues of efficiency can be separated from those of distribution and equity.</p> <p>The neo-liberal strand assumes that housing is a private good where the benefits go to the owner and/or the occupier of the dwelling. It asserts that if consumption of housing is both rival and excludable, in principle it can be provided via the market;</p> <p>Approaches used to study factors determining demand and supply, to model and predict housing prices.</p>	<p>Whitehead (2012) Malpezzi (1999); Sheppard (1999); Malpezzi (1999); Gyourko and Saiz, (2006), Phang <i>et al.</i>, (2010); Sheppard (1999)</p>
Institutionalist perspective	<p>Unique features of housing and the pervasive impact of state intervention into the housing system imply that habit, custom, power relations and institutions have influence in transactions involving housing and community</p> <p>Institutionalist approaches focus on the role of institutions to make sense of the housing phenomenon</p> <p>Major clusters of institutional theories (Ball, Lizieri and MacGregor, 1998; Gibb, 2012) include:</p> <ol style="list-style-type: none"> (1) Institutional economics (old and new) (2) Perspectives based on the role of individuals as opposed to wider markets and other institutions (3) Conflict institutionalism (4) Behavioural institutionalism (5) Structure-agency institutionalism (6) Structure of building provision 	<p>Gibb (2012); Gibb and Nygaard (2006); Darabi and Jalali, (2019); Ehwi (2019); Paul and Harry (2001); Pawson et al. (2019); Van Der Krabben (1995); Healey (1992)</p>
Social geography	<p>They address the question 'who lives where?' They also pose the related question of how distinctive social and geographical areas come into being and are reproduced in space and time;</p> <p>This tradition is widely applied in studies on gentrification phenomenon.</p>	<p>Buttler and Hamnett, (2012); Cameron (2003); Shin (2009); Fainstein (2010); Andreasen et al. (2017); He and Wu (2007); Shin (2009a)</p>
Social policy	<p>Housing being an important asset of personal and community life, it constitutes a subject of political interest and concern and community action;</p> <p>This tradition in housing studies has examined housing problems associated with homelessness, poverty and poor health. This approach has focused on practical problems and has been empirical and positivist in nature.</p>	<p>Clapham (David); Clapham (2012c); Waldron (1991); Clapham and Kintrea (2000); King (2000); Allen (2005);</p>

Social constructionism	<p>The approach is based on a disagreement with approaches that assume the objective status of knowledge; a focus on the construction of meaning through social interaction; and the importance of language and discourse in the carrying of meaning.</p> <p>Common applications of social constructionism perspective in housing include:</p> <ul style="list-style-type: none"> (1) studying questions on the nature of social problems; (2) social interactions that shape relationships such as those between landlords and tenants; (3) international comparisons of housing policies examining the factors that have shaped the different definition of housing problems in different countries; (4) use of social constructionism as a base for the integration of other perspectives such as the structuration approach of Giddens. 	<p>Jacobs and Manzi, (2000); Clapham, (2002); Jacobs, et al. (2003); Clapham (2012b); Kemeny (1988, 1992); McKee <i>et al.</i> (2017); McKee, (2011); Hegedüs, (2020);</p>
Structurally inspired approaches	<p>Structuralist theorists try to explain causal processes underlying housing phenomena by using methods such as comparative historical analysis and process tracing of concrete reality</p> <p>Theories applied in housing analysis have discussed the relative power of structure over individual agency, role of class and social movements, the level of consciousness held by agents and pervasiveness and endurance of structures over time and space.</p>	<p>Lawson (2009); Ball (1986, 2003); Sullivan, (1994); Murphy (1995); Burke and Hulse (2010); Ambrose (1991, 1994); Fulong (1996)</p>
Housing politics and political science	<p>Approaches focus on political institutions (state and non-state) and processes of interaction between political elite actors as well as between elite actors and citizens in general;</p> <p>They also discuss applications of some normative political concepts like democracy, citizenship and social justice in housing studies.</p>	<p>Burton (2003); Bengtsson (2012); Chirisa, Bandaiko et al. (2015); Croese and Pitcher (2017); Jonkman and Janssen-Jansen (2018); Sørvoll and Bengtsson (2018); Fainstein(2021);</p>
People-environment studies	<p>People–environment approach in housing studies have basis in environmental psychology;</p> <p>A multi-disciplinary approach that focuses on the relationship between people and their domestic environment;</p> <p>Address questions analysing the quality of human environments by focusing material conditions of residential environments but also social relationships (such as landlord and tenant rights and obligations), economic conditions (especially affordability in terms of household budgets) and ecological consequences (including the use of natural resources)</p>	<p>Eby et al. (2012); Stewart (2001); Janssen-Jansen and Schilder (2015); Sadalla et al. (1987); Yeo and Heshmati (2014); Gou <i>et al.</i> (2018); Imrie (2005); Clark and Kearns (2012)</p>

Source: Based on the review of approaches in housing research by Clapham, (2012, p.107-243)

3.3 Theoretical choice for the study: New Institutional Economics (NIE)

New Institutional Economics (NIE) draws its origin from the work of Ronald Coase (1937, 1960). He developed and extended the core concepts of transaction costs as explanatory ideas indicating why organizations develop internal structures or instead subcontract with market suppliers and the significance of property rights in terms of a theoretical solution to the problem of externalities (Gibb, 2012). Other than Coase, Oliver Williamson (Williamson, 1975) and Douglas North (North, 1990, 1993) are also largely known to have significantly contributed to further conceptual development of the NIE approach.

NIE emerged as an expansion of neo-classical economics and, more importantly, an adjustment to its weaknesses by tending to ignore institutional constraints and transaction costs (Furubotn and Richter, 1998). Neo-classical economics is mainly concerned with optimal allocation of resources assuming that the market was operating without frictions, while NIE departs from an imperfect market situation to focus on the functioning of institutions and the related problems of coordination of market actors (Krabben and Lambooy, 1993).

Under NIE, it is emphasized that issues related to transaction costs, property rights, and contracts have to be understood in a world of bounded rationality, agency problems and information asymmetries (North, 1993; Williamson, 2000). Meaning that where markets are more or less imperfect, and choices are often suboptimal. The NIE stance postulates that market institutions evolve over time and are affected by the opportunistic behaviour of individuals (Karruna, 2013). Hence, NIE seeks to account for the evolution and persistence of institutions on the ground of their efficiency (Teraji, 2018). This study draws on the NIE framework built on coherent concepts of institutions, transaction costs, and property rights, as North (1990, 1993) suggested. However, the adapted analytical framework will be only limited to concepts of institutions and transaction costs.

- **Institutions:** these are the rules, which govern transactions between human agents (Bromley, 1989). They include the formal laws of the state, private laws and the procedures within an organization, informal rules within a family or voluntary organization, and general cultural practices. Furthermore, North, (1991) defines institutions as the humanly devised constraints that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions and codes of conduct) and formal rules (constitutions, laws, property rights) (North, 1991, p.97). Both formal and informal rules are always incomplete because of bounded human rationality and have to be discovered

through a process of trial and error, in which they are continually refined (Chen and Webster, 2012).

- **Transaction costs** generally refer to the costs incurred in exchanging property rights over resources. They include the costs of searching for information, contracting, monitoring, and enforcing contracts. Otherwise, Lai and others define transaction costs, referring to property development, as 'all than the costs of physical production' (Lai and Chung, 1994, p.84). Transaction costs emerge due to lack of perfect rationality and complete information (Buitelaar, 2007). Poorly designed institutions are a source of higher transaction costs (Teraji, 2018). Therefore, individuals shape institutions not only with respect to their desirability to the group/society, but also select institutions that minimize aggregate transaction costs.
- **Property rights** in NIE include economic (de facto) rights consisting of the ability to derive direct or indirect income or welfare from a resource irrespective of legal ownership and legal (de jure) rights referring to the rights recognized and enforced, in part, by government or by some other competent authority (Chen and Webster, 2012). An inefficient initial allocation of property rights leads to persistent suboptimal contracting outcomes and lower market activity (Teraji, 2018).

Justifying use of NIE conceptual tools

Institutional analysis has been increasingly applied in housing and urban studies. Within the institutional analysis tradition, NIE is a particularly highly regarded approach to studying urban experience given that it encompasses issues such as land and housing markets for which transaction costs, information asymmetry and property rights render them unique (Krabben, 1993). For scholars with vested interests in housing and property research, the NIE toolbox of transaction cost economics, property rights analysis and agency incentives helps to understand better a wide range of questions, including the organizational form of housing providers, property markets efficiency, affordable housing markets (Gibb, 2012). Furthermore, Gibb (2012) suggests unexploited avenues where NIE could be usefully utilized, including transaction costs analysis of social housing and market housing provision to inform the design of more incentive compatible and efficient market/non-market housing provision. Similarly, this study views NIE as a capable framework to provide a nuanced analysis of how institutions affect the process of affordable housing provision in Kigali city, Rwanda.

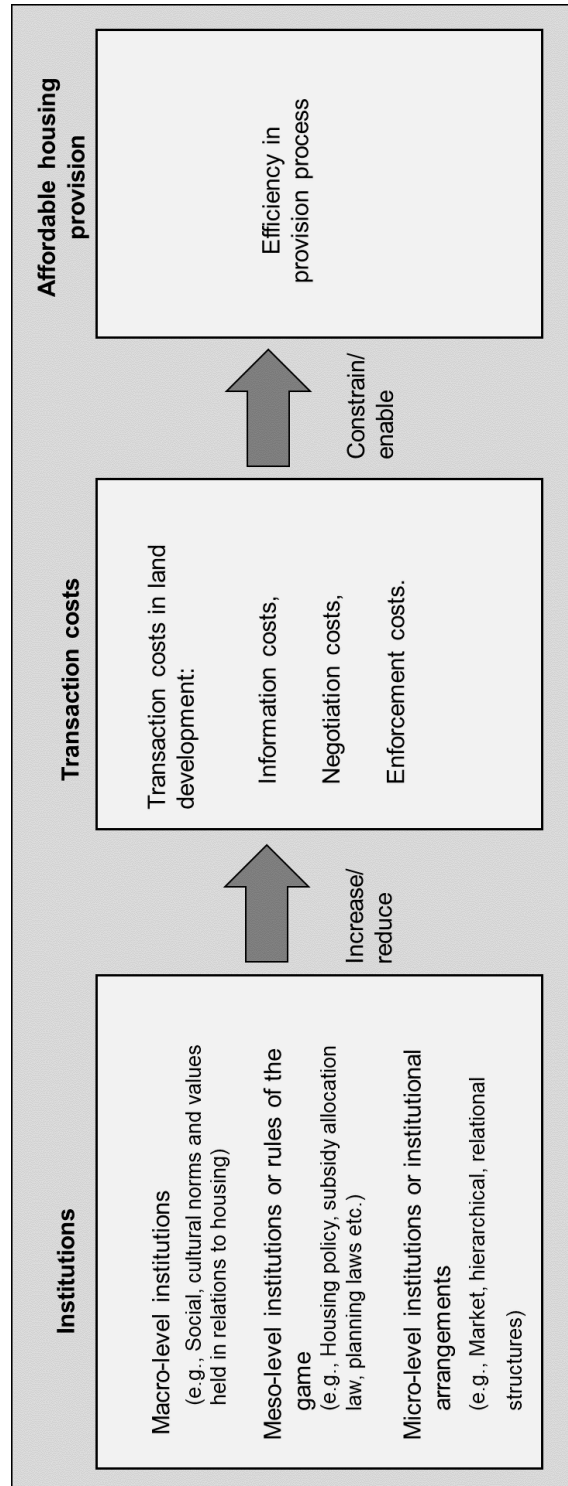


Figure 3.1 Conceptual framework for institutions, transaction costs and affordable housing provision
 Source: Author elaboration based on (North, 1990, 1991; Keogh and D'Arcy, 1999; Williamson, 2000; Buitelaar, 2007)

This study distinguishes institutions from organizations, following classification by Bromley (1989) and North (1990), defining organizations as the 'players' that perform actions within the institutions or 'rules of the game'. However, we recognize that this distinction remains blurred, and in some instances, both are treated as institutions (Dequech, 2005 cited in Buitelaar, 2007). Organizations in affordable housing provision include public, private, cooperative, international development agencies, etc. Alexander (2005) and Buitelaar (2007) categorize institutions as micro-level institutions encompassing those institutions that shape the interaction between individuals and organizations (e.g., Market, hierarchical, relational structures). The meso-level institutions entail the rules of the game that actors face when intervening in affordable housing provision (e.g., housing policies, planning laws, subsidy allocation law, etc.). In addition, agents operate within a wider institutional context, also described as macro-level institutions, which encompasses a system of social, cultural norms and values, for instance, held in relation to housing consumption or ideal housing types.

Institutions can be constraints or enablers to the process of affordable housing provision by increasing or reducing transaction costs involved. According to (Buitelaar, 2004), transaction costs in land development are categorized as costs to search and acquire information about the exchange and costs incurred in the creation and enforcement of institutions. Institutions' primary function is to reduce uncertainties in social exchange, hence they are seen as efficiency-enhancing (Williamson, 1990). In doing so, institutions act to minimize transaction costs, substitute missing markets or enforce and protect property rights (Keogh and D'Arcy, 1999). However, it is argued that institutions may also establish an inefficient structure to human interaction (North, 1990). For instance, certain institutions may reflect the interests of powerful agents in society, which indicates that they are not always efficiency-enhancing (Ensminger, 1996). This study is mainly preoccupied with finding out why interventions in affordable housing provision have been limited despite the evident need in Kigali city. It is assumed that institutions, by failing to mitigate uncertainties, act as impediments to the progress of affordable housing provision.

3.4 Operationalization of the conceptual framework in Kigali (Rwanda) context

A review of literature indicated that NIE concepts of institutions and transaction costs could be useful in understanding the affordable housing provision process. As a result, these are adopted to form a framework for the analysis of how institutions influence affordable housing provision in Kigali city. In this section, the main discussion consists of an attempt to operationalize these concepts in the study context, and it comes after a brief description of the key terms.

Michael Ball defined housing provision as ‘a physical process of creating and transferring a dwelling to its occupiers, its subsequent use and physical reproduction and, at the same time, a social process dominated by the economic interests involved’ (Ball, 1986, p.160). Based on the latter, provision of affordable housing in this study refers to the physical, social, economic and political processes by which affordable house units are produced and allocated to the beneficiaries. In Rwanda, the National Housing Policy (2015) describes affordable housing as financially and administratively accessible housing for people with regular and irregular income. It sets out that a house would be considered affordable if one spends not more than 30% of income towards rent or acquisition costs (ROR, 2015c).

In terms of affordable housing consumers, the term ‘low-income’ (in relation to people) is used to describe households who cannot meet house prices or rent under market conditions, thus needing support to access affordable housing. Whilst there is no criteria to define those falling in the low-income group in Rwanda, with regards to affordable housing, the government defines beneficiaries as those earning a monthly income ranging between Rwandan franc (RWF) 200,000 (€186) and RWF 1,200,000 (€1,119) (Uwimana, 2019). The income range is based on the minimum monthly income possible earned by a formal employee to qualify for credit finance that is sufficient to purchase a standard house unit. This study adopts a relatively broader description of low-income households as all residents that are unable to afford formal housing availed in the market in Kigali, including those whose monthly income falls below RWF 200,000.

Operationalizing concepts of institutions and transaction costs

Applying an institutional perspective in Rwanda's affordable housing context, the study aims to analyze housing provision processes the institutional arrangements within these processes, identify transaction costs and find explanations for what constrains provision efforts. The assumption is that affordable housing provision takes place within an institutional context that influences its processes and shapes the outcomes. The framework described in figure 3.1 outlines the nature of institutions. The institutional arrangements refer to the framework governing how economic entities interact (Buitelaar, 2004). In this study economic entities correspond to actors (or agents, organizations) operating in the affordable housing arena, except that these have diverse motives other than economic. In Kigali's affordable housing sector, the main actors are public institutions (e.g., Ministry of Infrastructure, Rwanda Housing Authority, Kigali City, Rwanda Development Board, and Districts). Private sector actors include real estate developers, financiers, and landowners. There are also international development agencies (e.g., World Bank, Swiss Development Agency), voluntary organizations (e.g., cooperatives, lobby groups) and future beneficiaries of affordable housing. The interactions and transactions between affordable housing actors are undertaken through market institutions (e.g., exchange by means of price), yet most of them also have to go through hierarchical structures (e.g., planning legislations, subsidy approval process), and other relationships are governed by relational structures (e.g., Contracts in public-private partnerships).

Another category of institutions determines the opportunities and choices available to different affordable housing providers. These correspond to what North (1990) distinguishes as formal and informal institutions. The former consists of legal-like rules whose objectives are spelt out in the government's legal and policy instruments. In the context of Kigali, these include the national housing policy (2015), Prime Minister's instructions determining government support to affordable housing developers (2017), the law relating to investment promotion and facilitation and the Kigali Master Plan. On the other hand, informal institutions encompass conventions, habits and social norms that are not legally enforceable but can influence actions (North, 1990). In Kigali's housing context, informal institutions refer to the ideals about housing types and tenure, prevalent practices in housing construction (e.g., self-help house building) and determine people's housing preferences. Formal and informal institutions function as constraints or enablers to affordable housing providers as they may impose or reduce transaction costs involved in provision process.

In relation to land development, transaction costs are described as institutional hurdles, processes or procedures, extra burdens, hidden costs outside the budget and deadweight losses that have to be minimized (Buitelaar, 2007). In Kigali, affordable housing development equally involves transaction costs, given that there are formal institutions primarily intended to mitigate them (e.g., online construction permitting system). Although, other institutions are equally susceptible to contributing to transaction costs (e.g., procedures and requirements to qualify for government support to affordable housing developers). In housing development, transaction costs are encountered at every stage, from acquiring land to the post-construction phases (Healey, 1992). In this respect, Buitelaar (2004) identified transaction costs in different stages of development process as: the preparation of land acquisitions, preconditions to qualify for finance, information search outside the institutional arrangement, depth of administration and protocols, depth and extent of deliberation and bargaining with professionals, procedures and determination of sales agreement formats, design approval administration and bureaucracy, passing through application procedures for planning permission among others. Building on the latter and other studies on housing delivery in cities of developing countries, we compiled a summary of transaction costs also deemed relevant in the context of affordable housing provision in Kigali city (Table 3.2).

Table 3.2 Transaction costs in housing development

Development phase	Transaction costs
Land acquisition	Information research Market research (i.e., in case of developers) Extent of negotiation and agreement Extent of institutional procedure/protocol, bureaucracy
Construction	Zoning regulation obstacles, planning permission requirements Application process and administration length of housing finance Pre-conditions and qualifying for credit loan terms Negotiation and bargaining contracts with consultants Difficulty of compliance with building code Extent of developer's transparency on profit
Allocation of house units	Information research Extent of institutional procedure/protocol, bureaucracy Extent of transparency in allocation process

Source: Author compilation based on Buitelaar (2004); Ram and Needham (2016); Gbadegesin (2018); Taruvunga (2019)

3.5 Summary

This chapter has covered the theoretical and conceptual framework for the study. First, it explored different theoretical approaches in housing research. It was shown that due to the practice orientation of housing research, this field is often criticized for being excessively empirical and, in some instances, atheoretical (Clapham, 2002). On the other hand, in response to those lamenting about lacking appropriate theory of housing, Jim Kemeny underscored that it is still possible to undertake housing research with rigour using different theoretical lenses in social sciences (Kemeny, 1992). It was also acknowledged that the multi-dimensionality of housing makes it a complex object for study, but also a topic connected to and important for several fields. Therefore, the inter-disciplinarity nature of housing research underpins the potential to apply and integrate different approaches grounded in different traditions.

Moreover, the chapter briefly described major theoretical approaches used in housing research. They span across many fields such as economics, social geography, sociology, political science, and psychology. Based on the review of theoretical approaches, the study adopted New Institutional Economics to guide the empirical analysis. In this respect, the NIE framework was deemed suitable thanks to its power to explain the influence of institutions on the behaviours of actors and, in turn, on process efficiency. Particularly, as far as the provision of affordable housing is concerned, institutions constitute both the enabling and constraining factors to the process efficiency and outcomes. Finally, this chapter also presented the conceptual tools of institutions and transactions to form the analytical framework, operationalized in the affordable housing provision context of Kigali in Rwanda. So far, the dissertation has described the research problem, research objectives and conceptual framework. The next chapter covers the research design and methods applied to undertake empirical analysis.

CHAPTER 4

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

The purpose of this study is to assess facets of the housing problem in Kigali city by examining institutional constraints hindering the affordable housing delivery process. The previous chapter has explored theoretical approaches applied in housing research and presented the conceptual framework to guide the empirical analysis. This chapter discusses the research design and methods used for empirical analysis. First, the chapter presents the ontology and epistemological stances in section 4.2. It is followed by a section discussing the research design for the study in section 4.3, where a detailed account of why a case study design was suitable is provided. Section 4.4 describes data and sources, study participants, data collection methods, and analysis applied. This section demonstrates that using a mixed-method approach with multiple data sources is beneficial since it offers the possibility to validate information collected from different sources. The next section covers the ethical considerations for the study contained in section 4.5. Lastly, the chapter closes with a summary in section 4.6.

4.2 Ontology and epistemological stances of the study

This section leads a discussion on philosophical paradigms that determined the research design and approach for the study. Levine (1988) defined research philosophy as a belief about the way data should be collected and analysed. Saunders et al. (2007) link research philosophy to the production of knowledge and its nature. Every paradigm is based upon its own ontological and epistemological assumptions (Scotland, 2012). The term ontology originates from Greek, with "onto" meaning "being," and "-logos" referring to "science"; thus, ontology literally would mean the science of being (Iheme, 2017). Also, ontology is referred to as the study of being (Crotty, 1998). The main concern for ontological assumptions is what constitutes reality or what is. Hence, researchers must clarify their position concerning their perceptions on what exists, how things really are and how things really work. Epistemology is similarly derived from Greek. The noun "episteme" means "knowledge", and the suffix -ology means "the study of". Bhattacharjee (2012, p.18) defined epistemology as 'our assumptions about the best way to study the world'. Epistemology relates to the nature and forms of knowledge (Cohen et al., 2007). Thus, epistemological assumptions focus on how knowledge can be created, acquired and communicated, in summary, what it means to know (Scotland, 2012).

Also, the understanding of epistemology was developed based on the theoretical distinction between rationalism and empiricism. Although both are means of knowledge acquisition, rationalism views reason as the source of knowledge or justification (Bhattacharjee, 2012). In contrast, empiricism views empirical activity through systematic observation, measurement and experimentation as the source of knowledge acquisition (Bhattacharjee, 2012). Ontology and epistemology are major elements of the philosophical component of research methodology. 'These are core research paradigms or worldviews that inform a research, and identify how worldviews shape the conceptualization, practice, and nature of research' as noted (Bloomberg and Volpe, 2012, p. 28). Although both sometimes tend to overlap, the two are differentiated based on how we know things (epistemology) instead of what things really are (ontology). Within a scientific undertaking, ontology and epistemology positions assist the researcher to assess and choose between competing philosophies, theories and analytical traditions (Bates and Jenkins, 2007). Therefore, with respect to this study, the research paradigm consists of subjectivism as ontology and interpretivism as epistemology. Nevertheless, the study will also draw on critical realism as a preventive measure against limitations of the selected position.

(1) Subjectivism

According to Bryman and Bell (2011), subjectivism believes that social entities are created through the perceptions and actions of social actors. This position further asserts that social phenomena are created from the perceptions and subsequent actions of the social actors concerned with their existence (Saunders et al., 2007). Therefore, given that social interaction between actors is a continual process under constant revision, it entails the need to study the details of a situation to understand what is happening or the reality occurring behind what is going on. Subjectivism is often regarded as exclusively appropriate for qualitative methodology. However, qualitative methodology has equally an objectivist strand (Ratner, 2002). In sense that objectivism views the researcher's subjectivity critical to accurately comprehend the world as it exists in itself (ibid). In qualitative tradition, therefore, the researcher is encouraged to reflect on the values and objectives motivating her/his research and how these influence the research exercise.

(2) Interpretivist/social constructivism

Interpretivism is an epistemology that asserts the necessity for the researcher to understand differences between humans in our role as social actors (Saunders et al., 2007). This stance stresses the difference between conducting research on human subjects rather than objects such as computers. At the same time, it dismisses the notion of objective view of reality, instead aligning with the relativist approach of reality (Whittall, 2008; Quaye, 2013). Interpretivists question the usefulness of strict scientific methods for

studying human behaviour, arguing that human beings are not robots but think and reflect (Creswell, 2007). Instead, they assume that reality can be accessed only through social constructions such as language, consciousness, shared meanings, and instruments (Myers, 2013). For instance, language does not passively define objects but actively shapes and moulds reality.

Moreover, social constructivists view research as value bound rather than value-free. Therefore, the researcher and the study context have an influence on the process of inquiry (Lincoln and Guba, 1985). Interpretivist researchers do not predefine dependent and independent variables. Rather, they focus on the full complexity of human sense-making as the situation emerges (Eriksson and Kovalainen, 2008; Myers, 2013). Nor do they start with a theory (as in case of postpositivists), instead they raise research questions and generate meaning from field data (Bloomberg and Volpe, 2012). That way, interpretivist methodology is aimed at 'understanding a phenomenon from an individual's perspective, investigating interaction among individuals as well as the historical and cultural contexts, in which people live and work' (Creswell, 2009, p. 8). Instances of interpretivist methodology include case studies, phenomenology, hermeneutics and ethnography. This study has opted for a case study approach, and the rationale for this choice is explained in one of the subsequent sections.

(3) Critical realism

Critical realism emerged in the 1970s and 80s as a scientific alternative to positivism and constructivism (Denzin and Lincoln, 2011). However, its ontology and epistemology accounts maintained some elements from both methodology strands. An important principle of critical realism is that the nature of reality is not reducible to our knowledge of reality (Fletcher, 2017). In other words, human knowledge captures only a small portion of a more profound and vaster reality. Critical realism views are completely antagonists to both positivism and constructivism perspectives. One of the prominent critical realists Bhaskar (1998), condemned positivism, highlighting the limitation of 'reality' to what can be empirically known (e.g., through scientific experiments). The same critique also holds to constructivism, which considers reality entirely constructed through and within human knowledge or discourse (Bhaskar, 1998). Critical realism is applied in research with its ontology stratified into three-level: empirical, actual and real (Fletcher, 2017, p.5). The empirical level refers to events or objects that can be measured empirically and often explained through common sense. The actual refers to events as they occur without the filter of human experience, and the real means inherent properties in an object or structure that act as causal forces to produce events (Fletcher, 2017). In the view of critical realists, our knowledge of reality (ontology) cannot be understood independently of the interactions

of social actors (Quaye, 2013, p.137). As a result, to obtain knowledge of the social world (epistemology), it is fundamental to have a deeper understanding of the dynamics and prevailing interrelationship between social actors, their underlying context, and social structures (Quaye, 2013, p.137).

4.3 Research design

4.3.1 Case study approach

A case study design was the most appropriate for this study within a framework of qualitative approach. As a methodology, case study research design consists of an in-depth description and analysis of a phenomenon, social unit, or system bound by time or place (Berg, 2004; Stake, 2005; Creswell, 2007). A case study is ideal for empirical inquiries whereby the researcher is interested in investigating a contemporary phenomenon within its real-life context, particularly when boundaries between phenomenon and context are not evident, as argued Yin (2009). Thus, case study is chosen as it is a suitable approach if a researcher wants to understand and interpret phenomena related to processes and outcomes for policy interventions. Merriam (1998, p. 19) further emphasizes it, noting:

A case study design employed to gain an in depth understanding of the situation and meaning for those involved. The interest is in the process rather than outcomes, in context rather than a specific variable, in discovery rather confirmation. Insights derived from case studies can directly influence policy, practice and future research.

The present study similarly seeks to gain an in-depth understanding of the situation and meaning of the subjects involved. Because it sought to understand better how policy objectives and stakeholders' responses address the affordable housing problem and why interventions undertaken so far have had limited outcomes in Kigali city. To this end, the study drew on a holistic case study research design, whereby a case study is studied as a whole as opposed to embedded case studies involving more than one unit of analysis (Yin, 2009). With this choice, the goal for this study was to explain, describe or explore features, context, processes and outcomes pertinent to the phenomena under investigation.

Rationale for selecting a case study approach

Case study as a research strategy is commonly used in various social sciences studies such as political science, organizational and management studies and city and regional planning (i.e., studies of plans, neighbourhoods or public agencies) (Yin, 1994). Case studies are often applied to and meet the requirement of exploratory, descriptive or explanatory research (Rowley, 2002). To this end, Flyvbjerg (2006) argues that a case study approach leads to an advanced level of understanding, otherwise impossible to achieve. Hence, researchers who apply a case study approach to their studies often have their assumptions refuted or disapproved as part of an essential process to learning, which generates new perspectives and enhances the study's validity and reliability (Reardon and Dymén, 2015). On further merits of the case study approach, Bradley (2009) asserted that this approach offers the researcher a better understanding of the phenomena theorized about and addressed by existing studies.

Deciding on a suitable methodology is an essential component of a research undertaking. Researchers are recommended to consider three factors to determine an appropriate research methodology (Rowley, 2002, p. 17): (1) types of questions to be answered; (2) the extent of control over behavioural events, and (3) the degree of focus on contemporary as opposed to historical events. In this respect, case study methods allow for a deeper and more detailed investigation to answer the 'how' and 'why' questions. Moreover, a case study approach presents strength to study contemporary events by its unique ability to deal with various pieces of evidence from different sources, including documents, artefacts, interviews, and observations (Yin, 1994).

Despite its robustness, a case study approach has also presented shortcomings. This method has been largely criticised for lacking scientific rigour and offering a limited basis for generalization (Yin, 2003; Gerring, 2007). However, Yin (2003) refutes this critique arguing that the main intention behind case studies is not to draw inferences on a sample or population but to generalize theories. Furthermore, there are different strategies to deal with potential pitfalls inherent in the case study methodology. For instance, Crowe and colleagues suggested use of theoretical sampling (i.e., drawing on a particular conceptual framework); respondent validation (i.e., participants checking emerging findings and the researcher's interpretation, and providing an opinion as to whether they feel these are accurate) and transparency throughout the research process (Crowe *et al.*, 2011, p.9).

Against this background, the motivation behind this study's consideration of Kigali city as a case study is to observe a single phenomenon pertinent to the affordable housing problem and responses. While it would not be possible to draw generalizations out of the

case study, it is the researcher's conviction that the selection of Kigali for investigating the phenomenon meets the criteria of a typical case (Yin, 2009). In this context, Kigali represents a typical case for the affordable housing challenge facing fast urbanizing cities as it has been largely contended (UN-Habitat, 2003b, 2009a; Bredenoord and Montiel, 2014).

Case study area – Kigali, Rwanda

The study was conducted in Kigali city in Rwanda. Besides being the capital city, Kigali is also the largest city in Rwanda. It is geographically situated slightly south of the Equator between 29°43'0"E and 29°44'0"E of Longitude and 2°35'0"S and 2°37'0"S of Latitude (REMA, 2013). Wetlands and hilly landscapes dominate the physical configuration of Kigali. In this view, Wetlands and steep slopes cover around 19% and 3% of the city's area, respectively (Nduwayezu, 2015). Physical landscape forms a major obstacle to spatial development, with the master plan indicating that only 43% of the land area is suitable for human settlement and development (COK, 2013c). In terms of human settlements, most of the neighbourhoods have developed on hillsides and flattened hilltops. Kigali features three categories of neighbourhoods: planned, informal (mostly labelled unplanned settlements), and mixed neighbourhoods that include both planned and unplanned areas (Jaganyi *et al.*, 2018). Planned neighbourhoods are characterised by clearly separated, demarcated plots, an organised road system, and are well serviced with basic infrastructure compared to mixed neighbourhoods. On the other hand, informal neighbourhoods are poorly serviced with basic facilities; roads are generally unpaved and, in most cases, only accessible for pedestrians (Jaganyi *et al.*, 2018).

Kigali city recorded a fast-track growth of population over the last few decades. In 2017 the city counted a population of 1.6 million (NISR, 2018b). Based on this trend, it is estimated that, on average, between 57,000 and 90,000 people are added to the city's population every year (Bower *et al.*, 2019). Regarding the economy, Kigali contributed around 40% of Rwanda's GDP in 2012 (Bower *et al.*, 2019), which is not surprising considering that most large enterprises are based in the city. Also, an increase in foreign direct investments in recent decades is another contributing factor (World Bank, 2015b). On the other hand, poverty incidence also remains a challenge though it is most predominant in rural areas in Rwanda. In Kigali, the poverty rate stood at 13.9% in 2017, from 20.9% in 2014, while the extreme poverty rate was 4.2% in 2017 compared to 9.4% in 2014 (NISR, 2018b)— overall, indicating an improving situation in recent years.

In terms of the administrative structure, Rwanda is divided into four provinces and the city of Kigali (i.e., the capital city). Kigali city is subdivided into three districts: Gasabo, Nyarugenge and Kicukiro (Figure 4.1). These are subdivided into 35 sectors, which in turn are subdivided into 161 cells and finally subdivided into 1,061 villages (the lowest administrative entity). Much of the governance decisions are made at the Kigali city council's administrative level. The same entity also retains the responsibility to oversee the implementation of decisions and directives at lower administrative levels. The administrative entities below the level of Kigali city council play roles that include enforcing decisions, rules and policies or acting as intermediates between upper-level administrative entities and residents.

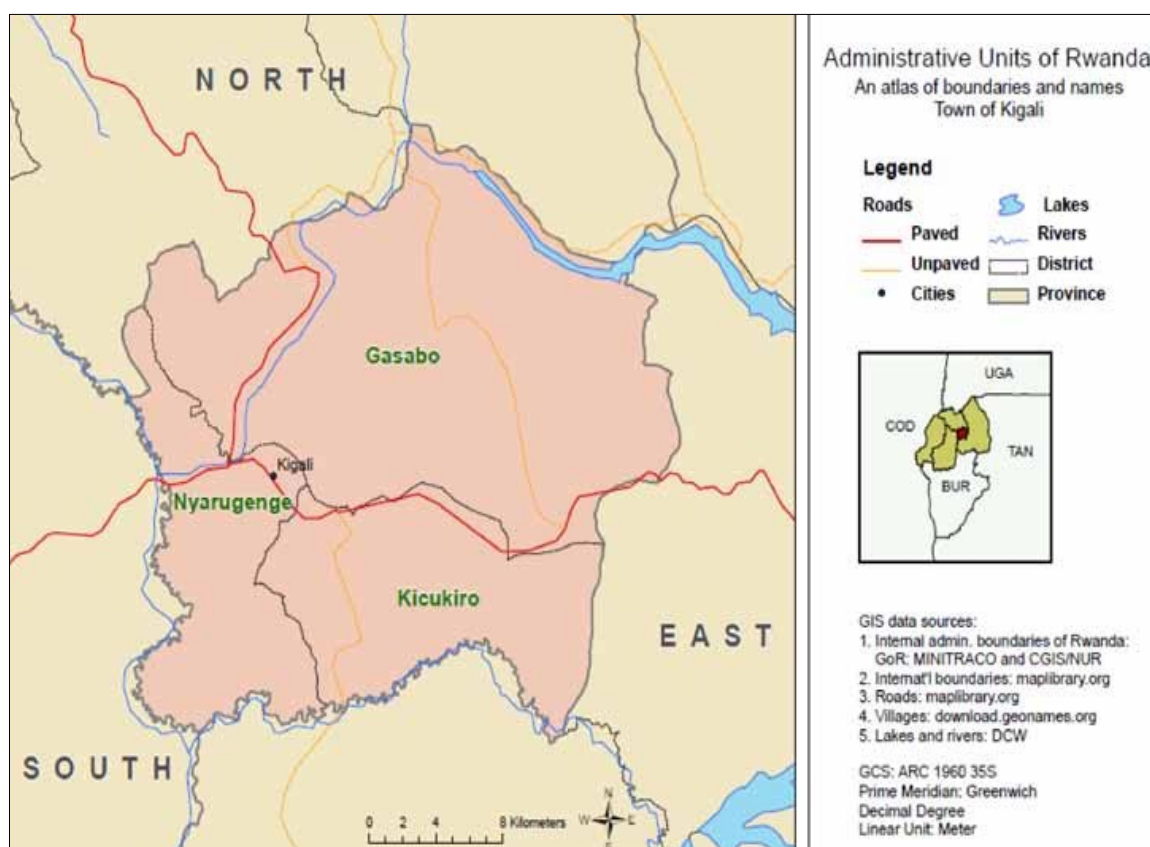


Figure 4.1 Administrative map showing three districts of Kigali city.
Source: Adapted from NISR (2015, p.10)

Research participants

Selecting a study sample is an important step in any research undertaking as it is rarely practical, efficient or ethical to study whole populations (Marshall, 1996). Thus, the study applied a purposeful sampling procedure to select a sample that would yield information about the phenomenon under investigation. A purposeful sampling method is particularly common among studies applying a case study methodology (Marshall, 1996; Polit and Beck, 2004). This method allows researchers to select study participants with a purpose in mind (Trochim, 2006). Marshall (1996, p. 523) further elaborated on the advantages of the purposive sampling technique,

[With the purposeful sampling] the researcher actively selects the most productive sample to answer the research question. This can involve developing a framework of the variables that might influence an individual's contribution and will be based on the researcher's practical knowledge of the research area, the available literature and evidence from the study itself.

In the present study, the researcher sought to identify individuals affiliated with different groups that play direct or indirect roles in urban planning and housing policies in Kigali. Therefore, a combination of criterion sampling and snowball sampling techniques was used to identify relevant participants. Before the fieldwork, criterion sampling helped identify an initial smaller sample of people who met one criterion of fitting in at least one of the pre-defined groups described below. On the other hand, purposeful selection of interviewees assigned priority to the people in senior positions at targeted departments/institutions. Although it was not often possible to access people in executive positions (e.g., Minister, City Mayor), in some cases, their immediate subordinates would be engaged and interviewed in their place whenever it was possible. Identified participants fall into the following groups:

- Government institutions and agencies operating at different levels (i.e., ministerial, city, district). These would have urban planning and housing under their responsibilities and deal with related issues in their mandates.
- Private sector actors in housing construction (i.e., premium and affordable housing, local and foreign companies).
- University lecturers/researchers with research background and professional experience in urban development/planning and housing matters in Kigali.
- Non-market actors including housing cooperatives, civil organisations such as local non-profit groups with interests in low-income housing.

- International organizations/bilateral organizations with interventions linked to affordable housing development.
- Low-income tenants—who are supposedly the future beneficiaries of affordable housing.
- Real estate agents operating in low-income neighbourhoods. Since they assist low-income tenants in finding rental housing as part of their daily work, it is assumed that they have knowledge about constraints that low-income encounter to secure affordable housing.

During the field study, a snowball sampling technique was used throughout. At the end of the conversation, the researcher asked interviewees if they could recommend someone in their network whom it would be useful to talk to in line with the study objectives. In this situation, the researcher insisted that interviewees recommend individuals (or organizations) with knowledge and experience in or directly connected to affordable housing matters. In addition, the researcher would further collect information about current employment for recommended individuals (or area of residence in the case of tenants) and their positions. Then, an assessment of the professional background was done to validate participants' suitability for the study before inviting them to take part in the interview. A snowball sampling technique was used to identify and invite participants. This strategy, let alone it was practical from the methodological point of view, has particularly helped win participants' trust and secure their consent to attend interviews. In a context such as Kigali, that approach was critical as some prior studies reported challenges related to participants' mistrust (Manirakiza, 2018). At the end of the fieldwork, 36 interviews with key informants from different groups were completed. Table 4.1 presents further details the number of interviews by affiliated groups and organizations.

Table 4.1 Study participants by group and affiliated institution

Group	Institution	No. of completed interviews
1. Government officials	Ministry of infrastructure	3
	Rwanda Housing Authority	1
	Local Development Agency	1
	Kigali City Authority	2
	District office	1
	Rwanda Development Bank	1
2. Academics	University of Rwanda	3
	Mount Kenya University	1
3. Housing & real estate companies	Foreign companies	4
	Local companies	2
4. Community based organizations (CBOs)	Housing cooperatives	3
	Local NGOs	1
5. International organizations	SKAT*	1
	Global Green Growth Institute (GGGI)	2
6. Residents	—	6
7. Real estate agents	—	4
TOTAL		36

Source: Author.

Note: *A Swiss consulting firm contracted by the Swiss Development and Cooperation Agency (SDC) for eco-friendly building materials development programme.

Information Needed to Conduct the Study

The study derives information from three distinct sources. First, qualitative interviews were conducted with 36 participants, as described in the previous section. The second source of information consists of documents including institutional reports, laws, policies, and other forms of grey literature. Lastly, also the study derived information from two households' surveys obtained from the National Institute of Statistics of Rwanda (NISR). These combined contributed to assessing housing affordability trends and end-user experiences regarding challenges to access affordable housing and hindrances in the affordable housing provision process. In an attempt to understand the institutional constraints limiting progress in affordable housing provision, three research questions were asked to collect needed information (Table 4.2). In addition, the information required to answer these research questions is summarized into perceptual and theoretical

categories. Perceptual in terms of the study participants' experience and opinion about the difficulties to secure affordable housing and effects, policy objectives, and the factors that undermine key affordable housing providers' responses to the problem. Equally valuable is the information generated from an ongoing literature review, which provides the conceptual basis for the study.

Table 4.2 Overview of information needed for the study

Research questions	Information Needed	Method
(1) Has housing become more affordable for tenant family households in recent years in Kigali city?	Changes in housing affordability between 2010/11 and 2016/17, Participants' perceptions on constraints to secure affordable housing in Kigali city	Descriptive statistics, interviews; document review
(2) How does the underlying institutional framework support key actors' interests, objectives and affordable housing provision strategies?	Actors in the housing sector, formal rules governing affordable sector; housing provision strategies; institutional support	Interviews, document review
(3) What are the constraints affordable housing providers face given the institutional environment?	Institutional constraints (i.e., formal rules related, informal institutions related, transaction costs)	Interviews, document review

Source: Author

Overview of research design

This section presents a summary of the steps undertaken to conduct this research. In addition to describing each step's details, a diagram depicting the entire research steps in chronological order is included later (Figure 4.1).

- a. Prior to the actual data collection, a selected review of the literature was conducted to study the contributions of other researchers and writers in the broad areas of affordable housing programmes, the role of urban actors in housing delivery, and planning and housing interfaces.
- b. After the research proposal passed evaluation, the researcher was granted permission to proceed with subsequent research steps. The following step involved developing a plan outlining fieldwork strategy, study participants and research instruments to collect needed information.
- c. The initial sample of research participants was determined. Potential participants were contacted via email and telephone. Once the researcher

received the informant's confirmation of participation, interview appointments were arranged considering the participant's convenience in terms of time and interview venue. The interview guide was developed to collect perceptual data.

- d. Semi-structured interviews were conducted with 36 participants across differences in groups, including government institutions, private sector, universities, community organizations, international organizations and residents within Kigali city (see Table 4.1).
- e. Data generated from interviews was analysed within and between groups of participants.
- f. Document review was used to gather the information contained in policy documents, institutional reports, statistics and other secondary sources. Document review helped to collect both perceptual and theoretical data.
- g. Two household surveys supplemented primary data and were procured from the National Institute of Statistics of Rwanda (NISR). These helped in the analysis of changes in housing affordability in Kigali between 2010 and 2017.

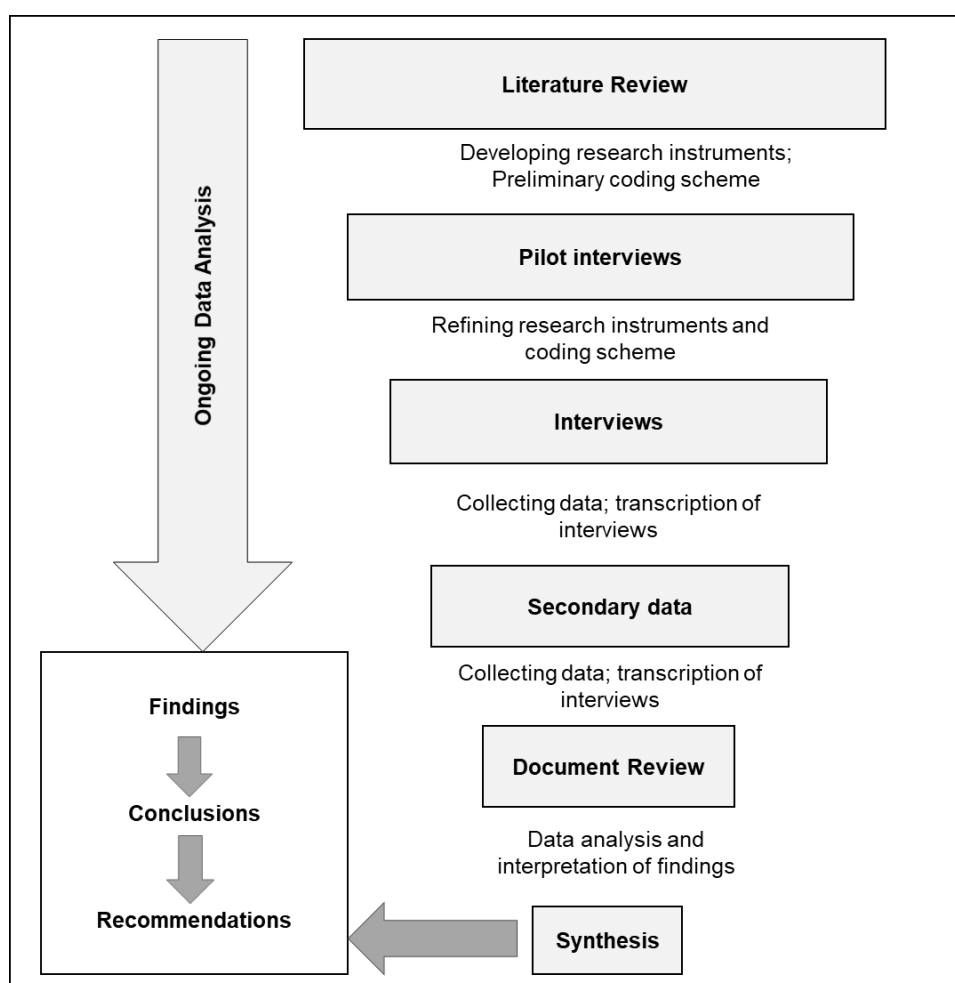


Figure 4.2 Research design flow-chart
Source: Author elaboration based on Bloomberg and Volpe (2012)

4.4 Data collection and analysis methods

Data collection

Combining multiple methods and triangulation is an essential approach to counteract biases. It also helps to gain an in-depth understanding of the phenomenon under investigation. According to some authors, this strategy improves robustness, breadth and depth of the study and enables convergence and corroboration of results obtained through multiple methods (Creswell, 2007; Denzin and Lincoln, 2011). For the same reason, this study applied three data collection methods. These include undertaking semi-structured interviews, collecting and reviewing documents, and collecting secondary statistical data.

Semi-structured interviews

This study employed interviews as the main method for data collection. This method was suitable for the study due to its ability to generate rich and thick insights from participants on complex and sometimes sensitive topics, allowing the researcher space to probe for more information and clarification of answers (Barriball and While 1994). Furthermore, it is argued that using interview techniques is particularly beneficial as it allows the researcher to capture the participant's perspective of an event or experience (Creswell, 2007; Marshall and Rossman, 2011).

Interview is both a standard and essential method in the qualitative research paradigm (Creswell, 2007). Kvale and Brinkmann (2009, p.1) define qualitative interview as an 'attempt to understand the world from the subject's point of view, to unfold the meaning of the subject's experiences, to uncover their lived world'. Under this study, it was similarly believed that adopting this method would facilitate capturing participants' perspectives and lived experiences by the researcher listening and interacting with them. While the interview technique presents strengths, some authors (see Schwandt, 1997; Bloomberg and Volpe, 2012) have also exposed its limitations. First, in interviews, not all people are cooperative, articulate and perceptive in a similar way. Second, interviews may be limited by the researcher's insufficient skills. Lastly, interviews are affected by researcher-participant interactions and context in which they occur, hence making them non-neutral data collection instruments. In light of the above shortcomings, nevertheless, the researcher took necessary precautions and preparations to ensure standard procedures of conducting interviews.

Interview guide and pilot interviews. The researcher used the three research questions as a basis to develop interview questions. In this regard, the researcher developed matrices depicting relationships between research questions and detailed interview questions. An interview guide was developed for each of the participants' groups. Afterwards, one doctoral colleague was asked to review the draft guide and later gave feedback to the researcher. Her comments were incorporated, and the fieldwork proposal was submitted to supervisors for further scrutiny. Upon receiving the supervisors' approval, two pilot interviews were conducted physically before actual data collection. In this case, the primary intention of testing the interview guide was to evaluate how participants interact with the researcher and other factors that could influence the quality of interviews. From information gathered during pilot interviews, questions were improved, and additional probing questions were added, offering the researcher more flexibility and allowing new directions to emerge during the interview with participants (see Appendix A).

Interview process. This step involved identifying and contacting prospective participants in the study. First, participants were contacted individually through email that featured a brief description of the study (i.e., research objectives, study contribution) and an invitation to participate in a face-to-face interview. If a reply to the invitation was not given immediately, the invited person was phone called to follow up on the interview invitation. One should note that the phone call strategy was often used. This was more effective than using emails to communicate with participants. Once the participant had confirmed participation, the researcher requested a convenient date and venue for a face-to-face interview—a task carried out progressively in tandem with interviews to save time. In total, 44 individuals were contacted and invited to take part in interviews. However, eight (8) of them could not make it to interviews for different reasons. Three (3) people declined to participate, two (2) did not reply to the invitation, and three (3), though they had accepted the invitation, did not attend for personal reasons. A few people in the last group offered to reschedule appointments at future dates that unfortunately did not fall into the fieldwork timeline. At the same time, they did not agree to the phone interviews as an alternative. In the end, only 36 participants agreed to be interviewed and held conversations with the researcher.

Interviews were conducted during a field study between 17th June and 17th August 2019 in Kigali. Before interviewees were contacted, the researcher took time to review interviewees' basic information such as affiliated institutions and held positions, which had been collected through desk research and acquaintances in the early stages of the research process. Also, before each interview, participants were given time to read a consent form, and interviews started once they had accepted to participate and signed the

form (see Appendix C). All interviews were conducted using a face-to-face conversation medium, whereby the researcher was aided by interview protocols. Nevertheless, the interview format remained flexible throughout the fieldwork period. For example, in some cases, the interview took the form of an informal conversation since a conducive environment was critical to let the participants freely give their opinions. As interviews were conducted, notes were taken in a concurrent process. Thereafter, notes were skimmed through, and critical incidences were recorded immediately. But a careful review of notes was also done later in a separate task.

Document Review

In addition to the interviews, the study also used document review. Bowen (2009, p.27) defines document review as 'a systematic procedure for reviewing or evaluating documents—both printed and electronic material'. The document review method can help the researcher to understand the historical roots of specific issues being investigated, and data drawn from documents can assist in contextualizing data obtained from interviews (Wheeler, 1996; Cohen, 2017; Watson *et al.*, 2017). Elaborating on the benefits of the document review method Merriam (1998, p.118) notes: 'documents of all types can help the research uncover meaning, develop understanding, and discover insights relevant to the research problem'. In light of its advantages, document review became a common qualitative method among researchers in need of access information contained in various secondary sources (Harwell, 2011; Bryman, 2012).

Nevertheless, document review also presents some disadvantages. First, documents are often produced for a purpose different from the research. Hence, they do not provide sufficient details. Second, documents are sometimes irretrievable, or they may be deliberately blocked and become difficult to access. Third, when the collection of documents is incomplete, it may lead to 'biased selectivity' (Yin, 1994; Bowen, 2009).

In this study, the purpose of applying document review is twofold. First, it is suitable to collect information contained in policies, laws and institutional reports (see Appendix D). These sources are crucial to examine the roles and strategies of different actors and how existing formal institutions affect housing provision. Secondly, document review helped gather perceptive information that supplemented interviews or helped to validate information collected from other sources. While undertaking document review, a comprehensive synthesis of collected information contributed to answering the three research questions.

Secondary quantitative data

Apart from interviews and documents, the study also employed secondary quantitative data. Although the role of the quantitative component is relatively minor in the research, quantitative data was essential in providing supporting evidence mainly to the first research question. The researcher accessed datasets from the National Institute of Statistics of Rwanda online database. The datasets⁶ consist of two national-level household surveys called 'Rwanda Integrated Households Living Conditions Survey' (widely referred to as 'EICVs') collected in 2010/2011 and 2016/2017⁷. EICVs surveys are undertaken every two years and cover the entire country, including the city of Kigali, drawing on a representative sample (see Appendix E). Through EICVs, the government of Rwanda seeks to monitor poverty and living conditions in Rwanda and provide evidence for policy and decision-making at different levels (NISR, 2018a). The table below presents few variables drawn from EICVs used in the analysis.

Table 4.3 Household surveys' variables selected for the analysis

Variable	Why it was used
<i>Household income</i>	Information on household income was used to analyse housing affordability, which was done by comparing how much of household income is spent on standard-house.
<i>Housing tenure</i>	This variable was used to enhance objectivity in analysis by narrowing focus on tenant households. But further explanations of this emphasis are in line with tenants' increased vulnerability vis-a-vis housing unaffordability and the fact that they are targeted beneficiaries of affordable housing.
<i>Number of bedrooms</i>	The number of bedrooms was used to analyse the evolution of overcrowding among tenant family households.
<i>Marital status</i>	This variable was used to distinguish family households from other types of households, with the study's focus of analysis for housing affordability being family tenant households.

Source: Author

⁶ EICVs stand for *Enquête Intégrale sur les Conditions de Vie des Ménages*. EICVs are biennial countrywide surveys undertaken by the National Institute of Statistics of Rwanda (See Appendix E)

⁷ Data is collected over two years.

Data analysis and synthesis

For the qualitative component of the study, two methods are deemed suitable to undertake analysis. First, data collected from secondary sources described earlier was analysed using document analysis. This method relies on the assumption that documents constitute a rich source of empirical data for case studies, such as data on the context within which the participant operates (Bowen, 2009). Document analysis is often used as a complement to other methods (Sogunro, 1997). But evidence also indicates that, in some cases, it has served as a stand-alone analysis method (Wild *et al.*, 2009). As Labuschagne (2003) suggested, the analytical procedure for this study has entailed searching, selecting, reviewing, and synthesising data contained in documents. To this end, this analysis has generated data excerpts, quotations, or entire passages, which in turn were organised into major themes, categories, and case examples specifically through content analysis.

In addition, the study has also drawn on content analysis to analyse interviews and data generated from document analysis. Content analysis is defined as a systematic coding and categorizing technique used to explore large amounts of textual information to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication (Mayring, 2000). It is argued that with content analysis, one can describe the characteristics of the document's content by examining who says what, to whom, and with what effect (Mayring, 2000). In this study, the same approach has helped organize textual data from interview transcripts into relevant themes, categories and codes suitable for further analysis and interpretation.

Process of qualitative data analysis. In the context of this study, analysis of data from interviews was approached through three interrelated stages of processing, reducing and interpreting data. Further details about this process are outlined below:

- (1) The first step entails coding transcripts and comparing emerging patterns and themes. At this stage, a thorough reading of transcripts several times has facilitated the researcher to understand the real world of the respondent. Then, the researcher has assigned codes to chunks of transcript texts. This helped to generate a system of categories summarizing and condensing interview data. In this process, emerging themes were captured, recorded and described through memos to keep the analysis process well recorded. This stage also involves examining and comparing threads and patterns observed within categories.

- (2) A sample of coded interviews was reviewed internally within the structured programme of Dresden Leibniz Graduate School (DLGS). This aimed to check the level of agreement/disagreement between the researcher and the independent observer. During this consultation, some chunks of texts that appeared to be a disagreement were reviewed and re-coded, but only if it was deemed relevant. After that, a final list of categories was confirmed, and the researcher proceeded with the extraction of quotations. Involving an external reviewer aimed to enhance the validity of the categorization method and to prevent potential researcher bias. At this stage, a brief description of the process in a narrative form was recorded to allow cross-checking of data or secondary analysis should there be a need at later stages.
- (3) Finally, portions of transcripts were matched with corresponding categories and all fragments of each code/category were put together in order to construct a holistic and integrated explanation. Nevertheless, multiple formats of each transcript at different analytical stages were regularly compared to ensure the context of coded sections was maintained. The main intention of this stage was to obtain patterns or themes that connect (either in a similar fashion or divergently) across categories and collectively describe or make sense of the phenomenon under study.

Analysis of quantitative data. Besides the qualitative component, the study also drew on analysis of two household surveys as already introduced earlier. Quantitative data were used to analyse housing affordability of family tenant households by comparing two periods (2010/2011 and 2016/2017). In terms of the analysis process, measuring housing affordability considered how much of the monthly income of tenant family households is spent on renting a hypothetical standard two-bedroom house. The information on rent for a standard two-bedroom unit for the years 2010 and 2017 was collected from local real estate agents. As an indicator of affordability, this dissertation adopted a 30 % income-to-house rent ratio which is also the one formally referenced in the national housing policy of 2015. In this respect, the share of households with difficulties to afford a standard 2-bedroom was counted based on the percentage of those income-to-house rent ratios exceeding 30%, and the process was reproduced for the second survey. Additionally, the datasets were used to examine the evolution of overcrowding conditions among family tenant households. Overcrowding conditions served to validate the housing affordability situation—this being one of the indicators for housing adequacy according to the UN-Habitat (UN-Habitat, 2009b). That way, it is assumed households are compelled in

overcrowding conditions because they cannot afford to rent a decent house of sufficient size.

4.5 Ethical considerations

In this section, the focus is placed on the strategies employed by the researcher to ensure ethical research conduct during fieldwork and beyond. This way, fieldwork challenges and methodological limitations in general are discussed in chapter 8. Researchers have moral and professional obligations to abide by the ethics and principles of good scientific research practices. For instance, one of the basic ethical standards requires researchers during a study not to expose respondents to a situation where they may suffer harm as a result of their participation in the study (Trochim, 2006). Similarly, it is crucial for any research undertaking to ensure the voluntary participation of study subjects. In this view, it is critical to guarantee that participants are well informed about the research purpose before deciding to participate. In the context of this study, although no aspects against the ethical research standards were suspected or encountered, various strategies were adopted to ensure protection and rights of participants throughout the exercise.

First, participation in the study was voluntary. It is recommended that voluntary participation requires informed consent from the study participant (Trochim, 2006). It ensures that respondents are not subject to any influence or coercion to take part in the study. Therefore, at the start of each interview, a participant was informed about her/his rights (i.e., right to withdraw from the interview, right to interrupt the interview, right to ask any question, right to refuse to answer any question, etc.) and purpose of the study, risks and the benefits of participating in the study. While these points were contained in a written consent form, the researcher made sure participants were comfortable to join the conversation. After a comprehensive introduction to the interview process, participants independently signed and returned a written consent form to the researcher.

Second, the study values the confidentiality and anonymity of participants. These aspects are even more critical when identifying strategies for data reporting and dissemination. The researcher has taken necessary measures to keep participants' names and other key personal information anonymous. This way, the personal information of the study's participants would never be disclosed or mentioned anywhere in the dissertation. Additional strategies were taken to ensure research data storage security and to prevent access to unauthorized users.

4.6 Summary

In a nutshell, the chapter has provided an account of the research design and methods applied in the study. Following a brief introduction, in section 4.2, the chapter explored ontological and epistemological underpinnings in housing research. Although it integrates some positivist aspects, the study is mainly aligned to an interpretativist stance. In section 4.3, the chapter turned the focus on the research design. It described why a case study research design was applied to investigate facets of the affordable housing problem and why responses have been limited in Kigali city. In section 4.4, the chapter discussed research methods. It was revealed that a mixed-method approach was employed to collect data through semi-structured interviews, documents and household surveys. Also, it was emphasized that a mixed approach provides superior advantages by allowing the research to triangulate data collected from multiple sources. Under the same section, it was also shown that data analysis methods consisted of housing affordability analysis based on two household surveys and capturing insights from interviews, policy and institutional documents through content analysis. The final section covered the ethical considerations for undertaking fieldwork. Discussion in this section aimed to emphasize the researcher's obligations while conducting fieldwork. Moreover, it has also highlighted strategies used by the researcher to ensure ethical conduct during the field study.

CHAPTER 5

HOUSING AFFORDABILITY SITUATION FOR LOW-INCOME TENANTS

5.1 Introduction

This chapter presents the results for the first research question: *has housing affordability improved for tenant family households in Kigali city in recent years?* To answer this question, the study draws on two sources of data. First, two household surveys were accessed from the National Institute of Statistics of Rwanda (NISR). These datasets contain information collected at the country scale during two periods of 2010/2011 and 2016/2017. The second source of data constitutes semi-structured interviews with tenants living in low-income neighbourhoods in Kigali city. The elaboration of these results has two objectives. First, to explore the evolution of rental affordability for family tenant households extending from 2010/2011 to 2016/2017. Second, to examine what tenants perceive as constraints to secure affordable housing by learning from their everyday experiences. The chapter is organized into five sections. After the introduction, the next two sections constitute the main body of findings with themes corresponding to the two objectives. In the end, the chapter concludes with a summary.

5.2 Changes in rental affordability between 2010/2011 and 2016/2017

We analysed two Integrated Households Living Conditions Surveys (EICVs) covering 2010/2011 and 2016/2017. In this respect, the focus was on five (5) variables from both datasets, namely: households' income, housing tenure, marital status, household size and number of bedrooms. First, an analysis of rental affordability for family tenant households drew on households' income, and house rents averages for a standard two-bedroom house in 2011 and 2017. In this case, the analysis is restricted to a family household type (instead of all households indiscriminately) to be more objective. While analysing housing affordability, we aligned to the official definition contained in the national housing policy of 2015, which designates 30% as housing costs to income ratio (the same applies to both house purchase and rent), serving as the affordability benchmark in the country (ROR, 2015c). But we also acknowledge the fact that whether a house is affordable (or not) would depend very much on the inherent features of an individual household. Unfortunately, most of these features are difficult to control in the analysis. Therefore, a specific household-focused analysis was viewed as the best possible approach. In this respect, by focusing on a tenant family household, we intend to assess changes in housing affordability during the period mentioned earlier. The outcome would indicate whether

housing affordability improved amid policy reforms aimed at increasing affordable housing responses.

Against this background, the analysis of the datasets generated results by which we did not detect improvement in rental affordability for family tenant households between 2010/2011 and 2016/2017. By comparing house rent-to-income ratios observed during the two periods, the proportion of people that can afford to rent a standard two-bedroom house unit decreased by 1.1% and 1.8% when ratios of 30% and 40% respectively are applied as benchmarks for housing affordability (Table 5.1). While the illustrated housing affordability trend implies a slight deterioration, the same also depicts a picture whereby most of the households cannot afford to rent a standard house unit.

Table 5.1 Changes in housing affordability and overcrowding conditions over 2010/2011-2016/2017

	2010/11	2016/17	Change
Median Household income/month (in RWF)	101,168	179,865	78,697
Avg. Rent for a 2-bedroom unit/month (in RWF)	99,878	149,983	50,105
% of family households with rent-to-income ratio less or equal to 0.3	16.3%	15.2%	-1.1%
% of family households with rent-to-income ratio less or equal to 0.4	24.4%	22.6%	-1.8%
% of family households in overcrowding conditions	24.2	33.6	+9.4

Source: Own elaboration based on household surveys (NISR, 2010/11 & 2016/17)

Alongside estimating rental affordability, we have also looked at the evolution of overcrowding⁸ conditions for family tenant households over the same period. We used this indicator to supplement the analysis of housing affordability. Since the definition for overcrowded housing in the Rwandan context does not exist, an international one was opted to serve as a basis for the analysis. The UN-Habitat defined overcrowding as ‘a situation where more than equivalent two adults members of the same households share one sleeping room’ (UN-Habitat, 2009b, p. 9). In other words, when a household is in

⁸ Overcrowding is one of the four indicators that the UN Habitat recommends for measuring housing adequacy, whereby a reduced space per person is often associated with certain categories of health risks and therefore considered as a key criteria to define the slum(UN-Habitat, 2009b).

overcrowded conditions, it means that there are fewer sleeping rooms than required under decent living circumstances. The results show that the share of people living under overcrowded housing conditions did not improve in Kigali. As table 5.2 illustrates, the proportion of family tenant households living in overcrowding conditions rose from 24.2% to 33.6% between 2010/2011 and 2016/2017 (Table 5.2). These results mainly stress the close link between increased incidence of overcrowding and decline in housing affordability highlighted earlier. Therefore, we would argue that overcrowding is not only a consequence of decreasing housing affordability. It is also a coping mechanism for tenants not able to afford decent housing large enough to accommodate their families.

5.3 Perceptions about constraints to secure affordable housing

This section drew on semi-structured interviews as the major source of data while other secondary data sources such as documents and media publications complemented them. Once the analysis was completed, two broad themes emerged. These correspond to the two categories of perceived constraints to secure affordable housing. They include the general constraints and those specifically related to the affordable housing program, as illustrated in Table 5.2. The label “general constraints” is because these constraints are not associated with any institutionalized housing intervention. Second, their effects reach all households regardless of the method used to acquire housing (i.e., purchase, rental, self-build). In contrast, constraints specific to the affordable housing program are what tenants perceive as hindrances to becoming beneficiaries of the affordable housing program (AHP).

AHP is a government initiative introduced in 2015 to address the growing challenge of lacking affordable housing across the country’s major cities and mainly Kigali city. Through this program, the government provides incentives to housing developers if they engage in the development of housing meeting specific criteria, including selling houses at prices not exceeding a defined limit (ROR, 2015c). The ceiling price is supposed to prevent developers from selling subsidized housing at a market rate or prices that do not match the financial capacity of targeted buyers. Chapter 6 provides further details about the programme, while this section only concentrates on the challenges facing aspiring beneficiaries to qualify for houses developed under the AHP programme. The study participants have raised constraints linked to the program’s inherent processes and outcomes, which they perceive hinder their chances of qualifying as recipients (Table 5.2).

Table 5.2 Perceptions of constraints to access affordable housing

Category	Constraint	Issues	Relevance to access mode		
			Purchase	Rental	Self-build
<i>General</i>	Employment & income conditions	Job insecurity, low salary	●	●	●
	Requirements to access mortgage loans	Meeting required borrower profile, High interest rates	●	●	●
	Regulatory constraints	Lack of tenants' protection law, Zoning density requirements	●	●	●
<i>Specific to AHP*</i>	Beneficiary eligibility criteria	Up to 30% down payment required, Exclusively for formal employees	●		
	Unclear house allocation process	Multiple organs in charge (both government organs and developers)	●		
	Unaffordable house prices	High house prices and sometimes out of defined affordable price range	●		
	Lack of balance of both housing tenure	Bias for owner-occupation, lack of rental options		●	
	Unsuitable location of housing	Situated far from job centres	●	●	

Source: Own compilation

Note: AHP=Affordable Housing Program

Before we proceed with a further description of the findings presented in table 5.2, we suggest an overview of the evolution of housing tenure in Kigali city (Table 5.3). With this, we intend to provide some background information. Of significance to these insights is the growing importance of rental tenure. Tenancy overtook owner-occupation as the predominant housing tenure in Kigali city in the past few years. The share of renting population increased to 53.8% in 2016/2017 from 40.5% in 2010/2011. This increase suggests that since 2017, most people have accessed housing through renting. This shift has marked an end to several decades of homeownership dominance in Kigali. In subsequent discussions, we will draw a link between the emerging constraints vis-à-vis both types of housing tenure (owner-occupation and rental) and examine the role of the current policy stance. Besides the demonstrated decline in owner-occupation, another point of interest concerns the strategies that people use to own a house. In Rwanda, past surveys reported that 83% of homeowners acquired their houses through self-building compared to only 6% that purchased their homes (Finscope, 2016).

Table 5.3 Changes in housing tenure in Kigali city between 2010 and 2017

Housing tenure	Per cent	
	2010/2011	2016/2017
Owner-occupier	52.6	38.5
Tenant	40.5	53.8
Dwelling provided by an employer	0.9	0.9
Dwelling provided free of charge*	5.6	6.8
Temporary camp	0.2	0
Other	0.2	0

Source: NISR (2012, 2018b) modified by the author.

Note: *This mostly refers to the social housing provided by the government and some non-profit entities.

General constraints

General constraints to affordable housing accessibility are further split into three sub-categories, as table 5.2 illustrates. These constraints arise from the following aspects: employment and income conditions, requirements to access finance and the regulatory environment. The general constraints affect people regardless of the methods used to access private housing.

1. Employment and income conditions

The income situation of households constitutes a key factor to housing affordability, as discussed in chapter 2. At the same time, the earning capacity of people is inextricably dependent on employment conditions. Therefore, access to decent employment implies that people have secure livelihoods, including the ability to rent or buy a house with less difficulty. Concerning the employment situation in Rwanda, the World Bank notes: ‘despite positive trends¹ in Rwanda employment is dominated by agriculture, informality and low earnings’ (World Bank, 2015a, p.vii). In addition, evidence shows that 77% of the workforce above the age of 16 acquire employment in the informal sector² (GOR, 2015c). A situation that also entails limited purchasing power for people in low paying jobs. For instance, the median monthly earnings of an employee at the main job in 2016 was estimated at RWF 52,000 at the Kigali city level (National Institute of Statistics of Rwanda (NISR), Ministry of Health (MOH) and ICF International, 2015). These facts reflect a situation where low-income earners struggle to afford decent housing due to the low level of income and employment³ conditions. The constraint related to insufficient income and employment conditions also recurred during interviews with tenants. From their point of view, as long as the underlying insecure employment and low earning conditions persist, it is nearly impossible to find standard houses matching their income status, as some participants note:

Living decently in Kigali requires one to be employed in a secure and well-paying job to cover basic needs and most notably housing, which is expensive”. (Interview with AG04, 14 July 2019)

People are uncertain about their jobs and sources of livelihood. People are not at ease with their income. They fear making long-term financial commitments. (Interview with RE01, 3 July 2019)

¹ Rwanda’s GDP grew at 8% per year during the 2000-2013 period, which resulted in a 170% increase in real GDP according to the World Bank. A trend accompanied by remarkable poverty reduction: From 59% in 2000 to 57% in 2005 and 45% in 2010 (World Bank, 2015a).

² There is no clarity on whether this percentage includes those engaged in farming activities. The World Bank reported that the share of people employed in non-farm informal sector accounted for 60% of Rwanda’s wage workforce (World Bank, 2015a).

Security of jobs is something to be given more attention because only when people earn decent income, they would afford housing availed on the market. (Interview with AG04, 19 July 2019)

The main challenge is that the demand for affordable housing is made of people who earn limited and irregular income, which only cover their daily needs. They have no saving capacity for housing. (Interview with CP03, 10 July 2019)

From the above accounts, it may be understood that job insecurity and low earnings do not constrain the informal sector employees alone. The same problem also affects formally employed individuals. Meanwhile, it is worth noting that there has been a reluctance to formalise the labour sector, with some key legislations and enforcement lacking for several decades to date. For instance, there are constant complaints about limited upwards salary revisions. Whereas wage disparities are not uncommon in both public and private sectors. Some interviewees raise these issues, stressing that, let alone irregular income earners, it remains similarly challenging for public servants to afford decent housing because salaries are not raised to keep pace with soaring rent and other house-related costs. A public servant reiterates this issue, saying:

It's a long time without salary revisions in both private and public institutions, and this is reflected in the levels of income in both sectors, which is low compared to the rise in housing prices and costs. (Interview with PB02, 21 June 2019)

On the same issue, public officials also recognize that low-income levels are a drawback to the existing efforts to improve access to affordable housing. It is admitted that the demand-side of the affordable housing supply chain has not received equal attention as the supply-side did in housing interventions in recent years. An official from the Ministry of Infrastructure puts it this way:

Although there are efforts to support the supply-side with subsidies offered to developers, what remains the problem is the demand-side characterised by low purchasing power. (Interview with PB05, 19 June 2019)

Also, in relation to the gaps in the regulatory framework for labour in Rwanda, tenants voice concerns that lack of a minimum wage increases their vulnerability vis-à-vis rising housing rents and costs:

There is a need to close the gap in income levels so that people graduate from low-income into medium and high-income segments, and the wage policy is necessary to make this happen. (Interview with PS04, 1 August 2019)

When searching for a house to rent, it is difficult to find one because of insufficient means. We spend a larger share of the salary to cover housing expenses." (Interview with RE02, 18 July 2019)

This constraint is connected to the current housing problems, with people stressing that housing policies do not address challenges associated with the income situation of households. In this respect, one official at the Ministry of infrastructure recognizes the failure to address the problem: ‘we do not have the minimum wage, and we know it is a hindrance, but this does not fall under our responsibilities’ (Interview with PB02, 21 June 2019). Not far from this view, a private housing developer points to the same issue suggesting that more efforts are needed to empower the demand-side of affordable housing: ‘there is a need for structural adjustments on economic policies to make the economy run in favour of all income segments’ (Interview with PS04, 1 August 2019).

In the post-2015 period, the National Housing Policy has served as a reference for other policy instruments enacted to respond to the housing affordability challenges. The same policy equally recognizes the existing low-income and capacity and fosters enabling all people, regardless of their income and background, to access decent housing:

Everyone independent of income, the base of subsistence, and location shall be able to access adequate housing in sustainably planned and developed areas reserved for habitation in Rwanda.” (ROR, 2015c, p. V)

Through the same policy, the government proposes six (6) strategies to support affordable housing development primarily centred on the involvement of the private sector. These include: (1) collaborative finance and investment; (2) promotion of saving schemes for housing; (3) collaborative development and land pooling; (4) strengthening the local construction industry through an emphasis on professionalism, (5) skills development and increase of local material production and small and medium enterprises; (6) optimum use of land (ROR, 2015c, p.V). As observed, out of the listed six strategies, only the second one deals with the challenge of low levels of income, albeit it remains unclear whether it would really target low-income households. While the latter is articulated without further details on how it will be done, emphasis on the supply-side responses is rather apparent as the five remaining strategies reflect a close connection. Therefore, the national housing policy's stance in terms of responses shows that limited attention is attached to the economic situation of targeted beneficiaries. Hence, it validates the concerns of interviewed tenants who insist that low-income levels and employment insecurity constitute a barrier to accessing affordable housing.

2. Requirements to access mortgage finance

House is an asset whose acquisition requires substantial capital—being an investment that necessarily requires external funding to support the aspiring homeowner's capital.

For this reason, access to finance is a critical component determining housing affordability—especially when it entails house purchase. The mortgage finance sector has experienced growth in Kigali city over the past ten years. The World Bank reports that residential mortgage-lending portfolio grew from US\$ 39 million in 2010 to US\$ 265 million in 2016, representing 15% of total bank credit. Also, Microfinance Institutions (MFIs) housing lending grew from US\$ 28 million to US\$ 57 million during the same period (World Bank, 2019). Even though the above trend would otherwise signal an encouraging environment in terms of accessibility to housing finance, not all residents find it easy to qualify for mortgage loans. In this respect, two major issues came up during interviews: (1) that qualifying for mortgage finance was difficult because banks prefer borrowers of a certain income and employment profile, (2) also interest rates for mortgage credit are high for people with modest income. These challenges are closely linked to job security, and low-income constraints discussed earlier. In other words, limited access to finance is a direct consequence of insecure employment and low earning capacity. For instance, commercial banks do not have mortgage products where informal sector employees and irregular income earners would fit, looking at the requirements to qualify for mortgage finance. On this issue, one interviewee observes:

There is a problem of security of income, which hampers residents to access housing because they cannot meet mortgage requirements, let alone that the cost of borrowing is also very high. (Interview with RE06, 16 July 2019)

On the one hand, while the mortgage finance sector is not accessible to low-income people, the concerns driving banks to set restrictive conditions could not be undermined. In this respect, mortgage lenders are confronted with a limited amount of assets (e.g., loans, bonds and reserves) at their disposal and restrictive conditions set by the national regulator (i.e., the central bank). The National Bank of Rwanda (BNR) asserts that the asset-liability mismatch constitutes a major factor limiting banks to provide long-term loans to minimize risks (BNR, 2017). As a result of BNR's tighter regulations of BNR, financial lenders face more strain in mortgage underwriting. On the other hand, MFIs and Savings and Credit Cooperatives (SACCOs) already face difficulties related to short-term and unstable liabilities. They are also confronted with additional regulatory requirements. For instance, these institutions are required to invest 30% of their assets in bank deposits (World Bank, 2018). Under these circumstances, financial institutions have become more vigilant and selective about who should qualify for credit, and they favour high-income low-risk borrowers. People who earn low and moderate-income do not match the ideal borrower profile that banks are looking for, so they cannot qualify for mortgage finance. As a further indication of the magnitude of finance accessibility challenge, some

participants point to the fact that even earning regular income is a guarantee to qualify for mortgage credit:

There is a problem of the high cost associated with access finance, and one will realize that it constrains regular income earners. But in most cases, commercial banks' lending terms excludes those with irregular income or without secure jobs. (Interview with NP02, 12 July 2019)

Another interviewee, while reiterating the same constraint, adds that besides high-interest rates charges and credit loan requirements related barriers also short period required for loan repayment puts more strain on the borrowers:

The mortgage market is not accessible because the interest rates are high (17%-19% per annum) with a shorter loan repayment period. In the past, it was possible to acquire a mortgage to pay back over 20 years, and such options are rare nowadays. (Interview with IO02, 24 June 2019)

Furthermore, the proportions of populations using formal sources of finance to fund their house purchase compared to those using other means shed more light on how access to housing finance remains difficult for many people. In Rwanda, it is reported that 85% of homeowners use savings as the primary source of finance to acquire their homes compared to less than 5% that use banks/MFI loans as the primary source of funding (World Bank, 2019). This situation also explains why the dominant approach to acquiring a home across the country is self-construction. The latter is a flexible approach in that it gives aspiring house-owners possibilities—in the context of stringent access to formal housing finance—to build their houses incrementally.

3. Regulatory constraints

The regulatory environment constitutes another factor influencing access to affordable housing (see Chapter 2). For example, the regulations determine who can be eligible for affordable housing and under what circumstances. This section presents results on the aspects of the underlying regulatory environment that hinder the chances of tenants to access affordable housing. In other words, the constraints categorized under this theme relate to the formal rules in the form of policies, legislations or legal procedures affecting the process to obtain affordable houses. The first category is related to the legislative vacuum whereby the difficulties to afford rent/costs arise from lacking legislation and policies.

To begin with, tenants have highlighted that they lack a legitimate institution to advocate and protect their interests. In Kigali, there are no such entities equivalent to tenants' associations or civil society organisations that lobby in their interests at different decision-making platforms. Even worse, tenants become more exposed in the absence of a law governing their relationships with landlords, which [according to some tenants] further undermines their tenure security and thus makes them vulnerable to the unprofessional practices of some landlords. Some participants reveal that acts such as evictions on short notice and intermittent rent hikes are not uncommon experiences for tenants:

Since rental housing is not regulated, landlords increase rent anyhow, which in the end becomes an injustice to tenants. (Interview with AG03, 19 July 2019)

Landlords are not flexible in negotiations and in the way they treat tenants. They take advantage of the legislation vacuum. (Interview with PS06, 15 July 2019)

The issue of the unregulated relationship between tenants and landlords is known to the government. In a conversation with a senior official at the government housing agency, stressing that tenants are sometimes victims of landlords' malpractices because they lack proper legal protection: 'there is lack of advocacy for renters to prevent exploitation of developers and landlords, which is sometimes the case' (Interview with PB03, 25 June 2019). The same constraints equally affect tenants in areas undergoing expropriation, whereby legislations remain mute on the fate of affected tenants in need of support to find new accommodation:

There is a gap in the legal framework, which did not protect tenants of areas undergoing expropriation and who are obviously most affected when it takes place. (Interview with PB02, 26 June 2019)

While the government also admits that tenants encounter difficulties due to lack of rights protection and limited advocacy, it was not until 2019 that the first official discussion about drafting a rental housing specific policy was introduced. The national rental housing strategy, under development, will set out strategic policy directions to support the rental housing development. This is an endeavour signalling a positive step amid limited policy attention to the rental housing sector, albeit the rental housing strategy alone would not improve tenants' circumstances. As far as the rental sector is concerned, the key challenge remains the lack of legislation to render tenancy a respectable and protected housing tenure.

In addition, it was also raised that the restrictiveness of specific planning regulations hinders people's efforts to secure housing. It is important to recall that most people acquire their homes through an incremental building process since it remains challenging to raise all funds required in one go. Considering how fund-raising is a challenge, self-builders prefer single-story single-family houses, although this style is traditionally more popular than multi-family houses. In contrast, following the introduction of Kigali Master Plan and zoning regulations, multiple-family housing is required in many residential areas to use land efficiently. However, despite anticipated benefits, vertical building orientation as encouraged by the zoning regulations constitutes a challenge for home self-builders. The housing styles imply higher building costs related to the amount of labour, skills and materials required, which makes securing housing costlier than what many people can afford: 'there is a mismatch between the nature of housing realized on the ground and income levels of residents. Thus, there is a need for accurate information to help make better decisions about housing development' (Interview with RE0512 July 2019). Zoning regulations determining technical building features such as density requirements are part of the Kigali city master plan (KCMP).

According to the master plan of 2013, affordable housing is proposed in both medium and high-density zones. The minimum density required for affordable housing development ranges between 50 to 120 units per hectare, depending on the zone (Uwimana, 2019). Under such conditions, only commercial housing developers can meet such requirements. While the number of private developers investing in mass housing has remained low, such projects are not required to commit a share of units to the affordable housing category, meaning they mainly serve people in higher income brackets. As a result, it has become more difficult to develop houses the traditional way: 'now people do not build because of strict planning regulations like zoning density requirements' (Interview with RE04, 14 August 2019). Hence, the master plan's provisions on density seem to be detrimental to the traditional approach of self-

provisioning housing. In this regard, some local experts also emphasize that the master plan provisions on housing are too stringent given the economic situation of the population, as a local university lecturer notes:

Most people earn very limited income, and there is clearly a mismatch between ambitions from the urban development perspective and what people can afford given their level of income. The slogan here is often “dream big, Kigali the Singapore of Africa”. (Interview with EX01 31 July 2019)

As emphasized in the above statement, Kigali’s vision reiterates the ambition to set an example of how a city can defy a tragic past to achieve spatial revitalisation within a short time—just as Singapore did. To further illustrate the influence of Singapore’s success story on Kigali’s urban policies, its high-density building identity is appreciated, and it is seen as the direction that the city should emulate. A planning officer at Kigali city stresses this perspective, stating: ‘in terms of aspirations of Kigali city, we want development and there are other cities that Kigali look up to, and we think we want to be like them, one of them is Singapore’ (Interview with KC01, 10 July 2019). The parallels between Kigali and Singapore are not uncommon. Particularly when such discussions refer to the modernization trajectories of Singapore and Rwanda that bear similarities, it equally reinforces the idea that Kigali [given its role as Rwanda’s political and commercial stronghold] can also emulate the successes of Singapore’s urban model. This rhetoric particularly captured the attention of local and international media outlets (Times Reporter, 2015; Ng, 2017).

The influence of Singapore on Kigali’s urban development can be traced back to a decade ago after the Rwanda government contracted a Singaporean firm to develop a detailed master plan for Kigali city, with both parties having reached an initial agreement back in 2008 (SCE, 2008). Later, the same firm also designed master plans for the country’s five secondary cities. However, the assertion that Kigali can follow Singapore’s urban development path faces shortcomings, especially apropos how the housing challenge is approached in both countries. Despite the benefits associated with high-density housing, one should note that adopting it in the context of housing development in Kigali seems more difficult because both countries differ significantly from the point of their structure of housing provision. While the vertical building strategy has worked well in Singapore, one should not ignore that public housing dominates, accounting for more than 80% (Phang and Helble, 2016). Whereas in Kigali city majority of the households build their houses and, in most cases, without state support. This way, as a cost-increasing factor, the high-density concept turns out to be a hindrance in the process of acquiring housing.

Constraints specific to the Affordable Housing Program (AHP)

In 2012 a Kigali city-commissioned study was an eye-opener disclosing the magnitude of the affordable housing challenge. At the same time, it instigated the government to pay more attention to affordable housing concerns. The study reported that housing affordability affects more than half of the city's residents (COK, 2012). Two years later, 2015 was a landmark year for housing policy. The same year the government officially recognized that lack of affordable housing was an issue deserving particular attention in the national development strategies. The same year, the National Housing Policy (NHP), initially introduced in 2008, was revised. Additional new policy instruments were enacted to streamline the provision of affordable housing in Kigali and other major cities. With the subsequent chapter supposed to cover more details about the institutional context for the AHP, this section only concentrates on tenants' perceptions about access to the house units produced under the program.

The constraints specific to the affordable housing program can be split into two (2) categories. The first one includes constraints related to the program's outcomes, and the second group clusters those associated with processes within AHP. Under the program's outcomes-related constraints, the first is related to the high price of houses developed under AHP. Looking at the prices of finished houses, many people express concerns that state-sponsored affordable housing projects are not designed to respond to their housing needs. The view that these houses carry prices out of reach to ordinary Kigali residents was dominant among interviewed participants, as some assert:

The problem is that new housing schemes do not facilitate low-income residents to access housing. Low-income tenants or residents, in general, are somehow excluded from upcoming housing schemes. (Interview with AG03, 19, July 2019)

There are cases where affordable housing is developed, but house units are too expensive given income levels among tenants. (Interview with EX03, 16 July 2019)

The Ministry of infrastructure defines the affordable housing category by setting a price range for houses falling in that category. According to this ministry, a house in the affordable housing category should sell between RWF 6 million and RWF 35 million. It is mainly assumed that house units within this price range are affordable to people with monthly income ranging from RWF 200,000 to RWF 1.2 million, considering low to

moderate credit finance parameters⁴ (i.e., interest rate and credit repayment period). These indicators are contained in the national housing policy of 2015 and other official documents. They are supposed to inform developers looking for government support to invest in affordable housing projects about what an affordable house should cost and who could afford it (i.e., beneficiaries of AHP). However, for some people, the mismatch between the prices of built homes and income capacity is also linked to the urban redevelopment interventions across Kigali city:

From what one can see on the ground is that urban redevelopment addresses the housing problem but only to those within a certain income range. In other words, it does not address the housing problem of those earning low-income. (Interview with AG04, 19 July 2019).

As further evidence to the above, most of the affordable housing projects completed after 2015 were built in formerly inhabited areas. It implies that the execution of these projects required expropriation of land/house owners in the areas concerned, potentially triggering displacements. For instance, on behalf of the government, RHA launched a public tender in 2019 whereby interested investors were invited to bid for various plots of land reserved for affordable housing projects across Kigali city. In such situation, the role of the government is to identify locations and plot areas, though less is known about the selection criteria followed. Then, it would also mediate negotiations between investors and landowners. The land plots offered through tender, and their respective sizes and locations are illustrated in Table 5.4. One could note that all the land plots had to be acquired through expropriation, meaning that they are privately owned. In this case, the problem does not lie in the expropriation exercise *per se*, but in how affordable housing development must take place at the expense of other people's welfare, amidst lack of a framework to make affected house-owners priority beneficiaries of the houses delivered under AHP.

⁴ Estimations are based some assumptions including the minimum income, which would allow a person to access a mortgage loan at 5-18% interest rates payable over 15 years with a 10% maximum down payment (NHP of 2015, p.7) (ROR, 2015).

Table 5.4 Sites for affordable housing projects by size and land acquisition mechanism

District	Lot no.	Site name	Plot size (Ha)	Mode of land acquisition
Nyarugenge	Lot 01	Gasharu	41	Expropriation
	Lot 02	Karama	34	Expropriation
	Lot 03	Kankuba	28	Expropriation
	Lot 04	Kagasa	31	Expropriation
Kicukiro	Lot 05	Mulinja	41.5	Expropriation
	Lot 06	Karama	66	Expropriation
	Lot 07	Cyimo	12	Expropriation
Gasabo	Lot 08	Kibenga	95	Expropriation
	Lot 09	Mbandazi	363	Expropriation
	Lot 10	Murama	54.5	Expropriation
	Lot 11	Rudashya	318	Expropriation

Source: Adapted from ROR (2019b, p.3)

Note: Ha=Hectare.

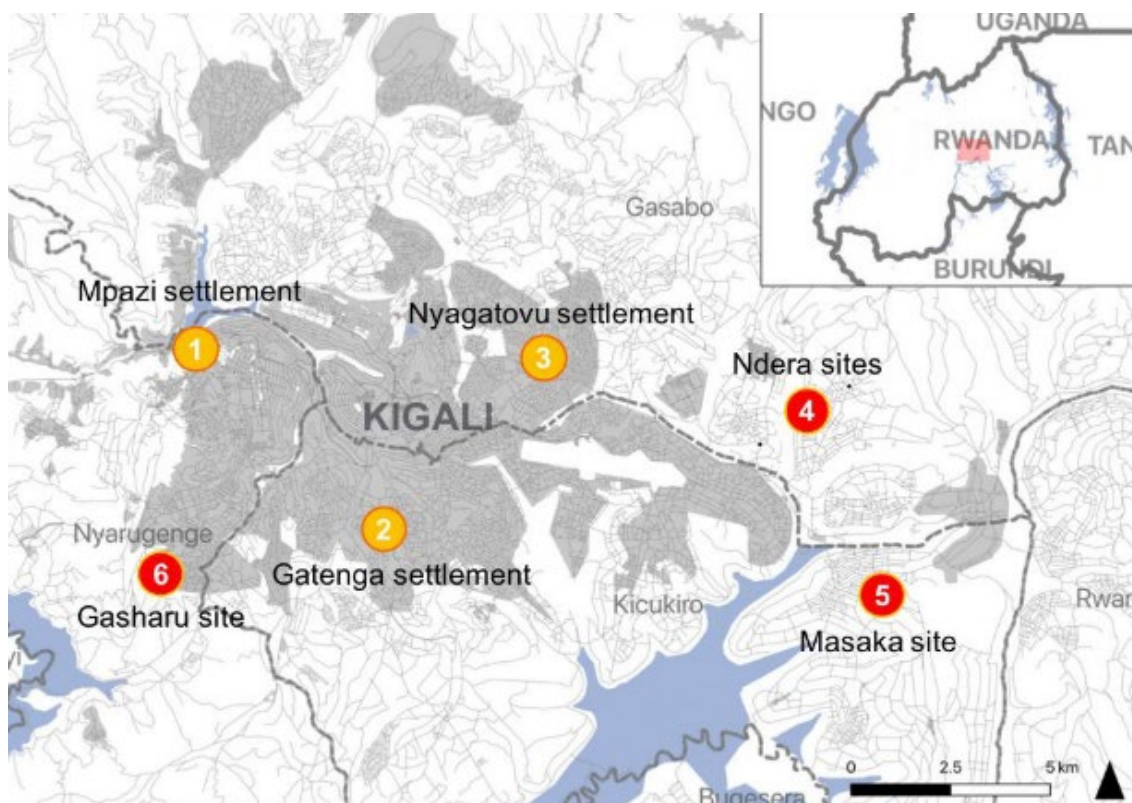
Secondly, overemphasis on owner-occupancy forms another type of AHP related constraint. Given how much low earning capacity constitutes a major constraint, as seen earlier, many tenants cannot save sufficient funds to purchase a house unit among those produced under the AHP. Considering this situation, if affordable rental housing were supported, it would be a better intermediary tenure while tenants are accumulating enough savings to buy houses to own. Yet, it is still hard to find projects devoting a share of or all house units for rental purposes. Some tenants identify that as a major gap in the AHP because it excludes them with homeownership being out of options due to limited financial capacity: 'Build and sell strategy presents a challenge to low-income people because they are constrained with income' (Interview with RE05, 12 July 2019). On the other hand, there is no requirement whatsoever on the developers' side to ensure that tenure options are available in their housing projects. As a result, in the absence of any restriction, many developers choose to build and sell completed houses being the option presenting fewer risks compared to rental housing:

As a developer, I find rental housing not attractive. Because, unlike the build and sell strategy, rental housing does not assure you that you will recoup your investment after a specific period. The property requires consistent maintenance and running costs. All of these make rental housing less attractive. I am not interested in such kind of housing investment at all. (Interview with PS02, 15 July 2019)

Thirdly, the location of proposed or completed affordable housing projects is also considered unsuitable. Most low-income populations live in unplanned settlements in the central areas of Kigali. Thus, the central location facilitates their inhabitants to stay in close proximity to job hotspots (Figure 5.1). A study undertaken in 2019 on understanding the dynamics in unplanned settlements in Kigali reported that over 70% of households live within two kilometres from their workplace (Hitayezu et al., 2018). Yet, most affordable housing projects and sites for future schemes are often located in less populous areas and farther from the central area (Figure 5.1). This is a constraint for some low-income tenants who are used to short commutes to job places since relocating them to farther places where they would commute longer distances turns out to be more difficult than being a solution to their housing needs. While from the government side, location selection is based on the possibility to obtain enough land at a reasonable cost. Tenants, on the other hand, express their concerns pointing to high transportation costs and long commutes to their jobs:

There are some projects in place, but the problem is that they are located far away from employment. (Interview with AG04, 19 July 2019)

There is no better alternative for proximity to employment nodes. No reliable transport to work in the areas where new housing projects are built. (Interview with EX03, 15 July 2019)



- Sites identified for affordable housing schemes
- Unplanned settlements in the urban core

Figure 5.1 Locations of inner-city unplanned settlements and greenfield sites for affordable housing
Source: Adapted from World Bank (2020b, p.26)

Locations of affordable housing projects in Kigali city since 2015



Figure 5.2 Locations of affordable housing projects by development status as of 2019.
Source: Geodata: Own survey, Openstreetmap contributors, Natural Earth (2018) | F.Nkubito, U.Schinke 202.

On the other hand, certain aspects of the processes in the Affordable Housing Programme (AHP) also pose challenges to the tenants. First, tenants find some of the eligibility criteria imposed to acquire a house produced under the program too restrictive and not targeted at people with economic profiles like theirs. The detailed requirements for people willing to benefit from affordable housing projects are contained in article 7 of the Prime Minister's instructions No. 001/03 of 23/02/2017, determining the conditions and procedures for obtaining government support for affordable and high-density housing projects. According to these instructions, applicants must first fulfil a set of criteria presented in Table 5.5.

Concerning the eligibility requirements, the main challenge is meeting the defined income range. Compared to the 200,000 RWF, the minimum income required to apply for a house under the AHP, 78% of the population in Kigali has a monthly income⁵ of less than 300,000 RWF (COK, 2012). According to some participants, the fact that the minimum monthly income set exceeds what most low-income tenants earn. Thus, that criterion explicitly excludes them from AHP, as one participant asserted: 'current affordable housing projects favour people within a certain income range to benefit houses, but how about those earning less than required than minimum income?' (Interview with RE01, 3 July 2019). Another interviewee questions the basis for defining the eligibility criteria: 'above all, there is an issue regarding the definition of affordable housing. It is still not clear what basis is for the requirements for affordable housing' (Interview with NP02, 12 July 2019).

Both statements point at existing ambiguity concerning how affordable housing and affordability are conceptualized in policies. Attempts to define affordability from the government side emphasize the minimum cost to develop a type of housing that meets minimum standards. At the same time, if a project qualifies for government support, it should allow developers with some profit level that does not compromise the reasonable price of completed houses. For the same reason, the government has fixed US\$ 300 per square meter as the required minimum cost for a housing project to fit in the affordable housing category. In other words, the minimum cost to deliver housing serves as a reference point in defining housing affordability. But this perspective misses out on capturing the affordability of completed house units to the end-users.

⁵ At the country level less than 6% of employed Rwandans earn RWF 100,000 per month or more (World Bank, 2015a)

Table 5.5 Eligibility and selection process of beneficiaries for affordable housing programme

Eligibility to be beneficiaries of affordable housing (Article 7)	<ol style="list-style-type: none"> 1. Be a citizen or permanent resident in Rwanda. 2. Be at least twenty-one (21) years old, except if the beneficiary is a full orphan. 3. Not possess a real estate or a house in an urban area or lessee of such estate with a remaining lease period of above ten (10) years or not to be legally married to a spouse of an owner of such real estate or house. 4. Not have a net yearly income above a value set by the Minister in charge of housing once every two (2) years⁶; 5. Commit him/herself not to sell a government supported Affordable and High-density housing unit within a period of at least ten (10) years by signing a declaration. A beneficiary may, however, be permitted to swap units within that housing scheme or rent it during or after full acquisition.
Process for selection of beneficiaries (Article 8)	<ol style="list-style-type: none"> 1. If a real estate developer informs the relevant District of the planned Affordable and High-density housing development project, the district shall publicly announce the project proposal on its notice board, through local authority information meetings, media outlets by providing information on site plans and floor plans of proposed housing units. 2. Any person interested in benefiting from a housing unit within the Affordable and High-density housing development project and who fulfils requirements specified in article 7 of these instructions may register such interest at the district office within twenty-one (21) days from the day of announcement of the project proposal. 3. The concerned District Council shall select the beneficiaries of the proposed project basing on the following: <ol style="list-style-type: none"> a. If the beneficiary was the original land holder who contributed land to the project and if s/he had registered interest in housing if s/he fulfils conditions specified in article 7 of these instructions. b. Gender-sensitivity.

Source: Adapted from the Prime Minister's instructions No. 001/03 of 23/02/2017(ROR, 2017b)

⁶ There is no regular update of income threshold in practice. By far the required monthly income range for end-user applicant should be not less RWF 200,000 and not above RWF1,200,000.

Besides the issues linked to eligibility for AHP houses, lack of consistency in procedures to acquire houses is also problematic. During the housing acquisition stage, developers can set initial deposit charges before houses are built (usually once plans are out and the project has been given the green light to launch building activities). This way, prospective buyers of government-sponsored affordable housing projects need to pay the required deposit amount to confirm their reservation. The remaining amount would be paid to the developer later after the buyer secures a bank credit. For instance, there are cases where interested buyers were required to pay 30% of the total house price in a project implemented by a housing cooperative (Interview with CP01, 06 August 2019). In two other projects delivered under a PPPs model, buyers were required to pay 5% and 15% down payments (BRD, 2018b, 2020). Moreover, it is worth noting that specific deposit charges are not referenced in any law or policy by far. Thus, there is no official rule on the maximum initial deposit amount developers cannot exceed. This is closely linked to another challenge associated with the existence of multiple institutions in prospecting and selecting beneficiaries of houses under AHP (Figure 5.3).

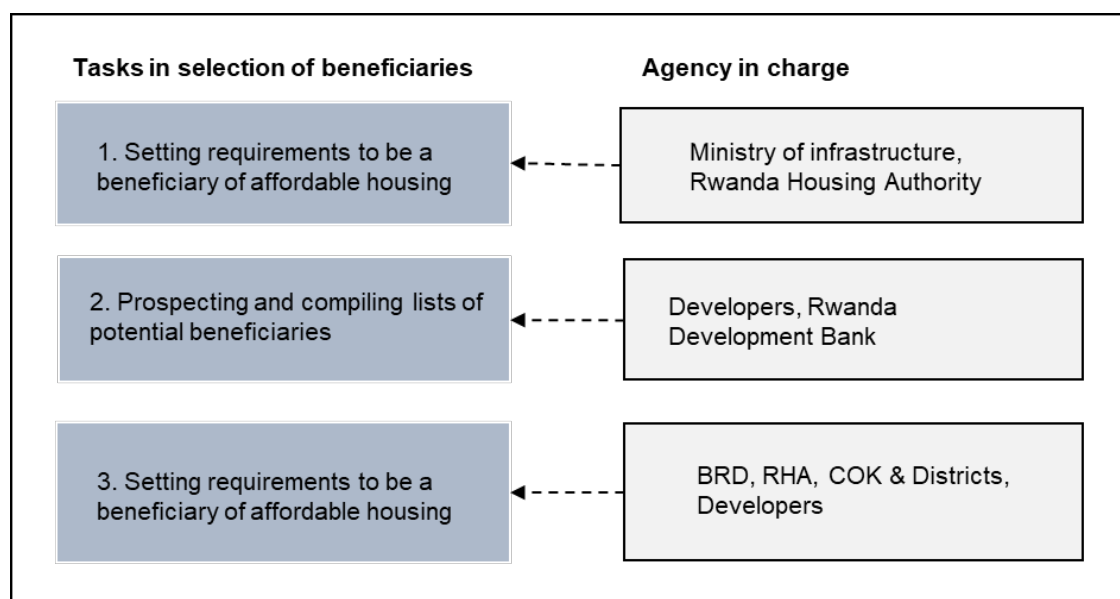


Figure 5.3 Process of identifying affordable housing recipients. Source: Author.
Note: BRD= Rwanda Development Bank; RHA= Rwanda Housing Authority; COK=City of Kigali

The presence of multiple agencies with control over the selection of beneficiaries makes allocating houses and beneficiary selection less transparent and confusing. There is less clarity about who oversees which step. In some cases, people complain about lack of information about procedures required for one to be a beneficiary of AHP: 'there is a need to harmonize processes to identify beneficiaries because how it is currently done does not guarantee transparency' (Interview with NP02, 12 July 2019). In the meantime, article 4 of the PrimeMinisters' instructions No. 001/03 of 23/02/2017 indicates that developers should compile profiles of potential beneficiaries in advance and submit them in the application for government support (ROR, 2017b).

At the same time, article 8 provides that once developers have compiled the list of potential beneficiaries, the district shall approve it, underscoring the influential role of the district authority in the beneficiary selection process. Whereas BRD also possesses an online platform that helps recruit beneficiaries of AHP though it is not referenced in the PrimeMinisters' instructions. Apart from the three actors mentioned, RHA also reveals that it plays a role in assessing the eligibility of beneficiaries for the AHP (Interview with PB04, 26 June 2019). While the Prime Minister's instructions on government support for affordable housing contain a list of eligibility criteria for one to be a beneficiary of AHP (Table 5.5), the procedures for beneficiaries' selection and delegation of responsibilities among concerned actors remain vague. Consequently, it turns out to be a major concern for people who would like to be beneficiaries of AHP but are worried about inconsistent procedures.

5.4 Discussion

The first set of findings for research question one confirmed the study assumption about the lack of improvement in housing affordability in Kigali in recent years. The increased difficulty for many family tenants' households to afford decent housing is congruent with recent studies that similarly reported a deepening housing crisis, particularly in fast urbanising cities (UN-Habitat, 2016a, 2020) and extensive dissatisfaction about availability of affordable housing (Coupe, 2020). An UN-habitat report predicted a persistent increase of slums dwellers in Africa and Asia by 2.3% and 5.3%, respectively, per one per cent increase in urban population (UN-Habitat, 2016a). The same institution further underscores the magnitude of the housing problem, indicating that housing affordability is not only a preoccupation in some cities given that, globally, homeowners have to save up to five times of their annual income to meet the price of standard house and renters are compelled to spend more than 25% of their monthly income towards rent (UN-Habitat, 2020).

The decline in housing affordability in Kigali cannot be isolated from developments that unfolded in tandem with the implementation of urban policies in the past two decades. On the one hand, unplanned settlements constitute the primary source of accommodation, despite strict sanctions on illegal house building that includes demolitions (Goodfellow, 2013) and multiplying government efforts to revitalize former inner-city informal settlements (Goodfellow, 2014; Bachofer and Murray, 2018). As the study has found, these interventions could have partly contributed to the drop in housing affordability and increased incidence of overcrowding among tenants (see Table 5.1). In the same vein, several authors also have emphasized the close link between tenants' affordability problems and crowded living conditions (Tipple and G.Willis, 1991; Ndubueze, 2009). In Kigali, however, overcrowding could also be a coping strategy for some households facing the heavy burden of housing costs—especially considering the practice is not legally prohibited.

Secondly, concerning this chapter's findings, tenants relate increased difficulty to obtain affordable housing to factors such as low income and insecure employment, limited access to finance, regulatory constraints and limited chances to access a house in the government-sponsored affordable housing programme. Considering these challenges, one can argue that low-income levels constitute a primary constraint, being a precursor to most of the other hindrances facing the demand side for affordable housing. In Kigali, the informal economy remains an essential source of jobs for most of the city's population. However, while its contribution to the economic output vis-à-vis providing an alternative source of revenues to the low-skilled labour force cannot be underestimated

(Rukundo, 2015; Baffoe et al., 2020), the informal nature of employment jeopardize job security and purchasing power on the housing market. Low-income and insecure jobs are also partly exacerbated by gaps in the labour legislation (e.g., the lack of minimum wage), as many tenants pointed out (Section 5.1). Besides this, the lack of targeted state demand-side subsidies further reduces the chances of the beneficiaries-would-be of affordable housing to overcome financial constraints.

The income and job-related constraints consequently put tenants in a weak position to qualify for mortgage finance. Even if many people are traditionally used to self-building strategy to obtain their own house, it has increasingly become more complicated amidst strict planning regulations that favour mass housing delivered through professional builders. Nevertheless, the underlying economic situation of many households does not allow many households to purchase complete houses in Kigali city (Manirakiza, 2015; Finn, 2018; Nikuze *et al.*, 2019). This study argues that relaxing regulations to integrate self-building strategies within the existing formal housing market would assist financially constrained households in building their houses in phases, thus ruling out the need to raise large funds at the start.

Another outstanding finding of the study is the disregard of rental tenure and related housing responses. Despite the lack of appropriate rental housing strategies, tenancy has dethroned owner-occupation as the dominant housing tenure in Kigali. This shift was also observed in many cities in the wake of the global financial crisis (Soederberg, 2017a). Persistent disregard of rental tenure is manifested through absent tenancy law or any policy specific to the rental housing sector. In developing countries, the rental housing challenge is also well documented (UN-Habitat, 2003a; Gilbert, 2012b). In this context, evidence indicates that it was an antecedent to severe social problems such as homelessness (Lima, 2020). In Kigali, gaps in rental sector legislation imply that tenants have minimum protection against the rent-seeking behaviours of landlords and developers. Also constraining tenants is the lack of rental options in the affordable housing program, with houses sold at prices not affordable for them. This constraint corroborates with the findings of Uwayezu and Vries (2020) in their recent study. Moreover, many studies also pointed to the failure of government-supported low-income housing schemes to reach low-income beneficiaries, arguing that they have benefited affluent residents and wealthy few (Jenkins, Smith and Wang, 2007; Ibem, 2011; Tipple, 2015).

5.5 Summary

In this chapter, we have presented findings for the first research question. The main results were outlined in two interrelated sections. First, it was found that housing affordability for tenant family households did not improve during the period between 2010/2011 and 2016/2017. The study found a decline in the share of households that can afford to rent a standard two bed-room house unit from 16.3% to 15.2% by applying a 30% income-to-house rent ratio as the housing affordability benchmark. Also, during the same period, the proportion of households living in overcrowding increased by 9.4%, further indicating the deterioration of housing affordability in Kigali city.

Second, this chapter also discussed the perceptions of actors concerned with the issue, including mainly low-income tenants, on the factors constraining access to decent and affordable housing in the city. It was revealed that the general constraints, meaning that they affect everyone regardless of means used to access housing, include low-income levels and insecure employment, difficulties to access housing finance and regulatory environment in terms of lacking legislations or restrictive rules; all that make the process of securing housing difficult.

On the other hand, the constraints related to the state-supported affordable housing program (AHP) are also identified. In this case, we found that constraints linked to the program's outcome are unaffordable high prices of house units and lack of tenure balance with a bias towards owner-occupation. The constraints arising from processes include limited clarity of eligibility criteria, limited transparency in the allocation process of completed house units, and inconvenient location of some affordable housing schemes—with many situated in peripheral, less accessible areas. This chapter has paid more attention to describing the situation of those who make up the demand for affordable housing. The next chapter examines actors' participating in affordable housing provision, their roles and institutions governing their operations.

CHAPTER 6

ACTORS, INSTITUTIONS AND AFFORDABLE HOUSING PROVISION STRATEGIES

6.1 Introduction

The chapter presents the findings for research question two: *how does the underlying institutional framework support key actors' interests, objectives and strategies in affordable housing provision?* While answering this question, we have used two sources of data: interviews with actors engaged in the affordable housing sector and individuals with knowledge about and whose work directly deals with the sector-related issues. Besides this, the study also draws on various forms of documents, including policies, legislations, institutional reports and other grey literature, to collect data relevant to the research question. The findings presented under this chapter have three objectives: (1) to identify key actors that have a stake in affordable housing provision, (2) to examine institutions governing affordable housing provision, and (3) to assess the institutional support for housing provision strategies. The chapter is organized into six sections. After a brief introduction, the following section (6.2) focuses on mapping stakeholders active in affordable housing provision. Different categories of stakeholders are distinguished at this stage. However, only the key actors are the group of interest for the study. Thus, they will be the focus of subsequent parts of the dissertation. Section 6.3 analyses the institutions governing the affordable housing provision. That way, it describes the official procedures set out in policies and regulations and how they affect the affordable housing provision process. In section 6.4, the chapter discusses contrasts between policy and practice in terms of strategies for affordable housing provision, institutional support, and the implications of identified contrasts. The chapter also features a synthesis of results covered in section 6.5 and closes with a summary in section 6.6.

6.2 Key actors engaged in the affordable housing sector

A stakeholder mapping helped identify actors with a stake in the affordable housing sector in Kigali city. Table 6.1 illustrates participating stakeholders who are organized into four groups: government agencies, private actors, development agencies, and civil society in line with the nature of the organization. Also, it distinguishes actors based on their positions and functions performed and their involvement within the affordable housing sector. As the table indicates, the stakeholders are diverse in their nature and objectives vis-à-vis affordable housing responses. They range from actors affiliated to the public sector, such as ministries and government subsidiary corporations such as the Development Bank of Rwanda (BRD). Among the private sector actors include real estate and housing development agencies, utility companies and different financial institutions. In the third sector, there are network organizations like cooperatives, non-profit organizations and advocacy organizations like the Private Sector Federation (PSF) and tenants who constitute the potential end-users of affordable housing. This section presents these groups and constituent actors⁷ and their respective roles in the affordable housing provision.

First, we explore the contribution of as many actors as the researcher could identify. However, discussion of findings focuses on the key actors from the next section and onwards. Drawing upon various actor analysis literature (Hermans and Thissen, 2009; Mainardes et al., 2012; Hermans and Cunningham, 2018), we categorize stakeholders into three categories. First, the key actors as the role players capable of significantly influencing a course of action by using their capabilities, knowledge and position of power. Second, the primary actors consist of stakeholders who would like to acquire or must forego power and privileges. These may include people affected by an intervention or beneficiaries—equivalent to the position held by tenants in the context of the affordable housing provision in Kigali (Figure 6.1). The last category consists of stakeholders who are only indirectly or temporarily involved during a given intervention. This way, they include intermediary service organisations classified as secondary stakeholders.

The process to identify and categorize stakeholders followed a two-step assessment. In the first place, the actors identified are evaluated on each of these criteria: roles and legitimacy in the housing arena, their resources in terms of knowledge or material

⁷ Terms actors, agents and stakeholders are used interchangeably. Stakeholders are defined— based on Herman & Cunningham (2018, p.13) — as ‘individuals, organisations, or groups capable of autonomous and intentional actions that impact the problem of interest.’

resources to influence decisions and responsibility, their position in the network, and the quality of connections with other actors. This stage also identifies various forms of actor involvement, which is done by assessing if actors participate in one or many of these ways: in decision-making, as a coordination partner, co-production partner, in consultation or participates only by providing information.

Table 6.1 Stakeholders, core functions and forms of involvement in the affordable housing sector

Potential key stakeholders	Position and core functions			Forms of involvement in affordable housing sector
	Roles & legitimacy	Resources & responsibility	Relationships	
Government agencies				
Min. Infrastructure	Strong	Strong	Strong	Decision-making, coordination partner
Min. Finance	Strong	Strong	Strong	Coordination partner, decision-making
Min. Local governance	Strong	Strong	Strong	Coordination partner, decision-making
Min. Environment	Medium	Medium	Strong	Coordination partner, decision-making
Rwanda Housing Authority	Strong	Strong	Strong	Coordination partner, decision-making
Rwanda Social Security Board	Strong	Strong	Strong	Co-production partner, coordination partner
Rwanda Development Bank	Strong	Strong	Strong	Co-production partner, coordination partner
Kigali city & Districts	Strong	Medium	Strong	Coordination partner
Private actors				
Foreign developers	Strong	Strong	Strong	Co-production partner
Local developers	Strong	Medium	Strong	Co-production partner
Utility companies	Strong	Weak	Weak	Coordination partner
Commercial banks	Medium	Weak	Weak	Consultation
MFIs	Weak	Weak	Weak	Information
Development Agencies				
World Bank	Strong	Strong	Strong	Cooperative partner, co-production partner
SDC (via SKAT)	Strong	Strong	Strong	Cooperative partner, co-production partner
GGGI	Medium	Medium	Strong	Cooperative partner
Civil societies				
Co-operatives	Medium	Medium	Weak	Co-production partner
NGOs	Weak	Medium	Medium	Consultation
PSF	Strong	Medium	Medium	Consultation
Tenants	Weak	Weak	Weak	Information

Source: Author

In the second step of stakeholder mapping, the focus is shifted to the stakeholders' interests and scope of actions in the affordable housing sector (Table 6.2). At this stage, the assessment aims to determine which stakeholders' actions are congruent and responsive to the problem at stake (i.e., limited progress in the provision of affordable housing) and the change process. These, in other words, constitute the key stakeholders.

Table 6.2 Stakeholders' interests and scope of action

Stakeholders	Interests in relation to the affordable housing provision	Coherence with improving provision of affordable housing objective		
		Yes	No	INDIFF
Government agencies				
*Min. Infrastructure	Regulate industry, facilitate private sector	●		
*Min. Finance	Allocate sufficient budget	●		
*Min. Local governance	Monitor local authority	●		
Min. Environment	Protect environment			●
*Rwanda Housing Authority	Audit implementation	●		
*Rwanda Social Security Board	Invest in housing for profit & social goal		●	
*Rwanda Development Bank	Equity funding, credit finance	●		
*Kigali city & Districts	Ensure compliance to master plan		●	
Private actors				
*Foreign developers	Equity funding, profit		●	
*Local developers	Quality housing, profit		●	
Utility companies	Provide basic infrastructure			●
Commercial banks	Credit finance		●	
MFIs				●
Development Agencies				
*World Bank	Provide long-term funds	●		
*SDC (via SKAT)	Ecological building materials, job creation	●		
GGGI	Green urbanization & growth			●
Civil societies				
*Co-operatives	Mutual help, job creation, profit, homeownership	●		
NGOs	Advocacy	●		
Private Sector Federation	Advocacy			●
*Tenants	access to affordable housing	●		

Source: Author

Note: INDIFF: Indifference meaning that the actor does not exhibit sympathy in the affordable housing problem and their role in the sector is largely passive.

*Identified key stakeholders.

Public sector actors

The public sector involvement in the housing sector is inevitable in Kigali city. The constituent actors play diverse roles. Table 6.1 shows that the prominent roles of public sector actors are rules and decision-making, coordination, and co-delivery partnerships. At the national level, key actors include an inter-ministerial panel made of various ministries and subsidiary agencies. Being the highest decision-making level, this panel is mainly responsible for assessing housing needs and taking appropriate action to accelerate the affordable housing provision. At the local level, the two major actors are the Kigali city authority and the district. In terms of the administrative hierarchy, Rwanda is subdivided into four provinces (Northern, Southern, Eastern and Western) and the city of Kigali. Provinces and Kigali city are in turn subdivided into districts, then sectors, cells and finally the village—the lowest administrative level. Rwanda's highly centralized governance system implies that most important decisions, including those concerning urban housing programs, are taken at higher levels of the hierarchy and implemented through top/a down approach (Pätsch, 2017; Behuria, 2018).

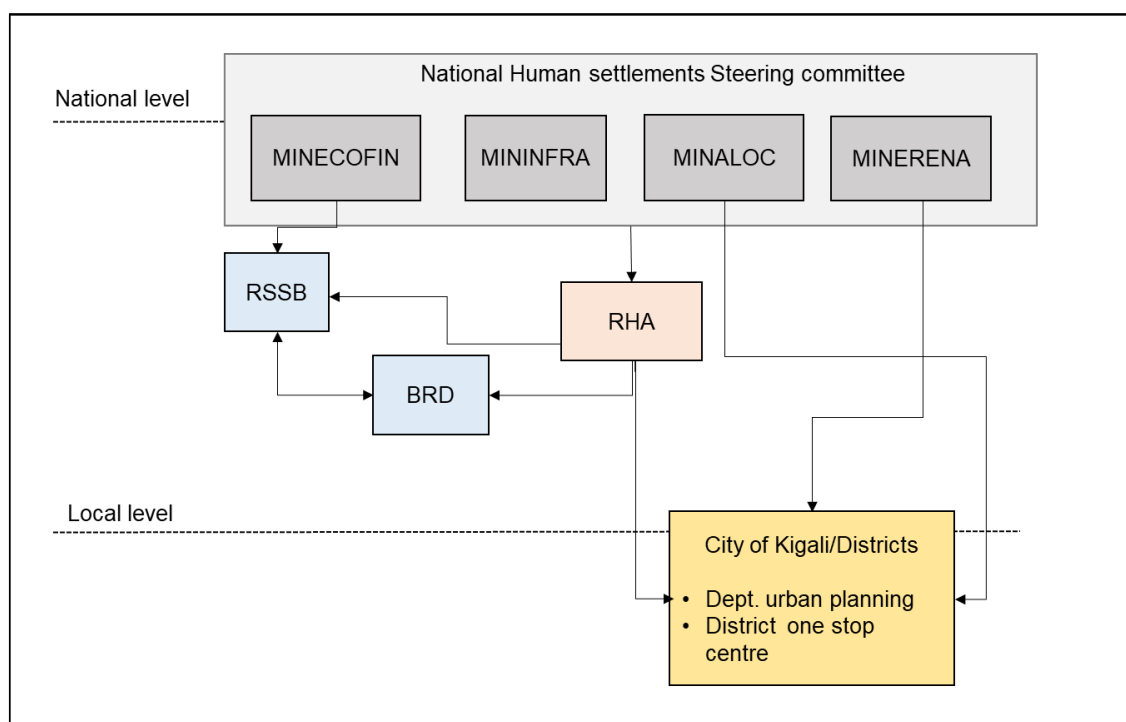


Figure 6.1 Public administration structure of affordable housing provision in Kigali.

Source: Author.

Note: MINECOFIN=Ministry of Finance and Economic Planning; MININFRA=Ministry of Infrastructure; MINALOC=Ministry of Local Governance and Administration; RHA=Rwanda Housing Authority; RSSB=Rwanda Social Security Board; BRD=Rwanda Development Bank

Inter-ministerial panel

Four ministries make up the panel: the ministry of infrastructure (MININFRA), ministry of finance and economic planning (MINICOFIN), ministry of local governance (MINALOC) and ministry of natural resources and environment (MINERENA). Housing and planning fall under the responsibilities of the ministry of infrastructure. The same ministry is the leading institution and is entrusted with coordinating affordable housing responses. While the MININFRA mandate covers the broad spectrum of infrastructure development, it features a stand-alone department of urbanization, human settlement and housing development. The latter exclusively deals with urban planning and housing matters within the ministry's structure. In reference to the housing sector, MININFRA intends to create a conducive environment through appropriate legislations and policies that would support the increase of housing stock (ROR, 2018e). The ministry's mandate includes setting guidelines, making and updating policies on housing and planning, and auditing and monitoring policy implementation in accordance with national programs and strategic plans (MININFRA, 2020).

The ministry of finance intervenes in affordable housing on the grounds that some projects require public funding. The ministry is the highest administrative entity dealing with finance, national budget and economic planning. MINECOFIN has an overall mission to raise sustainable growth, economic opportunities and the living standards of all Rwandans. In the context of affordable housing, the ministry intervenes in the decision-making concerning the allocation of government support for affordable and high-density housing development. Their role is to ensure funds are available and disbursed to the developers meeting the required criteria.

The ministry of local governance (MINALOC) ensures the coordination and territorial administration programs responding to economic, social and political issues. It oversees administrative territories starting from provinces and Kigali city all the way to the village level. During affordable housing interventions, MINALOC coordinates and monitors the city of Kigali and districts to ensure the execution of decisions at the local level. The Ministry of Environment (MINERENA) has land administration and management under its responsibilities. Hence, the ministry's primary role in the affordable housing sector is to ensure housing project locations and construction processes abide by relevant environmental protection safeguards. All these ministries are the executive members of the national approval committee in charge of determining government support for affordable and high-density housing projects. Beyond the executive members, that committee includes the Rwanda Housing Authority and the City of Kigali.

Rwanda Housing Authority (RHA)

RHA is a government agency aligned with the ministry of infrastructure. The main mandate of MININFRA is to organize and coordinate urban and rural settlement development and the construction industry (ROR, 2015c). Whereas the RHA oversees the implementation of housing policies and supervises government construction projects. Concerning affordable housing delivery, RHA occupies the central position as the actor mediating interactions and facilitating the smooth flow of information directives both within the public sector and between the public sector and other sectors involved in affordable housing delivery. To this end, RHA performs a variety of functions outlined below (ROR, 2018e, p. 20):

- (1) To establish guidelines and regulations for the housing sector.
- (2) Intermediary between government and actors in the affordable housing sector.
- (3) Assessment of developers' capacity against criteria to qualify for government support for affordable and high-density housing.
- (4) Audit and monitoring of affordable housing projects to ensure the quality of houses.
- (5) Facilitate allocation of completed house units by ensuring eligible buyers meet and negotiate with developers⁸.

In addition to the above functions, RHA must regularly report to the ministry of infrastructure and the national approval committee for government support to affordable and high-density housing concerning the progress of government-sponsored affordable housing projects. In a nutshell, RHA holds a central role in coordinating affordable housing directives from the government side and ensuring that its stakeholders are informed about them and work in silos.

City of Kigali/Districts

The city and district councils form the executive committee governing the Kigali city area and constituent districts. Concerning the planning and housing matters, the responsibilities of the city primarily include the implementation of the master plan, sectoral plans and their enforcement (COK, 2020). With housing development being an integral element of the master plan and other strategic plans, the city of Kigali intervenes in establishing guidelines for housing development and the zoning regulations that developers must follow. The department of construction and urban planning set up in 2010 oversees monitoring the implementation of the master plan. According to the

⁸ RHA is responsible for ensuring that completed affordable houses are allocated to the beneficiaries who meet a set of criteria (see table 5.5)

master plan of 2013, Kigali aims to be “a city of affordable homes and neighbourhoods” (COK, 2013c). In this study, we combine the roles of the city of Kigali and districts, as most decisions concerning land use and development control are made at the city level. Furthermore, the role of districts is limited to monitoring and mediation between actors on issues of local relevance such as land acquisition or distribution of completed houses.

Based on the experience of both past and ongoing affordable housing projects, the city of Kigali and its districts have contributed in three ways. First, they have contributed to identifying sites suitable for affordable housing projects. But the city may also facilitate developers in the transfer of land ownership. In cases where land is state-owned, developers could either purchase it or acquire a leasehold from the government depending on agreement terms between both parties. Nevertheless, in most instances, the exchange occurs between private landowners and developers through the mechanism of expropriation, as noted in the previous chapter. If expropriation is required, landowners have no right to objection. The City of Kigali and districts assist developers in identifying sites and help them in mediation with landowners, mobilising them about the purpose of expropriation and public benefits associated with carrying out the proposed project. Mobilisation and government intervention help avoid potential antagonism towards the exercise. The law governing expropriation was first enacted in 2009 and then revised in 2015 (ROR, 2015b). The same law confers irrevocable power to the state to acquire private real property under the pretext that the proposed project is considered an act of public interest⁹. We provide an elaborated discussion of the expropriation exercise covered in chapter 7.

Another role of Kigali and its districts is to enforce the master plan. The latter consists of a blueprint featuring the vision of anticipated spatial development of the city by 2040 as well as zoning regulations implement the plan (COK, 2013c). More precisely, the construction and urban planning department is responsible for spatial development and ensuring compliance with the Master Plan. Lastly, the city and district authorities intervene in the selection of beneficiaries. The Prime Ministers' instructions No. 001/03 of 23/02/2017 determining government support for affordable housing stresses that the involvement of local government entities, such as the City of Kigali/districts, intends to ensure transparent and equitable allocation of completed house units (ROR, 2017b). This could be seen as a preventive measure to the concern that if developers are left alone to select beneficiaries, subsidized houses may be sold to unqualifying individuals and not serve the purpose. However, many people question why developers would be

⁹ Defined as ‘an act of government, local entities with legal personality or public institutions, aiming at the interest or well-being of the general public’ (Expropriation law of 2015, Art. 1).

entrusted with such responsibilities considering they have limited knowledge about the socio-economic context of beneficiaries and are primarily profit oriented.

Development Bank of Rwanda (BRD)

Development Bank of Rwanda largely known as BRD—a French acronym standing for ‘Banque Rwandaise de développement’—is a public company limited by shares. It is co-owned by government subsidiaries (majority shareholder) and other private sector partners. Established in 1967, it aims to be a leading finance provider to projects falling in the four (4) development sectors, namely: housing, energy, special projects, education, and agriculture sectors. BRD is the main source of finance to fund various projects in those priority areas. Thus, it holds a critical role in supporting the implementation of the government’s development strategies (i.e., Vision 2020, NST1, Vision 2050).

The strategic intervention of BRD in large-scale housing and affordable housing projects particularly became more prominent since 2010 after the takeover of formerly Banque de l’Habitat du Rwanda (BHR)¹⁰. BRD’s investment in housing has increased in recent years, although the funds channelled to housing development remain noticeably low (Table 6.3). As the table further illustrates, BRD recorded a remarkable rise in disbursed funds in 2019 for two major reasons. First, the same year BRD adopted new strategies that sought to clean up the bank’s portfolio, recapitalisation and adaption to the new strategic direction after a 2017/2018 year marked by a decline in performance. Second, the bank managed to extend relationships and partnerships with international financiers. Through these relationships, the bank has mobilised RWF 53.3 billion and invested 30.2 billion, with the bank’s borrowings reaching an annual growth of 13% (BRD, 2019).

¹⁰ Following the merger BRD had acquired a mortgage portfolio amounting to RWF 8.7 billion BHR which increased to RWF 10 billion in 2015 following the merger (BRD, 2017).

Table 6.3 BRD funds disbursements across sectors for 2018 and 2019

Sector	Disbursed funds (in million RWF)	
	2018	2019
Agriculture	456	934
Export & Manufacturing	3,268	9,132
Energy	851	15,827
Housing	170	820
Education	-	3,011
Infrastructure & special projects	3,470	531
TOTAL	8,215	30,255

Source: Adapted from (BRD, 2019)

By intervening in the affordable housing sector, BRD seeks to support affordable housing development. In this way, BRD focuses on mortgage finance and the production of bankable housing. In an attempt to achieve the objectives mentioned above, a framework for housing finance interventions is in place and is built on five strategies (BRD, 2016, p. 1):

- Increasing supply, bankability and affordability of housing and reduce the national housing deficit.
- Increasing availability of housing finance (mortgage loans).
- Standardize all aspects of lending and make mortgage loans a commodity.
- Improve liquidity of mortgage loans, create risk management mechanisms to improve safety and performance.
- Create funding links to local capital markets where there is long term funds and desire to invest in mortgage securities.

The above strategies are in congruence with those stipulated by the national housing policy on the affordable housing issue. BRD plays a crucial role within the affordable housing sector since it is the government's right-hand agency to provide finance to both developers and recipients of affordable housing. Since 2015 it has financed different categories of housing projects (Table 6.4). Projects falling in the affordable housing category accounted for a total investment of RWF 4 billion as of 2017 and are projected to reach RWF 183.5 billion in line with the country's short-term development strategy extending over the 2018-2024 period (BRD, 2018a).

Table 6.4 BRD funded affordable housing projects in Kigali city between 2015 and 2019

Project	Finance mechanism	House units	Status*
Urukukumbuzi	Ordinary loans	200	Completed
Cohaki	Ordinary loans	N/A	Completed
Abadahigwa ku Ntego	Ordinary loans	56	Completed
Hillside Estates	Ordinary loans	100	Undergoing
Rugarama Park Estates	Equity funding	2,674	Undergoing
Ndera housing project	Equity funding	2,000	Conceptual phase
Kinyinya SPV	Equity funding	10,000	Conceptual phase

Source: BRD annual reports (BRD, 2016, 2017, 2018b)

Note: *Status recorded as of 2019

BRD intervenes in affordable housing development via two mediums. The first approach entails cases where the bank issues ordinary loans to qualifying developers once their housing project proposals have met the institution's lending criteria. In this situation, BRD finances the proposed project cost up to 90% depending on risk assessment. The second medium consists of instances where BRD intervenes in housing projects by contributing equity finance. In the latter case, partnering with other government subsidiaries such as the RSSB or foreign investors in joint ventures constitutes a common arrangement for BRD's intervention through equity funding. BRD sees itself as the core of finance supply thanks to the competitive interest rate and special consideration for affordable housing projects. Of significance from that statement, BRD's position and role in affordable housing delivery are essential to the sector amid limited interests from other private financial institutions.

Rwanda Social Security Board (RSSB)

RSSB is a government subsidiary in charge of handling many social security programs, including the pension scheme, public servants' medical insurance, community health insurance, and long-term saving scheme. The collection of members' contributions gives RSSB enormous capital at its disposal. As a result, RSSB has been the government's investment right hand with the institution's portfolio spanning different sectors such as real estate and housing. RSSB makes investments intending to achieve short and long-term returns sufficient to meet the institution's funding objectives. In the context of housing, RSSB has predominantly intervened in mid-range and high-end accommodation, with only 40% of funded housing projects falling in the affordable housing category. While public opinion also points to the fact that RSSB, given its financial capacity, has a responsibility to invest in housing that most contributors can

afford. In 2019, RSSB reported that its housing and real estate investment portfolio rose to RWF 125.8 billion, up from 107 billion in 2018 (RSSB, 2019).

The past few years have marked a turning point in RSSB's role in housing. It has expressed willingness and plans to invest more in affordable housing, unlike in the past. This is after RSSB's approach to housing had faced backlashes in local media for showing bias for high-end housing projects and turning a blind eye to the housing needs of most pension contributors (Kabona, 2018). Moreover, while high-end housing does not represent a marginal share of housing needs on the ground, some past projects in this category have struggled to attain projected sale proceeds (Kabona, 2018). Therefore, it constituted further ground for critics of RSSB's strategy in housing. In a bid to restore its image, RSSB has exhibited more enthusiasm to invest in affordable housing. The institution has been directly involved in different projects, either as a leading developer or a partner (Table 6.5). Apart from direct investments in housing, RSSB also invests in land banking. This strategy entails identifying strategically located privately owned land and acquiring it mostly via expropriation. Then, individual land parcels are consolidated, serviced and reserved for future housing and real estate projects. For example, this strategy was used to acquire land in lower Kiyovu—a former inner-city informal settlement. The land acquired was later sold to investors in the framework of extending and revitalizing of Kigali Central Business District according to the master plan. Thus, RSSB constitutes an important government arm in implementing the land banking strategy across Kigali (GOR, 2015b).

Table 6.5 RSSB housing projects in Kigali city over 2008-2019

Project	House units	Under AHP*	RSSB role
Batsinda (phase I)	250	Yes	Developer
Kacyiru executive apartments	50	No	Developer
Vision 2020	300	No	Developer
Umucyo Estate	122	No	Developer
Vision city	504	No	Developer
Batsinda (Phase II)	600	Yes	Developer
Gahanga	300	Yes	Developer
Kinyinya SPV	1800	Yes	Co-developer

Source: RSSB (2019)

Note: AHP=Affordable Housing Programme

Although RSSB operates as an independent corporation, it is heavily subject to and works under close supervision of government through the parent—the ministry of finance

and economic planning (MINECOFIN). Considering the substantial funds at the RSSB's disposal, it serves as the government's investment arm in realising its housing objectives. This role is further proven, seeing how the government uses RSSB to acquire land or implement housing projects requiring significant capital. At the same time, RSSB and BRD are the two leading government institutions that intervene in partnerships with foreign developers on affordable housing projects, as further discussed in section 6.4.

Private sector actors

The private sector actors are also active in providing affordable housing in Rwanda. In particular, the government counts much on the private sector to deliver housing to different income categories (ROR, 2015c). In the past, evidence shows that most private sector actors have focused on house typologies suiting middle and high-income range buyers and tenants, as they constitute a lucrative business (COK, 2012). But this situation has left a gap in affordable housing development. Following the government-increased attention to affordable housing issues in 2015, private actors have demonstrated interest in the affordable housing sector. This section breaks down these actors into two groups. The first group comprises local developers, while the second group consists of foreign developers and investors. Based on past projects, an actor could intervene as a financier of the affordable housing project (at least partially) or undertake the building and selling of houses alone. In other cases, the contractor (builder) could be different from the leading developer or project owner. In the absence of a registry of all developers exclusively engaged in the affordable housing sector, we have had to rely on interviews and grey literature to access information on these actors.

Local developers include local construction enterprises or individual real estate investors. These actors are of different scales, which is reflected in the size of their respective housing projects. Their objectives in the affordable housing sector are predominantly profit-oriented and social to some extent. In terms of economic gain, developers envisage taking advantage of underserved sections of residents. Nevertheless, they also consider their contribution of social nature since they produce housing that benefits people who otherwise cannot access it on the market. In this process, the government also portrays the affordable housing sector as 'a profitable business' in the local media campaigns to attract both local and foreign developers. Table 6.6 describes the affordable housing output (expressed as the number of projects completed) by type of developer. The contribution of local developers to affordable housing outcomes is superior to foreign counterparts considering that their project output accounts for more than half of completed projects in recent years (Table 6.6).

Table 6.6 Developer type, housing projects and origin of international investments

Type of developers	No. of projects	Origin of foreign developers/investors
Local developers	6	N/A
Foreign developers	1	US, Nigeria
Partnerships*	6	Finland, China, Switzerland, Morocco, International funding agencies**
Government subsidiaries	2	N/A

Source: Official documents

Note: *Most partnerships are formed between the two major government subsidiaries intervening in housing (i.e., RSSB and BRD) and foreign investors, developers and financiers.

**International Finance Corporation (IFC) and Shelter Afrique are key actors in this respect.

N/A: Not applicable



Figure 6.2 A Completed housing project by a local developer in a Kigali Suburb. (Source: Author)



Figure 6.3 Construction for a multi-family housing project under the partnership between a Finnish developer and government. (Source: Author)

Foreign developers/investors constitute another type of private sector actors involved in affordable housing delivery. They range from real estate developers, financial institutions and equity investors. Foreign private actors are attracted to the sector by policy incentives and possibilities for undertaking projects in partnership with the government (Figure 6.3). The image in figure 6.3 indicates that foreign developers, in line with their financial capacity and experience, are more inclined towards multi-family housing design than their local counterparts. Foreign private actors have a positive perception about partnerships amid concerns over the risks the sector may present, adding to the unfamiliar context. To this end, by committing their investments in affordable housing, their objectives are essentially economic, including expansion of the investment base.

As a precondition to this, however, foreign private actors require government assurance in terms of their project viability before they could make further commitments, contrary to the local developers.

As further evidence demonstrating how the government took this matter seriously, incentive packages and public-private partnerships guidelines were established to enhance developer assurance (this theme will be elaborated in section 6.4). While preferential treatment to foreign actors in land acquisition is not formalized in any policy instrument, they have better access to information and government institutions. To this end, since they are unfamiliar with the context, they are entitled to more attention and support for their operations. One observation made is that projects led by foreign developers/investors are larger in terms of housing output, reflecting financial superiority to local counterparts. Nevertheless, local developers lead when both are compared in terms of project completion rate.

Third sector actors

The term “third sector” refers to ‘widely differing kinds of organizations such as charities, non-governmental organizations, self-help groups, social enterprises, networks, and clubs, to name a few that do not fit into the state or market categories’ (Corry, 2010, p. 11). Based on this description, the study defines the third sector as the residual group of actors who neither follow the logic of the market nor fall under the public sector command. In Rwanda, the number of third sector actors participating in affordable housing development is limited. A few considered strategic actors and, to some extent, involved in the sector are the World Bank, the Swiss Agency for Development and Cooperation (SDC) (it intervenes indirectly via its contractor—Skat consulting), and some housing cooperatives. Nevertheless, beyond the actors listed above, we could not find any traces of more non-governmental organizations or local civil societies active in the affordable housing sector. However, based on our observation, some of these organisations only passively participate in informal consultations in different sector-related forums. Some examples are Housing Sector Working Group and other non-regular events such as Housing Day or the Urban Forum. However, this analysis does not intentionally pay attention to the passive actors, given that their role and ability to influence the sector are limited. The key actors in the third sector group are described next.

World Bank/IFC

The role of the World Bank and its subsidiaries in the housing sector in developing countries is well documented (World Bank, 1983; Pugh, 1995; Ramsamy, 2006). In Rwanda, the World Bank has also been active in the urban development in Kigali. In the post-genocide period, most of the support went into urban reconstruction. The world bank interventions have mainly targeted funding infrastructure development and resettlements for internally displaced people and returning refugees in the late 1990s. In recent years, the World Bank has funded projects aiming to upgrade unplanned settlements in Kigali and secondary cities. This institution has not carried out projects with explicit links to the affordable housing sector until the end of the 2010s. Since 2015 following the government's move to place affordable housing at the centre of urban development policies, the World Bank became increasingly engaged in affordable housing responses as a stakeholder. Thus, its role is evident considering it provides the government with grants to execute related programs and funds affordable housing schemes led by private actors or joint ventures.

However, one can argue that infrastructure projects have dominated the World Bank's interventions in urban development in Rwanda over the last decade. This is partly related to the fact that improving infrastructure is a significant component of informal settlement upgrading programs. In Kigali City, a flagship project within that category was implemented in one informal settlement called 'Agatare' located near the central business district. Under the Urban Development Project (UDP), the World Bank has funded the construction and upgrading of the local road network (Table 6.7). The project was expected to increase the size and quality of the road network within the neighbourhood, which would induce further improvement of the residential area.

Table 6.7 Summary of proposed infrastructure works in Agatare upgrading project

Area	Proposed road improvement works	Cost (in million US\$)
Agatare informal settlement	– 8 m Wide Roads = 1,200m in length upgraded to asphalt	1.00
	– 6 m wide roads = 2,840m in length using mostly cobblestones	1.50
	– 4 m wide roads = 2,220m in length using mostly cobblestones	0.90
	– 3 m wide roads = 1,320m in length using mostly cobblestones	0.50
	– 2 m wide foot path = 1,360m in length using concrete pavers	0.65
	– 1.5m wide foot path = 8,025m in length using concrete pavers	2.8
	– Public Street lighting	0.5

Source: ROR (2016a, p.5)

Under the UDP project, the World Bank seeks to enhance urban management and access to basic infrastructure in selected urban centres (ROR, 2016a). Although the World Bank requires the government to follow social safeguarding strategies to minimize the project's social effects, there is no direct linkage between unplanned settlement upgrading and improved housing affordability. Instead, there have been concerns about the social impact on households that occupied or owned affected houses (Benken, 2017). Given that such a project has no component to deal with housing affordability specifically, one could also foresee further consequences on low-income tenants due to the imminent gentrification. The city of Kigali facilitated the project implementation by undertaking tasks related to contract management and mediations between different parties (i.e., property owners, contractors and the World Bank).

Rwanda Housing Finance Project (RHFP)

Another project in which the World Bank directly addresses housing development is named "Rwanda Housing Finance Project (RHFP)". In this project, the World Bank offered to support a government's housing finance guarantee fund. The government procured a \$150 million long-term loan from the World Bank, which will be disbursed to commercial banks at a lower rate so that beneficiaries of affordable houses can access finance at a lower cost. BRD is supposed to set criteria that commercial banks will follow to ensure transparency. Whereas the World Bank will host in task team in charge of project monitoring. The World Bank and the government agreed to co-manage the fund,

whereby BRD represents the government. Although the fund was formally established in 2019, it is too early to see the impact of RHFP in terms of issuing low-cost mortgage loans to beneficiaries since this stage has not been reached. RHFP intends to be a solution to the difficult access to low-cost housing finance. According to the World Bank, the interest rates are still high in Rwanda, coupled with regulatory constraints and deposit deficiencies facing commercial banks. This means that lenders precautionary target high-income borrowers (World Bank, 2018). Hence, RHFP is expected to make housing finance more affordable and easier to access through participating commercial banks. The latter will access funds at a 6% interest rate from BRD. In turn, participating banks are expected to disburse mortgage loans at an 11% interest rate to the beneficiaries of affordable housing—which is noticeably low compared to the 18% average interest rate under normal conditions. The following table provides key details of RHFP and expected outcomes (Table 6.8).

Table 6.8 Description of Rwanda Housing Finance Project (RHFP)

Project features	Details	
Total project cost	\$150 million	Long-term loan
Funder	World Bank through IDA*	World Bank to set up a technical team to co-manager the project with BRD
Borrower	Ministry of Finance of Rwanda	On behalf of the government of Rwanda
Implementing agency	BRD	Funds to be made accessible to commercial banks at 6% interest charges.
Project objective	To expand access to housing finance to households	Households to access mortgages at 11% interest rate from different local banks

Source: World Bank (2018)

Note: *International Development Agency is one of the subsidiaries of the World Bank. Rwanda recorded an inflation rate of 1.36%, 2.43% and 7.72% in 2018, 2019 and 2020 respectively (O'Neill, 2021).

Besides the previous two examples, another way the World Bank has intervened in the affordable housing sector in Kigali was through a subsidiary institution known as the International Finance Corporation (IFC). IFC is the investment arm of the World Bank with interests in a wide range of sectors—housing being of them. The IFC identifies the affordable housing sector with opportunities and hence seeks to promote partnerships and contribute through advisory and investment in large scale projects (World Bank, 2019). To this end, IFC contribution is mainly traced to supplying funds to financial institutions. First, in 2008, it assisted the former Banque de l' Habitat in creating a mortgage refinance facility. Later in 2011, IFC also provided US\$ 5 million in funding to the Kenya Commercial Bank (KCB)—the Rwandan branch. Both interventions have targeted supporting the government's campaign to make homeownership affordable by developing an efficient and competitive mortgage market that could provide affordable mortgage loans (IFC, 2008, 2011).

In recent years, the IFC has turned to support developers by funding them directly rather than through financial institutions. For example, it is the case of a PPP vehicle, whereby the IFC has agreed to finance a major real estate project in Kigali. The consortium is labelled 'Kinyinya Special Vehicle Project' or Kinyinya SPV. The project is conceptualized as a mixed-use development and is currently at feasibility study stage. Upon completion, it is expected to produce a township of 10,000 house units, including 1,040 units in the affordable housing category, at the cost of US\$ 226 million (IFC, 2019). Apart from IFC and RSSB, other partners include BRD from the public sector side. On the other hand, private sector partners consist of two Chinese contractors who formed a merger called 'Broad Rwanda Limited' (BRL Ltd.), representing them in the Kinyinya SPV. IFC has funded the project with US\$ 76.5 million. RSSB and BRD contributed the equivalent of 81 ha situated in the Kinyinya suburb of Gasabo District. The government also covered the infrastructure cost of 13% of the total project cost, while the BRL Ltd would provide construction and infrastructure services. One should note that the proposed housing project would produce affordable housing only. Instead, it intends to develop an entirely new suburb with a mix of residential housing and commercial buildings, whereby affordable housing units would only account for 10% of the total project output (Table 6.9).

Table 6.9 Project characteristics for Kinyinya SPV

Project features	Details	
Total project cost	US\$ 226 million	<ul style="list-style-type: none"> – Long-term loan (20 years), – 45% debt, 42% equity and 13 % infrastructure cover
Funder	World Bank through IFC	<ul style="list-style-type: none"> – Loan amount US\$ 76.5 million
Borrower	Ministry of Finance of Rwanda	<ul style="list-style-type: none"> – On behalf of the government of Rwanda
Partners from the government side	RSSB, BRD	<ul style="list-style-type: none"> – Land through expropriation – Infrastructure cover
Partners from the private sector	Broad Rwanda Ltd. formed by two companies: Broad homes ltd. and BSMART Ltd.	<ul style="list-style-type: none"> – Construction technology – Construction services
Project goals	To produce a mixed-use development township with 10,000 house units	<ul style="list-style-type: none"> – 1,040 affordable apartments, – 1,232 middle-cost condominiums, – 54 ground-floor commercial lots, – 244 villas – 356 units of commercial outlets

Source: IFC (2019)

The slight difference among some of the World Bank interventions is that in the RHFP, the World Bank works more closely with government agencies—mainly the ministry of finance, ministry of infrastructure and BRD—in managing the project implementation. Whereas IFC rather intervenes as a partnering financier in joint ventures involving both public agencies and private actors. Against this background, one could argue that even if the World Bank's direct contribution to affordable housing provision has been somewhat limited in Kigali, the organization still exhibits interest in the sector. This time around, however, it has expanded its influence, funding both government programs and other resourceful private sector actors.

Skat consulting (On behalf of SDC)

The Swiss Agency for Development and Cooperation (SDC) also participates in the affordable housing sector. While SDC does not intervene directly, they are represented by Skat consulting, which is a Swiss contractor that undertakes the former's projects. SDC delegated Skat to empower the construction sector in Rwanda through pioneering climate-responsive and locally-sourced supply chains that can meet the demand for affordable housing and piloting participatory upgrading of informal settlements (Skat Consulting Ltd., 2021). Therefore, we will mostly refer to Skat consulting in our discussions, being the one running programs linked to the affordable housing sector.

Skat started its operations in Rwanda in 2013. In the same year, formal relationships with the government were established and formalized through a memorandum of understanding between the ministry of infrastructure and SDC. Skat interventions in urban development focus on producing ecological building materials seen as a potential source of off-farm jobs. A major initiative is implemented under the project called PROECCO¹¹, which envisages training and transfer of technical know-how apropos the ecological and cost-saving brickmaking techniques to the local artisans, builders and brick factories. The project period was supposed to run from 2012 to 2019.

In terms of objectives, PROECCO aims to minimize the environmental impacts of building materials production (prevalent techniques involving artisanal clay brick burning) and improve livelihoods through job creation in the construction industry (Skat, 2019). Therefore, PROECCO is regarded as a much-needed contribution to new low-cost building technology—an essential factor in cutting the production cost in affordable housing schemes. Figure 6.7 displays various ecological brick designs made under PROECCO. According to an official working on the project at Skat, the new ecological brick prototype created reduces the production cost of the popular burnt brick by half (Interview with IO03, 15 August 2019). Additionally, Skat developed a residential housing model that uses similar brick prototypes and cost-efficient designs. This model, dubbed the 'Swiss cube', provides the possibility of building an RWF 8 million single-room house unit (cost of land not included), which is less costly for a comparable house unit of the same quality (Figure 6.4 & 6.5). The same design could also be expanded to host more families, as figure 6.6 illustrates.

¹¹ A French acronym standing for 'Programme for promotion of Climate Responsive Building Materials and Off-farm Employment in the Great Lakes Region'.



Figure 6.4 An 8 million RWF single-room unit prototype dubbed the 'Swiss cube' showcased at local trade fair. (Source: Author)

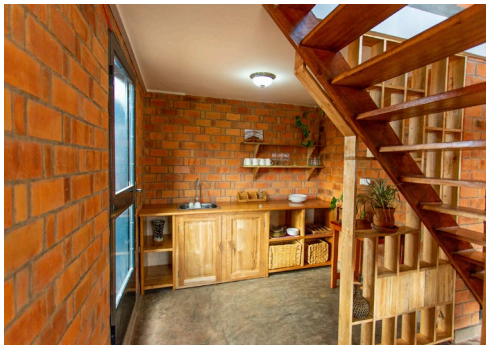


Figure 6.5 Interior of the Swiss cube model house. (Source: <https://Skat.ch>)



Figure 6.6 Construction site for a model multi-family residential block). (Source: <https://Skat.ch>)



Figure 6.7 Display of ecological brick models introduced under the SDC-funded PROECCO project. Source: Author)

After developing affordable housing models, Skat has implemented a showcase project to provide further tangible evidence of their new building technologies. This entailed a trial informal settlement upgrading project using the Swiss cube housing model. Under this project, a multi-family housing block was built to replace eight (8) single floor house units on the same site (Figure 6.6). Before the building process started, initial house-owners had pledged their land in exchange for house units in the new high-rise residential building. Apart from Skat, which undertook construction works, other contributors to the project include the city of Kigali, which assisted with basic infrastructure and sensitization. According to Skat, this project also served as a platform to transfer technical skills to local builders.

Furthermore, piloting this housing model has contributed in two ways. First, the project pioneered a cost-minimizing construction approach with the total cost for the eight house units block at RWF 100 million, which has benefited eight former house owners at the site. Secondly, the project also demonstrated the potential for partnership with landowners during informal settlement upgrading programs, which proves to be advantageous given residents' displacements are minimized. Additionally, Skat's contribution to the affordable housing sector includes the building technology (i.e., Swiss cubes) and brick typology that help reduce building cost to US\$230 per sq.m.—far less than US\$300/sq.m. benchmark required under the AHP. However, this project also highlighted some flaws in terms of limited beneficiary participation with housing recipients' discontent about design, which should not be underestimated in affordable housing projects.

In recent years, Skat has built a positive reputation thanks to its innovations and knowledge contribution to the industry. As a result, it is not uncommon for government officials to mention, for instance, Skat brick technology as a leading example that local enterprises emulate to produce locally made cost-efficient building technologies. Moreover, as an established government partner in the housing sector, Skat is also actively involved in the multi-stakeholder platform discussing housing issues, also known as the “sector working group”. Whereas their construction technologies (i.e., Swiss cube) have been integrated into the urban planning regulatory frameworks, as Skat asserts (Skat Consulting Ltd., 2021, p.11) :

It became immediately very popular in Kigali, first on social media, then among real estate developers and small construction firms, and ministers and mayors who integrated them in their urban development policies and master plans.

As further evidence of the influence of Skat innovations, their eco-bricks and construction approaches have been adopted in several government-built social housing across the country. However, one could also observe a limited trace of the same building technology among housing projects led by the private sector actors.

Cooperatives

Housing cooperatives also participate in affordable housing provision. In Rwanda, cooperatives are diverse and operate in various sectors. Law No. 50/2007 of 18/09/2007 determining the establishment, organization, and functioning of cooperative organisations in Rwanda serve as a reference for new initiatives registering as cooperative entities. The law sets out the scope for their operation. According to article 5, cooperatives are classified into five major categories in line with their respective areas of intervention: production, commercial and consumer, savings and credit, service and multipurpose organizations (ROR, 2007a). According to this law, cooperative organizations are defined as:

Associations that are physical or moral persons in nature with legal personality, based on the values of promoting their members in accordance with principles of mutual responsibility and self-help, democracy, equity and equal participation to the assets of a cooperative organization. (Cooperative law of 2007, Art.2)

With housing being both a product and a service, housing cooperatives easily fit into most categories defined by the law. This complicates the process of, without an appropriate register, identifying cooperatives that are exclusively engaged in housing production since it is possible that some could offer more than one service. The Rwanda Cooperative Agency¹² (RCA) reports that cooperatives operating in the real estate and housing sector account for less than 2% at the country level (RCA, 2019). By consulting media archives, records show that between 2015 and 2019, only two (2) affordable housing schemes have been delivered by cooperative entities. In this context, the higher presence of cooperatives in market-rate housing compared to affordable housing shows that this sector might present some challenges to these organisations.

¹² A national regulatory body in charge of overseeing governance of cooperatives. RCA reports to the ministry of commerce and industry.

During fieldwork, we were able to speak to three cooperatives (Table 6.10). One of them is an established entity that has already completed one affordable housing project. Whereas site preparation was underway to implement the second phase of the initial project. The other two cooperatives were in the process of obtaining legal personality. They have been active for at least two years but have not yet succeeded to register their initiatives as cooperatives. After spending some years on legal registration coupled with internal problems, they could not undertake their projects. Consequently, both organisations gave up pursuing cooperative identity swapping it with registration as companies instead.

In practice, the registration of companies is faster than cooperatives. But more to this is the internal governance of cooperatives that rely heavily on the general assembly. Because members must have equal shares in the capital, this structure sometimes becomes a hindrance to the decision-making process, unlike in companies where profits and voting rights are both based on the number of shares held by individual shareholders. The cooperative's general assembly would also determine how, when and how much profits would be distributed among members (ROR, 2007a). In terms of taxation, cooperative societies are not exempt from taxes. However, these could qualify for a discount depending on the nature of activities engaged in (e.g., cooperatives offering micro-finance services). Also, with most cooperatives falling in the category of small or medium enterprises¹³, they are entitled to a lower income tax rate than established companies, as described in Table 6.10. The table further gives an overview of the main differences between company entities and cooperative societies in Rwanda based on taxation, governance and profits distribution.

¹³ Medium-size business are those with an annual turnover between RWF 12,000,000 and RWF 20,000,000. Whereas small-size businesses are those that cannot make more than RWF 12,000,000 as annual turnover.

Table 6.10 Major differences between companies and cooperatives in Rwanda

	Companies	Cooperative societies
Taxes		
Trade licence tax	Ranges between RWF 60,000 and RWF 250,000 per year depending on annual turnover.	The same regime applies.
Corporate income tax	30% (only companies with annual turnover > RWF 200,000,000) <ul style="list-style-type: none"> A lump sum regime is applied to medium-size businesses (3% of the annual turnover) A flat rate regime is used for small-size enterprises (from RWF 60,000 to RWF 300,000 depending on annual turnover) 	The same regime applies.
Withholding tax on dividends	15%	No
Value Added Tax	18%	No. Except if a cooperative owns a subsidiary business entity registered for VAT.
Other differences		
<i>Primary objective</i>	To earn profits.	To provide service.
<i>Liability of members</i>	Limited to the face value of shares held.	Members of a cooperative can opt for unlimited liability, but their liability is generally limited.
<i>Membership</i>	Closes as soon as its capital is fully subscribed. Thereafter, people can buy shares at the stock market.	Membership is open and new members have to pay the same amount per share as old ones have paid.
<i>Voting rights</i>	Number of votes depends upon the number of shares and proxies held by a member.	The management of a cooperative is democratic as each member has one vote and there is no system of proxy.
<i>Profits distribution</i>	Distributed as dividends in proportion to the capital contributed by shareholders.	A minimum part of surplus must be set aside as a reserve and for the general welfare of the public. The remainder is distributed in accordance with the patronage provided by different members after paying dividend up to 10% on capital.
<i>Transferability of shares</i>	Shares can be freely transferable.	Share of cooperative society cannot be transferred but can be returned to the society in case a member wants to withdraw his membership.
<i>Members' relationship</i>	Usually drawn from different parts of the country and even from abroad or even different professions.	It generally draws its membership from a limited local area. The members have common bond in the form of profession, employer or locality.

Source: Adapted from RDB (no date); PWC (2015); ROR (2018b, 2021)

The differences between cooperatives and companies with respect to the way they function offer a glimpse of the difficulties new cooperatives face that may hamper their growth in the long run. Table 6.11 describes the three cooperatives interviewed during the fieldwork. From the table, one could note that, for most of the cooperatives, members have a shared profession and that all except one have not yet managed to complete formal registration. A more detailed discussion regarding challenges facing cooperatives is elaborated under section 6.3.

Table 6.11 Overview of housing cooperatives interviewed

Characteristics	Cooperative 1	Cooperative 2	Cooperative 3
<i>Founding members</i>	A subsidiary of military reserve cooperative	Teachers	Mix of employees and businesspeople
<i>Main activity</i>	Affordable housing developer, construction contractor	Housing	Housing
<i>Objective</i>	Build and sell houses	Houses for members	Houses for members, build and sell
<i>Registered as cooperative</i>	Yes	Not yet and thinking of registering as company instead	Not yet and in process to register as a company
<i>Relationship with authority</i>	Formal interaction with districts, RHA, Ministry of Defence	Occasional contact with the district	No interaction with any authority
<i>Achievements</i>	First project of 30 house units completed	Bought a piece of land	Bought a piece of land

Source: Author

6.3 Institutional framework for affordable housing provision

Apart from individual organisations, the institutional framework for affordable housing includes a variety of laws, policies, strategies and physical plans determining functions and relations among relevant institutions. Formal rules undergo frequent reviews and updates in response to changes in the real-world context. Table 6.12 summarises the essential regulatory documents directly linked to the housing issue at both the national and city of Kigali levels. Table 6.13 describes the underlying governance arrangements that guide actions and outcomes at different steps of affordable housing provision in Kigali city.

Legislations, policies and plans affecting affordable housing

1. Legislations

Housing is a cross-cutting issue and is directly affected by other problems such as land ownership, planning and infrastructure. In this view, different legislations are concerned with certain aspects, directly and indirectly, affecting production, delivery and access to housing (Table 6.12). In terms of land administration, the key legislations include Law No. 43/2013 of 16/06/2013 governing land in Rwanda. The latter determines procedures for land registration, property rights transfer and modes of land ownership (ROR, 2013). Besides this, Law No. 32/2015 of 11/06/2015 relating to expropriation in the public interest is another key legislation since the compulsory purchase of private land is a common medium of acquiring land for housing projects.

With regard to affordable housing development, the two most important laws are the PrimeMinisters' instructions No. 001/03 of 23/02/2017 determining government support for affordable and high-density housing (ROR, 2017b) and Law No. 06/2015 of 28/03/2015 relating to investment promotion and facilitation (ROR, 2015a). Both legislations set out government support and allocation procedures and were introduced to attract private investors in affordable housing development. The infrastructure support in housing projects is also provided under Law No.10/2012 of 02/05/2012 governing urban planning and building in Rwanda (ROR, 2012). However, it is not clear how it differs from or complements the one stipulated in the Prime Minister's instructions. There is also Law No.15/2010 of 07/05/2010 creating and organizing condominiums and setting up procedures for their registration (ROR, 2010). Although the law has been in effect for years, it has not been exploited as a potential solution to the affordable housing challenge with no evidence of affordable housing projects undertaken through this arrangement.

2. Policies

Besides legislations, various policies also guide housing development in urban and rural contexts. First introduced in 2009 and updated in 2015, the National Housing Policy (NHP) is the leading guide for housing development at the national level. It establishes the government vision and outlines objectives for housing and human settlement in Rwanda. NHP conceptualizes housing as a basic right for all citizens (ROR, 2015c). Moreover, it defines affordable housing in the Rwandan context as 'housing for which occupants do not pay more than a third of their income as rent or regular mortgage repayments' (ROR, 2015c, p. 16). National Human Settlement Policy (NHSP) (2007) is another policy. NHSP sets out a roadmap to improve urban human settlements (ROR, 2009). In reference to affordable housing, NHSP promotes low-cost housing production through the use of locally produced materials (ROR, 2009).

3. Strategies and plans

From the early 2000s, the government have set a 20-year development agenda. This was also known mainly as "Vision 2020", the first of its kind in post-genocide Rwanda. As a long-term strategy, Vision 2020 outlined devolvement objectives and implementation mechanisms. Through this strategy, the country mainly aimed at reducing poverty incidence and achieving a middle-income status country by 2020 (ROR, 2000)—despite progress in reducing the poverty rate (World Bank, 2015a), the overall goal was not achieved. Whereas in terms of urban development, vision 2020 considered rapid urbanization as an opportunity to stimulate economic growth. It projected urbanization at the national level to reach 30% by 2020 (ROR, 2000). To this end, an interventionist planning approach would facilitate a smooth urbanization process with the help of the master plan. While Vision 2020 has mainly underscored the need to enhance the quality of urban areas to support economic growth, it did not feature any explicit reference to housing, nor did it include a closely related indicator. Towards the expiry of "Vision 2020", a new strategy was conceived. The "Vision 2050" expanded on the former to set Rwanda's development objectives until 2050.

Unlike the previous strategy, vision 2050 is precise, containing housing-specific objectives. In this vein, Vision 2050 envisages that the share of the population living in inadequate housing conditions will fall from 62.6% in 2017 to 20% in 2050, and urbanization will reach 80% in the same year (ROR, 2015e). While Vision 2050 was drawn up with an extended timeframe, a short-term strategy is also in place. This is called the 'National Strategy for Transformation Phase 1' (NST1), extending between 2018 and 2024. NST1 aims to support housing provision and targets 15,000 affordable house units

by 2024 (ROR, 2018e). In terms of sectoral strategies, the Informal Settlements Upgrading Strategy (ISUS) was enacted in 2016. The ISUS devises ways to upgrade informal settlements in cities across Rwanda, and its main objective is to integrate housing in informal settlements into formal affordable housing stock (ROR, 2016b). From a policy perspective, informal settlement upgrading is seen as one way to improve housing affordability. While improvements in the road network and public transport in peripheral areas could relieve people from the pressure to seek shelter in high-rent well-placed central neighbourhoods, it remains unclear how improving the quality of neighbourhoods in central areas contributes to affordability. Instead, it raises concerns over the likely deterioration of affordability linked to gentrification. Thus, we choose to be cautious about affirming the upgrading of unplanned settlements as one of the strategies used for affordable housing provision.

Table 6.12 Legislations, policies and plans relevant for affordable housing provision

Category	Year	Objective/function in reference to housing	Administrative level	
			National	Kigali city
Legislations				
Prime Ministers' instructions determining state support for affordable housing projects	2017	Finance of basic infrastructure required and their implementation (Art.3); Recipients of affordable housing must be first-home buyers with an annual income not over a threshold determined every two years (Art.7)	●	
Investment facilitation law	2015	Offers qualifying affordable housing developers up to 50% corporate income tax discount	●	
Law relating to the expropriation in the public interest in Rwanda	2014	Confers power to the government for compulsory purchase of privately owned land in the public interest (Art. 3); Considers activities linked to the implementation of land use and development master plans as part of public interest (Art. 5)	●	
Organic land law	2013	Determines procedures for land registration, land transfer and modalities of land ownership in Rwanda	●	
Urban planning and building law	2012	Establishes the urban development fund, which finances infrastructure cost in housing projects (Art.11)	●	
Law creating and organizing condominiums	2010	Defines rights and obligations of co-owners in condominium associations (Art.9 & 11); Sets out procedures for registration of condominiums associations in Rwanda (Art.8)	●	
Policies				
National Housing policy	2015	Recognizes housing as basic right for all citizens (p.12); Housing is affordable when not more than a third of income is spent on it (p.16)	●	

National Human settlement policy	2007	Supports low-cost housing production through use of local materials (p.30)	●
<i>Strategic & physical plans</i>			
Vision 2050	2018	Set the target to reach 70% of urbanization at national level. Share of population living in inadequate housing to fall from 62.6% (2017) to 44% (2035) and to 20% (2050).	●
National Strategy for Transformation I (2018-2024)	2018	Set the target of delivering 15,000 affordable housing units by 2024 (p.48).	●
National land use guidelines	2017	Zoning for urban areas to prevent slum incidence and support affordable housing (p.50).	●
Informal urban settlement upgrading strategy	2016	To integrate housing in informal settlements into formal affordable housing stock (p.26).	●
Kigali city development plan (2013-18)	2013	Targeted 3,000 affordable housing units by 2018 (p.67). Goal: 60% of housing stock shall be affordable by 2035 (p.12)	●
Kigali city Master Plan	2013	Promotes mixed income, mixed use, high density affordable housing around employment centres and public transit corridors (p.XVI).	●
Vision 2020	2000	Emphasis on shift from uncoordinated to planned urbanization through master plans. Targeted 30% of urbanization countrywide in 2020 from 10% in 2000. The state to catalyse efficient private sector led provision of services and products.	●

Source: Official government documents

Given the centralized nature of governance, very few policy instruments are administratively conceived and enforced at the Kigali city level—considered a local administrative level in Rwanda’s context. In this view, a few exceptions include the Kigali City Master Plan (KCMP) and the City Development Plan (CDP). In the former case, KCMP is a blueprint for the envisioned city’s development by 2040 (COK, 2013c). It supports the redevelopment of informal settlements into planned areas, emphasizing high density and segregated land uses. More to this, KCMP envisaged that 60% of the housing stock across Kigali would be in the affordable housing category (COK, 2013c). The CDP 2011-2018 identified the main development challenges for the City of Kigali and designated priority areas, hence where to concentrate interventions during the timeframe set. In line with affordable housing, CDP recognizes affordable housing shortages admitting that an estimated annual deficit of 30,000 house units is a significant challenge for the city (COK, 2013a). In terms of responses, the city’s authority targeted delivering 3,000 house units by 2018, as elaborated in CDP (COK, 2013a). However, the city failed to achieve this objective, considering that only around 500 affordable housing units have been completed by mid-2019.

Institutional arrangements in affordable housing provision

After discussing the regulatory context for the housing sector, in this section, the attention is turned to the governance structures that define affordable housing development. The discussion here is concerned with how economic activities in that process are coordinated within an institutional context. In other words, we intend to assess how transactions between actors are defined and governed within the affordable housing production process. In this view, we draw on the work of some authors (see Van Der Krabben, 1995; Alexander, 2001; Buitelaar, 2007) to distinguish three forms of coordination: market, hierarchical and relational¹. In the market, participants are considered equal, with the price mechanism being the sole factor determining their behaviour (Alexander, 2001). Under the hierarchical arrangement, on the other hand, the rules made by the powerful actor (i.e., central government) determine the conduct of other actors (Verhage, 2002). Lastly, relational arrangement denotes that certain activities are coordinated through a different structure than conventional market or hierarchies, which is rather based on relational contracting or exchange (Buitelaar, 2007). The housing development process does not occur within purely market, hierarchical or relational coordination arrangements (Verhage, 2002). Instead, there is

¹ Also referred to as social networks (see for example Van Der Krabben (1995, p. 74).

often a mixture of different coordination mechanisms, as observed in the context of Kigali city. Table 6.16 offers a summary of institutional arrangements, rules in use and actors involved by activities in the affordable housing development.

Land acquisition

In Kigali, like in the rest of Rwanda, most of the land is held by individuals under leasehold from the government. Table 6.13 illustrates the distribution of land parcels in Rwanda by ownership type and tenure category. It shows that most of the land parcels are held under private ownership, corresponding to more than 80% of all registered land parcels across the country. However, the government maintains authority over land ownership, given that a large share of the population (97%) owns their land under an emphyteutic lease (Table 6.13). The organic land law of 2013 defines land tenure types and associated bundles of rights and sets out the conditions to upgrade from leasehold to freehold (ROR, 2013). The leasehold term ranges between 20 and 99 years depending on land use in exchange for the annual lease fee determined based on location and plot size (ROR, 2007b). Table 6.14 summarises the bundle of rights assigned to different tenure types. For instance, land located in an area designated for residential use is entitled to a leasehold not exceeding 20 years. Nevertheless, interested and eligible landowners can also apply for freehold titles, which they would acquire once they have met the conditions stipulated in Law No. 43/2013 of 16/06/2013 governing land in Rwanda (ROR, 2013).

Table 6.13 Distribution of land parcels by ownership and tenure typologies in Rwanda

<i>Distribution by ownership</i>		
Ownership type	Total parcels	Per cent share
Total land parcels registered	11,421,656	
Privately owned	9,346,205	81.8%
State owned	2,075,451	12.2%
<i>Distribution by tenure types</i>		
Leasehold	11,167,093	97.8%
Freehold	254,563	2.2%
Registered as condominium	18	0.0%

Source: Adapted from Ngoga (2016)

Table 6.14 Bundles of rights assigned to different land ownership categories in Rwanda

Category of land	Tenure typology	Bundle of rights
<i>Individual land</i>	Freehold title (certificate of full ownership)	Absolute right to occupy; to use; to rent; to transfer through inheritance, sale, gift, mortgage; to use as collateral for loan.
	Conditional freehold	Conditional right to occupy; to use; to rent; to transfer through inheritance, sale, gift, mortgage; to use as collateral for loan. Usually issued to facilitate qualified investors and those who already completed half of the land development.
	Emphyteutic lease of 99 years with Certificate	Real right to occupy; to use; to rent; to transfer the lease terms (remaining years) through inheritance, sale, gift, mortgage; to use as collateral for loan.
	Emphyteutic lease of 20 years for residential land, with Certificate (in urban areas)	With building permit as a precondition, right to occupy; to use; to rent; to transfer the lease terms (remaining years) through inheritance, sale, gift, mortgage; to use as collateral for loan.
	Emphyteutic lease of 30 years for commercial and industrial land, with Certificate (in urban areas)	With building permit as a precondition, right to occupy; to use; to rent; to transfer the lease terms (remaining years) through inheritance, sale, gift, mortgage; to use as collateral.
<i>State land</i>		
(1) Private State-owned land*	Freehold title (all state land is held under freehold regime)	Right to occupy, to use, to transfer the lease terms (remaining years) through inheritance; to use as collateral for loan.
	Emphyteutic lease of 30 years for commercial, industrial, scientific, social and cultural activities.	Right to occupy, to use, to transfer the lease terms (remaining years) through inheritance, to use as collateral for loan.
	Emphyteutic lease of 20 years for approved residential activities.	Right to occupy, to use, to transfer the lease terms (remaining years) through inheritance; to use as collateral for loan.
	Emphyteutic lease of 15 years for approved activities in waterways (like fishing)	Right to occupy, to use, to transfer the lease terms (remaining years) through inheritance; to use as collateral for loan.
(2) Public State-owned land	Certificate of ownership for public institution/administration	Real right to occupy and use. It is prohibited to transact the public domain unless it is transferred by the law to private State-owned land

Source: Adapted from Ngoga (2016)

Note: * Private state and parastatal, Kigali City and District owned land allocated for investment or for social purpose, including swamp land.

Acquisition of land for affordable housing can be acquired via purchasing land owned by individuals or the government. In practice, however, land has been mainly acquired through a hierarchical process entailing the compulsory purchase of privately owned land. In that process, the government acts as a facilitator, as asserted in Law No. 32/2015 of 11/06/2015 relating to expropriation in the public interest (ROR, 2015b). Housing projects require a vast amount of land, which cannot be easily found under single ownership. Consequently, assembling a sufficient area of land requires negotiating and buying individual small plots and then adjoining them together—a process enabled by the ability of the government to dispossess individuals' land in the public interest. The expropriation law of 2015 determines the circumstances for undertaking expropriation in the public interest (ROR, 2015b). The same law confers the government the power to acquire and influence negotiations between landowners² and the developer looking for land. Therefore, land acquisition and assembly involve a mixture of market and hierarchical arrangements. However, acquiring individual land through that mechanism has often led to controversies between city authorities and landowners.

On the one hand, landowners accuse Kigali city council of favouring investors and depriving them of their constitutional property rights. In this respect, they argue that real estate investment cannot be regarded as a public interest affair (Mireille, Masengo and Knox, 2014). On the other hand, the city authority emphasizes the need to undertake the compulsory acquisition of private land for the benefit of implementing master plan objectives, including mass development of affordable housing. Developers have clear motivations to welcome the expropriation approach since the government offers to manage the expropriation and transfer of ownership (Goodfellow, 2014). The latter requires significant effort and a lengthy bureaucratic process that adds to constant problems of contested land ownership and unclear plot boundaries.

Labour and building materials procurement

Unlike in the case of land, the labour and building materials are procured exclusively via public tender. In this case, there is no influence whatsoever from the administrative institutions. The transacting parties vary from government entities (i.e., government-run projects), private builders, construction professionals, and building materials suppliers. There is a strong belief that the housing problem is closely connected to expensive

² In Kigali, not all owners of land are in middle class. The largest area of the city is dominated by agriculture, mostly in subsistence form. As the city grows out most low-income landowners sell their land (or get expropriated) to give way to new economic uses. Similarly, some landowners in the urban core's informal settlements are at risk of expropriation when they fail to upgrade their houses to the required standards.

construction materials. The high production cost of housing is attributed to the limited local production of essential building materials, as the national housing policy emphasises (ROR, 2015c). The same is also underscored in the PrimeMinisters' instructions No. 001/03 of 23/02/2017 determining government support and Law No. 10/2012 of 02/05/2012 governing urban planning and building (ROR, 2012, 2017b). Table 6.15 provides a comparison of the cost of essential construction materials across a select of African cities. The numbers show that the cost of cement in Kigali is double that in Pretoria (South Africa) and almost three times that in Lusaka. Whereas the cost of Timber is two times more expensive in Kigali than in the neighbouring country cities of Dar Es Salaam (Tanzania) and Kampala (Uganda). However, stone and steel cost less in Kigali than in Pretoria (Table 6.15).

Table 6.15 Comparison of the cost of building materials across some African cities

	Kigali	Pretoria (SA)	Dar Es Salaam (Tanzania)	Lusaka (Zambia)	Accra (Ghana)	Casablanca (Maroc)	Kampala (Uganda)
Cement (\$)	1,533	695	773	662	1,126	953	1321
Ceramic (\$)	301	295	259	375	904	451	647
Electrical (\$)	680	640	902	636	1,500	1,007	774
Sand (\$)	202	441	180	126	268	273	451
Steel (\$)	2397	2527	3300	2473	2065	5,038	3,069
Stone (\$)	136	299	279	126	274	372	229
Timber (\$)	343	189	170	168	229	136	182

Source: Based on CAHF* housing cost benchmarking data (Gardner and Pienaar, 2019)

Note: CAHF: Centre for Affordable Housing Finance in Africa.

Estimations were made for a generic formal house in Africa. CAHF defines as 'a 46m² two-bedroom, one-bathroom house with a 9m² balcony (making a total built area of 55m²), built on a 120m² stand and provided with basic municipal or on-site services: water, sanitation, road access and an energy source' (Gardner and Pienaar, 2019, p. 3)

In response to the high costs of building, the government of Rwanda proposes some remedies. A prominent solution consists of supporting the increased use of locally produced materials. In this respect, policy-supported campaigns such as 'Made in Rwanda' were introduced to promote that strategy. The made in Rwanda policy sets out incentives for enterprises if they engage in the production of construction materials (ROR, 2017a). While the link between lowering construction costs and producing affordable housing is obvious, what is not is how the use of local materials would lead to affordable house prices. One example is that locally produced cement and floor tiles cost more than imported similar items, as we observed during fieldwork.

Planning approval

At this stage, the housing project developer must apply for permission from the City of Kigali to undertake construction activities. This exercise is exclusively hierarchical as state institutions in charge of urban planning set the rules determining the final building permit decision. The city of Kigali approves affordable housing development through a specialized department called the 'one-stop centre'. The Ministerial Order No.06/CAB.M/018 of 08/06/2015 determines the instructions for categorisation of buildings, conditions and procedures for applying for building permits. Affordable housing³ falls into the residential building category, hence is subject to the same order's building permit application requirements on buildings in that category (ROR, 2018c). The building permit is issued based on the completeness of the application, compliance to the Master Plan in terms of location-specific zoning requirements and the Rwanda Building Code on whether proposed construction technology and materials meet the standards (COK, 2013c; ROR, 2019c). Although fewer requirements could apply in house renovation at the individual household level, all construction projects face nearly the same building permit process. A general observation is that many houses in unplanned settlements need to undergo renovation. But, with the lack of a comprehensive approach to facilitate that exercise at a larger scale, it could be a hindrance when an individual or a community group would like to carry out housing upgrading beyond a single household level.

³ Ministerial Order No.06/CAB.M/018 of 08/06/2018 also determines procedures for refurbishment, occupancy or demolition of existing buildings.

Table 6.16 Institutional arrangements in affordable housing development

Activity	Institutional arrangement	Rules in use	Actors
Land acquisition	Hierarchical, Market	<ul style="list-style-type: none"> – Compulsory purchase of privately owned land. – Market value compensation. 	Developer, COK/Districts,
Labour and materials procurement	Market	<ul style="list-style-type: none"> – Public tender. 	Landowners Developer, Suppliers
Planning approval	Hierarchical,	<ul style="list-style-type: none"> – Compliance with master plan & zoning regulations. – Meeting building permit requirements. 	COK
Finance	Market	<ul style="list-style-type: none"> – Loan repayment capacity. – Adjustable interest rates. 	BRD, Developers, Beneficiaries
Construction	Market, Hierarchical, Relational	<ul style="list-style-type: none"> – Minimum building cost per unit: \$300/square meter – House sell price to be <RWF 35 million. – Density: 50-120 units per Ha – Need to be 25% higher than the prescribed density. 	MININFRA, RHA, BRD, RSSB, Private developers, Cooperatives
Infrastructure (Government support)	Hierarchical	<ul style="list-style-type: none"> – Applicants to meet eligibility criteria – Approval of funding granted via a centrally administered process. 	National Approval Committee, RHA
Prospecting beneficiaries and allocation process	Hierarchical, Market	<ul style="list-style-type: none"> – Beneficiaries selected through market rules (ability to afford finance) and hierarchical process (eligibility screening). – Beneficiaries must earn between RWF200,000 and RWF 1.2 million and be the first homebuyer. – An initial deposit of up to 30% of the total house price required. 	Developers, RHA, BRD, COK/Districts
Tenure rights	Hierarchical, Market	<ul style="list-style-type: none"> – Conditional ownership. – Re-sale not allowed before 10 years. – Renting out a house is permitted. 	RHA, MINERENA, Beneficiaries

Source: Author elaboration based on government official documents

Finance

Access to finance is a precondition for any housing project to be successful. In Rwanda, the NHP asserts that the government will collaborate with private financiers to initiate different mechanisms to finance both providers and end-users of affordable housing (ROR, 2015c). As such, the financial sector is dominated by commercial banks and microfinance institutions. Even if local financial institutions are the main source of finance for individuals or large enterprises venturing into the construction industry, their contribution to affordable housing delivery has remained limited. In a bid to fill the gap, Rwanda Development Bank (BRD), a government subsidiary, has been active in funding the supply-side of the affordable housing sector. On the other hand, end-users mostly use commercial banks to acquire loans to fund the purchase of housing. In this view, finance for demand and supply sides has been provided under exclusively market arrangements. Some of the criteria used to assess eligibility for loans include the borrower's credit repayment capacity, and once the loan is issued, it is subject to adjustable interest rates. The latter particularly worries developers due to likely interest rate fluctuations that would increase project costs. In contrast to the current housing finance structure, the newly introduced 'Rwanda Housing Finance Fund'—a partnership between the government and the World Bank—envisages an alternative strategy to improve access to finance for end-users of affordable housing. That way, a hybrid process made of both market and hierarchical arrangements will help both the government and commercial banks to jointly examine eligibility and allocate finance to the beneficiaries in need.

Construction and infrastructure provision

All forms of institutional arrangements are relevant during the construction of affordable housing. Private developers are the prominent actors, and a large part of their operations is coordinated through the market arrangement. Also, with some public agencies intervening in housing projects such as BRD and RSSB, their activities are subject to hierarchical decision-making. For example, whenever either of these organisations undertakes housing projects, they have to be endorsed by the parent ministry (i.e., the ministry of finance and economic planning (MINECOFIN) in both cases). In the end, a relational form of governance is also relevant as some modes of housing provision involve relational contracting (i.e., Public-Private Partnerships) and social networks (i.e., cooperatives) as a strategy of self-governance.

Provision of infrastructure is also crucial when implementing a housing project. During affordable housing development, basic infrastructure (i.e., roads, water and electricity) must be provided alongside the construction of houses. Infrastructure is subsidized to lower the housing project delivery cost, which developers would normally bear. As a result, the government covers up to 30% of gross development costs. The cover is considered sufficient to cover the infrastructure costs at the affordable housing site. However, developers are subject to meeting some conditions to secure the incentive. Article 12 of the PrimeMinisters' instructions determining government support for affordable housing development defines the requirements (ROR, 2017b). This exercise is subject to some administrative procedures to ensure suitability. A National Approval Committee (see Section 6.4) oversees the issue of infrastructure subsidy while RHA monitors the execution and performance of the construction works. However, with no mechanisms in place to capture value-increase on housing projects with government-funded infrastructure (including market-rate housing projects), it remains uncertain how the subsidy could be sustained to fund future affordable housing projects. In brief, the construction process is coordinated through a mix of the three types of institutional arrangements. Whereas hierarchy constitutes the primary coordination mechanism for infrastructure provision in affordable housing projects.

Prospecting beneficiaries and allocation of house units

Beneficiary selection is another essential step in the affordable housing provision exercise. Activities at this stage are undertaken under both hierarchical and market arrangements. In the former case, because not everyone is entitled to state-sponsored housing, there are rules determining who is eligible to ensure equity in allocating house units. Some of the rules include, for instance, that the applicant beneficiary should earn a monthly income of not more than RWF 1.2 million and not less than RWF 200,000 and should not possess another real estate. Furthermore, as already highlighted in the previous chapter, different public institutions oversee the screening of beneficiaries to ensure equity and transparency in the allocation of affordable house units. As a result, the process is subject to further rules that those agencies could set. Identifying beneficiaries also involves some aspects of market institutions. In one way, because the activity is closely connected to the processes in mortgage finance, the applicant must meet the market conditions to obtain the required funds for house purchase. In addition, according to the Prime Minister's instructions on state support for affordable housing, the developer must submit the list of potential beneficiaries. In this case, developers apply

the 'first-come, first-served rule and select applicants based on their own rules—which also implies the influence of hierarchical mechanisms.

Tenure rights

In the Affordable Housing Program (AHP), the allocation of house units is coordinated through a mixture of both market and hierarchies, as shown in the previous section. Once house units have been allocated, some rules define the framework of property ownership. At this stage as well both market and hierarchies define tenure rights. The program promotes homeownership over rental tenure. However, even if houses are bought with private funds, conditional ownership is imposed to avoid rent-seeking practices (e.g., house re-sale for personal gains). In respect, the owner cannot sell the allocated house before ten (10) years are elapsed but can still rent it out at market rates (ROR, 2017b). Lack of restrictions on rents for houses provided under the government affordable housing program raises concerns over whether, in case owners decide to rent out, built houses would still respond to the affordability problem they were built to address. At the same time, it hints at how responses are simply limited to owner-occupation housing challenges, misusing the opportunity also to address the lack of affordable rental housing.

6.4 Affordable housing provision in policy versus the practice

Typologies of affordable housing

The National Housing Policy (NHP) of 2015 describes the context and modalities inherent in affordable housing development. It broadly defines affordability as financially and administratively accessible housing (ROR, 2015c). Moreover, it contends that affordability depends on household income for different social groups, house unit cost, funding for infrastructure and end-users' finance. In an attempt to provide more clarity, NHP stipulates the conditions for housing to be considered affordable:

For a housing development scheme to be considered affordable, it shall offer such types of units which are in accordance with the real income structure in the concerned area. As an indicative orientation access to housing is considered affordable, if about a third of the income is spent on it. (ROR, 2015c, p. 16)

Based on the above definition, the income structure within the housing project area should be considered to set house prices/rents matching the affordability level. Also considered is the affordability benchmark. In this case, a 30% house cost-to-household income ratio (or rent-to-income ratio) is set as the official standard. The income is

determined based on the combined net earnings of spouses for married households or the individual buyer in the case of single a household. Both indicators, in theory, should be the basis for setting reasonable prices (or rents) after assessing the affordability of houses to the people living in the surroundings of the proposed project. In practice, however, we could not find evidence that sale prices of finished houses are determined based on income structure in the project-specific area. Instead, the general rule of thumb is that affordable houses should be sold at prices ranging between RWF 6 million and RWF 35 million. This rule appears in guidelines explaining procedures to obtain government support for affordable housing, but the price range was also confirmed during an interview with an official at the government body in charge of housing.

NHP proposes various institutional responses to reduce the magnitude of affordable housing shortfall. Table 6.17 describes different typologies of affordable housing based on the need and circumstances of targeted end-users as stipulated by the housing policy. These typologies include housing accessible to urban populations with low and irregular income and housing accessible to students. The former seeks to address the housing needs of those who cannot afford market rate housing due to limited income. While this typology represents a critical response to an existing problem, it also creates contradictions between the policy and practices. To this end, the question is whether affordable housing realistically benefits low and irregular income if many government documents refer to a monthly income range of RWF 300,000 to RWF 1.2 million, which is benchmarked against households' ability to qualify for mortgage finance. Furthermore, the experiences of low-income tenants elaborated in the previous chapter further enhance that affordable housing primarily targets regular income earners, not the low-income groups. NHP also provides that this typology will be provided through different mechanisms such as real estate developers, owner-builders and cooperatives. Private developers constitute the dominant formal channels of delivering affordable housing schemes. Owner-builders are also an important source of accommodation though they are not considered as a distinctive strategy in the housing policy.

Table 6.17 Policy defined affordable housing typologies and targeted groups

Typologies	Targeted group	Designated mode of delivery
(1) Housing accessible to urban population with low and irregular income	Low- and irregular-income earners	Real estate developers, Owner-builders, Cooperatives
(2) Housing accessible to students	Students	Private developers, educational institutions

Source: Adapted from ROR (2015b)

Another category of affordable housing entails housing accessible to students. Although the NHP describes this typology as a distinct response to student housing shortages, such interventions are relatively rare in practice. We could not find any evidence of an affordable housing project of a similar kind by far, looking at completed projects, those in the planning stage or under construction. At the same time, limited knowledge about the nature of students' housing needs could also be one reason for the low interests of investors, albeit this alone is not enough to explain the lack of interventions in affordable housing for students. Based on past experiences, a few universities, mainly public-owned, were able to develop a limited number of hostels for their students. However, it was never done within the framework of the affordable housing program. In the absence of sufficient student accommodation, students are left with no option but to find accommodation in the private rental housing market mostly located in unplanned settlements surrounding campuses. Therefore, the student rental sub-market cannot be distinguished from the rest of the rental housing market. Also, besides the narrow reference in the NHP, other policies/legislations on affordable housing provision do not include students among priority end-users of government-supported affordable housing.

Government incentives for affordable housing development

As already introduced in previous sections of this chapter, the government offers support to those interested in affordable housing development. But the support would be granted only upon meeting some predetermined eligibility criteria. Government support for affordable housing developers can be classified as fiscal support through tax discounts and subsidies to cover the cost of basic infrastructure in the affordable housing project. The Former category of support is determined by Law No. 06/2015 of 28/03/2015 relating to investment promotion and facilitation. Article 3 identifies low-cost housing as one of

the priority economic areas in which new investments must be encouraged. As a result, the government gives investors in low-cost housing a preferential corporate income tax rate of 15% (ROR, 2015a), representing a 50% discount from the original rate. In a context where affordable housing is regarded as a viable investment opportunity, fiscal support is expected to attract investors into the sector. Eligibility assessment and procedures for issuing government support are determined by the ministry in charge of housing (i.e., the ministry of infrastructure).

The basic infrastructure cost cover is established by the PrimeMinisters' instructions No.001/03 of 23/02/2017 determining the conditions and procedures for obtaining government support for affordable and high-density housing projects. As it can be understood, the same instructions determine support for both affordable housing and high-density housing projects. While the law does not explain why these two aspects are combined, one could argue that such a move is intended to encourage developers to build a wide range of housing, taking advantage of density. However, the same instructions also leave it up to the developers to choose between two options: building only market-rate housing as long as density requirements are met or mixing market rate and affordable housing. The Prime Minister's instructions set different eligibility criteria for high-density and affordable housing, but both are entitled to similar incentives, as shown in Table 6.18. Article 3 stipulates those private developers or cooperatives can qualify for either full financing of the basic infrastructure or implementation of the infrastructure required within the affordable housing project area. Both kinds of support are basically the same, albeit in the latter case, the government is responsible for implementing the infrastructure. Since the government does not undertake construction, a subcontractor is hired for the task. The value of government support towards infrastructure is equivalent to 30% of the total development value (Interview with PB04, 26 June 2019).

Table 6.18 Eligibility criteria for government support for affordable housing and high-density housing development

Affordable housing project eligibility criteria (Article 5)	<ol style="list-style-type: none"> 1. The project must offer a variety of housing unit categories and sizes 2. The project must exceed the minimum required number of units per hectare as provided for by urban planning code by at least twenty per cent (25%) 3. The housing unit shall not exceed a total floor area of 95 square meters or total floor area that shall be determined by the Ministerial Instructions where necessary 4. The building must be constructed using locally mined and produced or locally prefabricated materials as far as possible 5. The developer includes a capacity building and on-site training 6. The developer contracts local or national small and medium enterprise for more than half of the construction works 7. At least one of the following three (3) criteria is fulfilled: <ol style="list-style-type: none"> a. The cost per square meters of one housing unit, excluding the cost of public infrastructure, is below the value set by the Minister in charge of housing once in every two (2) years b. The developer offers an affordable payment mode to the targeted beneficiaries and enables the beneficiary to purchase or rent one of the offered housing units c. The developer is a cooperative formed by individual land holders of the housing planning area. The members of the cooperative must fulfil requirements specified in Article 7 of these instructions
High density housing project eligibility criteria (Article 6)	<ol style="list-style-type: none"> 1. The number of units contained in a high-density housing development shall be determined by separate instructions by Minister in charge of housing at least once every two years 2. The project must exceed a minimum required number of units per hectare as provided for by urban planning code by at least twenty-five per cent (25%).

Source: Adapted from the Prime Ministers' instructions No. 001/03 of 23/02/2017, Art.6 & Art.7 (ROR, 2017b)

Governance of incentive provision is mainly administered at the ministerial level. Article 10 of the instructions establish the national affordable housing and high-density housing support approval committee. This committee is responsible for assessing and authorizing the allocation of government incentives. The committee's permanent members include: permanent secretaries of ministries of infrastructure, in charge of local government, finance and economic planning, land and natural resources, plus the executive secretary of the city of Kigali and concerned districts and the head of Rwanda Housing Authority (ROR, 2017b). The last one serves as secretary of the committee chaired by the ministry of infrastructure. Figure 6.8 displays the administrative process for assessing the eligibility for the government support offered to affordable housing providers. When applying for support, developers must go through a four-step process administered at four different administrative levels. Whereas the final decision is made at the top of the hierarchy.

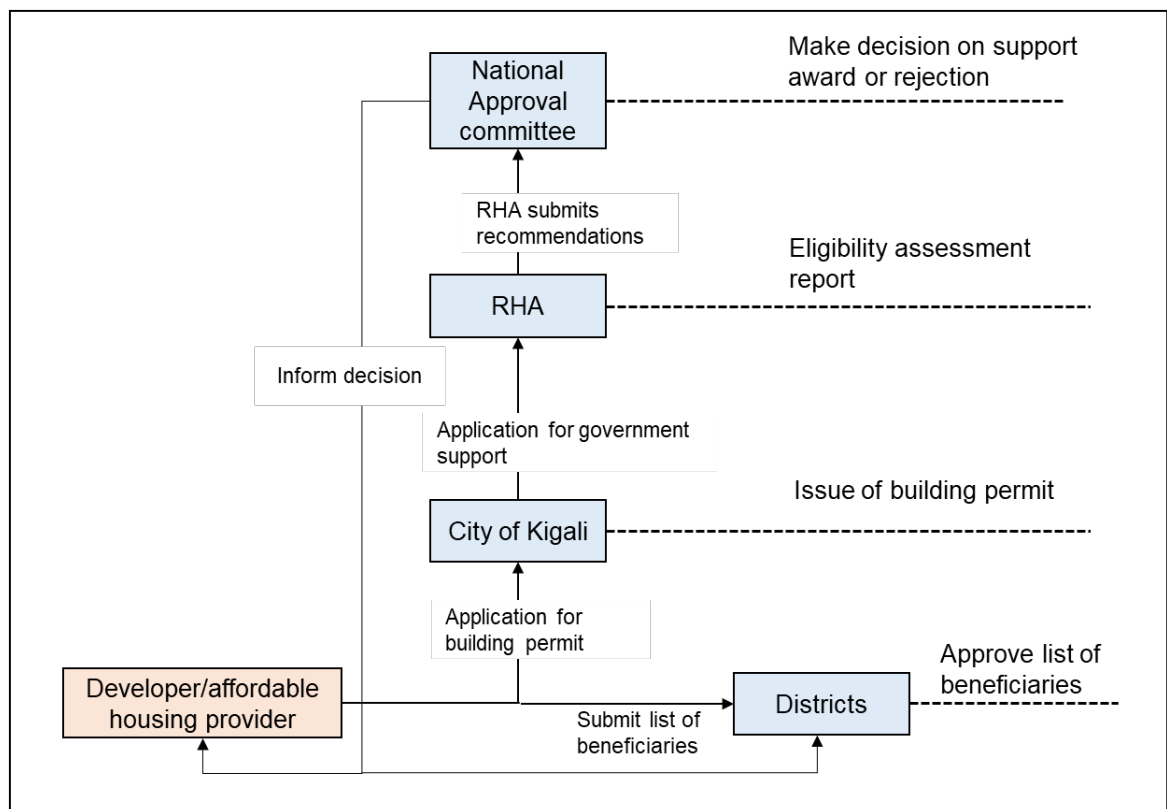


Figure 6.8 Administrative process for assessing eligibility for government support for affordable housing projects.

Source: Elaborated by the author based on Prime Ministers' instructions No. 001/03 of 23/02/2017 (ROR, 2017b).

The first step entails applying for a building permit in the city of Kigali. This stage is independent of the following three because the building permit is issued based on project suitability to the master plan. Hence, carrying affordable housing label does not seem to offer any added advantage. The next phase entails compiling a list of potential beneficiaries of the housing projects that must be submitted to the district for approval. In the third step stipulated in articles 12, 13, 14 and 15 of the Prime Ministers' instructions, the applicant must compile required documents, including a building permit, and submit a complete file to the Rwanda Housing Authority (RHA). At this stage, RHA assesses the suitability of the proposed affordable housing project. Then within the next 60 days, RHA has to submit a report with details on the nature of the proposed support to the national approval committee. In the final round, the inter-ministerial committee will sit and decide on whether to grant (or not) the requested support, followed by communicating the outcome to the applicant and concerned district (one in which the project is located) within the next 28 days (ROR, 2017b). According to these instructions, government support can only be granted when the project is already undergoing as article 14 points out:

The application file for special support from the Government for Affordable housing development may be submitted at any time during the implementation of an authorized housing neighbourhood development scheme. (ROR, 2017b, p. 198)

The timing for issuing government support is a critical factor in the effective delivery of affordable housing. If the rationale for seeking extra help from the state is based on the need to develop low-cost housing, it implies that such support must be counted in the overall development cost. The same applies when conceiving the project's physical features (e.g., design, land size) that impact the overall cost. That way, given that the developers face uncertainty regarding the outcome of their application until the project is already undergoing, it raises two concerns. First, the developers may start a project as a typical market-oriented housing project and try their chances to apply for government support, changing the project to the affordable housing category as their second-best alternative. Second, developers may start with the affordable housing project idea in mind but later are compelled into a tricky situation, having to bear all costs if their application for government support is rejected. Both scenarios reiterate the planning challenges encountered by developers, which could also increase the risk perception vis-à-vis investing in affordable housing. A more elaborated discussion about the implications of the structure of government incentives provision is covered in the next section.

Strategies for provision of affordable housing

In section 6.2, we have shown that the affordable housing arena attracts the interest of diverse actors. These were classified along the lines of the public, private and third sectors. This section explores the formal strategies for affordable housing provision, as outlined in the National Housing Policy (NHP). Therefore, discussions will give much emphasis on the main actors leading housing delivery. Table 6.19 provides a detailed overview of the major strategies through which affordable housing is delivered, participating actors and the nature of government support as prescribed by the housing policy. In this respect, the strategies are categorized as private sector housing, public housing, public-private partnerships led housing and housing cooperatives.

1. Private sector housing

Under this strategy, the private sector is entrusted with the responsibility to deliver affordable housing with minimal government support. According to the government, the private sector possesses capital and expertise, which are two essential resources needed to increase the supply of affordable housing. For this reason, NHP describes private sector investments as a precondition to the successful supply of needed affordable housing (ROR, 2015c). As already illustrated in section 6.3, private sector stakeholders include mainly real estate developers (both local and foreign) and financiers like commercial banks. While the role of market actors in housing provision is emphasized, the government also concedes that, without some form of support, developing realistically affordable housing is difficult. As a response to these concerns, the government offers some incentives to support eligible developers in reducing the cost of implementing affordable housing. Government incentives include funding for basic infrastructure at the housing project site and fiscal subsidies.

Table 6.19 Strategies for affordable housing delivery and institutional support

Strategy	Participating actors	How strategies are referenced in policies	
		Description	Government support
1.Private entities	Foreign investors, Local companies	<i>2015 National Housing Policy:</i> pg.37- Mobilisation of private investment is a precondition to the success of increased affordable housing supply.	<i>2017 Prime Minister's instructions:</i> Art.3- Full finance for or implementation of basic infrastructure. <i>2015 investment promotion law:</i> (pg.28-30) - Corporate income tax discount of 50%
2.Public institutions	Rwanda Social Security Board (RSSB), Rwanda Development Bank (BRD)	<i>2015 National Housing Policy:</i> pg.37 - Operations of government agencies active in housing development shall be framed.	<i>2015 National Housing Policy:</i> (pg.37 - Government can also qualify for government incentives upon compliance with approval criteria
3.Private-Public Partnerships (PPPs)	RSSB, BRD & Foreign investors	<i>2015 National Housing Policy:</i> pg.11 - An area with positive prospects. <i>PPP guidelines in affordable housing development:</i> pg.3 - PPPs will allow achieving superior outcomes through risk-sharing between the public and private sector.	<i>2015 National Housing Policy:</i> pg.34- Similar criteria shall equally apply to projects developed by private developers, government agencies or any parastatal institution requesting government funds. <i>PPP guidelines in affordable housing development:</i> pg.4-5, Government facilitates the land acquisition and identification of beneficiaries. <i>2015 National Housing Policy:</i> pg.33 - Government will financially support cooperatives developing affordable housing under defined conditions. <i>2017 Prime Minister's instructions:</i> Art.5 - To be eligible for government support, a cooperative should be formed by landholders within the housing planning area. Art.4 - Similar incentive qualification conditions for investors also apply to cooperatives.
4.Co-operatives	Housing cooperatives, Landowners	<i>2015 National Housing Policy:</i> pg.19 - As a collaborative strategy between landholders, developers or individual landholders forming cooperative acting as a developer. <i>2015 National Housing Policy:</i> pg.46 - A strategy to overcome master plan compliance challenges for low-income landowners.	

Source: Author's elaboration based on review of official documents

Note: PPP=Public Private Partnerships; pg.=Page; Art.=Article

Private sector-led affordable housing as the mainstream strategy

The provision of affordable housing by the private sector is the government's primary goal. The way the private sector housing strategy is promoted in policies suggests that the state counts on market actors to reduce affordable housing shortfall in the long term. For example, state-funded housing schemes delivered via this mechanism account for more than 60% of all projects. However, one should note that this approach is not unique to the housing sector. Attracting foreign capital has been at the core of Rwanda's developmental ambitions (Goodfellow, 2017; Behuria, 2018). To this end, many reforms were undertaken to create an investment-friendly environment earning Rwanda a positive reputation on the African continent (Kalamagye, 2015; World Bank, 2017a). Thus, from the government's perspective, affordable housing is postulated as one of several avenues expected to attract private capital.

The government's increasing confidence in the private sector housing delivery approach rests on the idea that affordable housing, an established need¹ in Kigali, represents a niche market and implies an investment opportunity. The government spreads the same rhetoric via influential local media outlets portraying affordable housing as an attractive yet untapped investment avenue (Times Reporter, 2018). An interview with a local affordable housing developer further illustrates it:

I think it is a very complex sector because what you hear in the media is different to the situation on the ground. The government exaggerates the attractiveness of the industry. When developers venture into the sector, they end up being disappointed. (Interview with PS02, 15 July 2019).

While the same interviewee reflects on his disappointment about investing in affordable housing, he recounted that his initial aim was to build 100 house units, with each house to be sold at RWF 40 million. At the time we held this conversation, his company had completed ten (10) units. Out of these, he had only managed to sell two (2) units. Because of difficulties in selling houses, he planned to curb the initial project output of 100 house units by half. Also closely linked to this experience, a recurring remark among private developers is that despite the government's line of discourse emphasizing affordable housing as both a need and a business opportunity, this alone does not guarantee an attractive return on investment. In short, the government and developers have contradictory views about the investment potential of affordable housing. For the former, affordable housing could be an area to invest in anticipation of reasonable profits.

¹ An estimated 344,163 house units out of which 186,163 affordable units are needed in Kigali city by 2022 (GOR, 2019).

Whereas private developers insist that their profit targets cannot be met as expected. The following section elaborates further on this issue by focusing on the shortcomings of government support to affordable housing providers.

Insufficient government incentives

Housing policy reforms have fostered enabling interested actors and helping them to reduce construction costs in affordable housing provision. With a detailed account of this policy already provided earlier, this section assesses whether government incentives serve the purpose, by drawing on the perspectives of beneficiaries (i.e., housing developers). In contrast to the government expectations, since the Prime Minister's instructions determining government support were enacted, the number of affordable housing projects remained significantly low. There is an overall impression that incentives are not sufficient to deter risks associated with the sector, as one participant asserts:

There are currently subsidies for developers in the affordable housing sector. One of them entails a reduction of corporate tax up to 50% for affordable housing developers. However, more still needs to be done by the government to find other aspects of the housing sector that deserve tax exemption. (Interview with CP01, 6 August 2019)

If one pays attention to the details of current incentives, they intend to reduce costs to establish and run a corporate entity on the one hand. And costs associated with the provision of infrastructure in the housing project area, on the other hand. However, some people argue that two aspects are not the only ones presenting challenges in the housebuilding supply chain. Instead, they insist that incentives should be expanded to reduce financial burden as a result of import taxes on construction materials and the cost of access to finance currently overlooked:

The incentives are not sufficient because what exists currently in terms of government support is to cover the cost of basic infrastructure in the project, but it does not cover anything related to construction materials, yet these are expensive due to importation costs. (Interview with IO01, 28 June 2019)

Based on the accounts of private developers, although the government offers some support, it has not reached a level where they have the assurance of meeting their profit objectives if they engage in affordable housing development. However, what remains unclear is whether the government assumes that developers would make some concessions when fixing profit targets (i.e., one below their expectations). If that was

considered, then the issue becomes why would developers be motivated to build affordable housing if they are not benevolent entities. Also related to this, the lack of a rule defining the maximum profit developers are allowed to make on a government-funded affordable housing scheme further increases uncertainty.

2. Public sector housing

Affordable housing provision is also delivered through public institutions. Apart from social housing², it is not common for the government to intervene directly through the building. But evidence shows that government subsidiaries have intervened in housing either as a stand-alone developer or in partnership with private developers. In the latter case, the government could contribute land or facilitate its acquisition while the private partner takes the leading role. The main government subsidiaries participating in affordable housing development are RSSB and BRD. In section 6.2, we have described the roles played by each of these organizations. Thus, the discussion here is restricted to examining the impact of the public sector's role in affordable housing provision.

From a policy perspective, the government is depicted as the regulator and coordinator of other actors in the affordable housing sector. There is no explicit mention that government shall build affordable houses in what can be labelled public housing. But the NHP slightly refers to ways the public sector could intervene in the construction of affordable housing. There is a general recognition that a public sector entity can intervene: 'operations of any government agency, which is active in housing development shall be framed' (ROR, 2015c, p. 37). However, a point of discord between policy and practice consists of where government agencies are prohibited from undertaking certain activities linked to housing development, such as land banking³. Yet, evidence shows that RSSB and BRD have both undertaken similar exercises with acquired land reserved for future housing projects.

On the other hand, public agencies involved in affordable housing development are also eligible for the incentives, as stipulated in the NHP (ROR, 2015c). However, the Prime Minister's instructions on government support, which establish the scope of the incentives, remain silent about the eligibility of government agencies or any other actor

² Housing built by the government or occasionally by non-profit organisations. Unlike affordable housing, social housing is provided to the vulnerable households free of charge (ROR, 2015c). Social housing (and affordable housing as well) tends to be conditional homeownership— a significant contrast to the social rented housing models in the European context.

³ According to the national housing policy these activities entail acquiring public or privately-owned land through market or compulsory purchase with aim of pulling large chunks of land together and preserving it for future use (ROR, 2015c).

beyond private developers and cooperatives. As a result, it creates confusion about the status of government agencies when undertaking affordable housing projects.

Direct public housing is not on the government's agenda

As reflected in the national housing policy, the government is neither a developer nor a builder of affordable housing. The experiences from recent affordable housing projects show no enthusiasm for public sector built affordable housing. Since 2015, the year that marked the introduction of the affordable housing program, only two (2) projects fall in the category of public sector housing provision. Both projects were implemented by RSSB and BRD. Some participants explain such hesitation as limited enthusiasm or simply under-prioritization of housing. One informant reiterates: 'what I see as a challenge is that housing is not a priority. Things will improve only if the government considers housing a priority (Interview with AG01, 10 July 2019). A stance is also shared by another official in the ministry in charge of housing. He pointed out that the government's body in charge of housing policies and programs (i.e., RHA) does not possess a comprehensive mandate that would include direct housing construction:

The government's engagement in affordable housing delivery has not been seen, and I do not think affordable housing is a priority. Rwanda Housing Authority has no execution mandate. Their current role is limited. (Interview with, PB02 21 June 2019)

The government applies an indirect intervention approach to affordable housing provision. With this strategy, the government mainly seeks to reassure developers and other actors within the private sector who, in turn, should lead affordable housing development. With or without government assistance, it is assumed that the private sector would manage to earn some profits while at the same time solving a social problem. However, where conditions allow, the government also demonstrates interest in establishing partnerships with private developers and investors to implement affordable housing projects. Therefore, Public-Private Partnerships (PPPs) is a highly regarded strategy, as highlighted in the next section.

3. Public-Private Partnerships

The purpose of PPP in affordable housing development is to combine the strengths of the private sector with those of the public sector in order to overcome challenges of inaccessibility to affordable homes. The PPP frameworks will allow to achieve superior outcomes through risks sharing between public and private sector.(ROR, 2019a, p.3)

While the government has been inclined against direct housing provision, it has also actively supported the option of partnering with private developers with keen interests in the sector. A public-private partnerships (PPPs) strategy was introduced, with which the government expects to attract more investors and reach better outcomes, as the above statement echoes. The PPPs strategy underscores the government's commitment to share sector-related risks with the private sector partners (ROR, 2019a). It is done to assure investors and developers by easing the burden of undertaking housing projects that otherwise they were supposed to bear alone. The NHP also endorses PPPs strategy in affordable housing delivery, associating the mechanisms with 'positive prospects' amidst the government's funding limitations and the private sector's hesitancy to invest in the industry (ROR, 2015c).

From the government side, two institutions (i.e., RSSB and BRD) are key players taking part in joint ventures. On the other hand, investor partners vary in terms of their areas of strategic operations. But they mainly include real estate developers, contractors and financial institutions. Affordable housing projects implemented via PPPs are also eligible for government incentives. In addition to the conventional incentive package (discussed earlier), the government facilitates land acquisition and ensures community cooperation when expropriation is required. The public-private partnership guidelines in affordable housing development were developed not only to harmonize processes linked to PPPs but also to serve as a reference for different parties seeking to engage in such a form of affordable housing provision. These guidelines provide the scope for distributing affordable housing development-related risks between the government and private developers. Table 6.20 and Table 6.21 compare how risk allocation in PPPs-led affordable housing projects should be according to the guidelines versus how it is done on the ground referring to an undergoing PPP-based affordable housing project. In most government documents, risk is related to costs that could lead an entity to failure to meet certain objectives (s). Thus, risks are broken down according to different steps in the housing development process. According to the guidelines for PPPs in affordable housing, the private partners have to bear more risks since they are supposed to purchase land, undertake construction and ensure cost recovery while the government

bears risk in infrastructure provision (Table 6.20). However, things may differ slightly in practice since public institutions could bear more responsibilities beyond what is prescribed in the guidelines. For example, the Rugarama Park Estates project⁴ is undergoing a PPPs-based affordable housing project involving public institutions (i.e., Kigali city council and BRD) and private partners (i.e., Remote group, Shelter Afrique). These partners form a consortium known as the 'Rugarama Park Estates Limited'. As Table 6.21 shows, public institutions are responsible for undertaking more tasks, implying that they bear more risks than defined in the guidelines. However, rather than a point to question, we acknowledge that flexibility with respect to the government taking more risks could be related to the nature of agreements between partners.

Table 6.20 Risk allocation in PPP led affordable housing project

Risks	Risk allocation			
	Public sector	Private sector	Financial institution	Beneficiary
Land		X		
Design		X		
Construction		X		
Constr. Finance		X		
Infrastructure cost	X			
Cost recovery		X		
Credit risk			X	
House maintenance				X

Source: Adapted from ROR (2019a, p. 6)

Table 6.21 Case example: risk allocation in Rugarama Estates project

Risks	Risk allocation			
	Public sector	Private sector	Financial institution	Beneficiary
Land	X			
Design		X		
Construction		X		
Constr. Finance			X	
Infrastructure cost	X			
Cost recovery	X		X	
Credit risk	X		X	
House maintenance				X

Source: Own elaboration based on ROR (2019a)

⁴ Rugarama Park Estates project is one of few public-private partnerships in affordable housing in progress (as of 2020). The project is a joint venture involving Rwanda Development Bank (BRD) and City of Kigali from government side and financed by Shelter Afrique and executed by Remote partners group from the private sector side. Partners formed a consortium 'Rugarama Park Estate Ltd' in which Shelter Afrique holds a 50% share and BRD the other half. City of Kigali contributed land, BRD and Shelter Afrique co-financed the project and Remote group is contracted as the project developer. The total project cost is estimated at US\$ 6 million to deliver 1,960 house units and 40 commercial sites.

Government sees potential in partnerships with private developers/investors

In Kigali, the PPPs strategy is firmly supported in affordable housing delivery. From a government point of view, the PPPs strategy constitutes a better alternative to public provided affordable housing. In this regard, the concessions made in favour of PPPs are also viewed as further proof of the government's commitment to attracting and enabling private developers in the sector it argues has investment potential. There is no uniform structure for PPPs in affordable housing. Thus, the government's role varies depending on the nature of agreements between partners. In the past projects, the contribution of the government included but was not limited to intermediating the process of land acquisition (particularly when land is privately owned), provision of land and basic infrastructure cover, and corporate tax discount—also available for other affordable housing provision strategies.

However, despite institutional support, the number of projects executed under PPPs has remained low. To this end, this strategy has been used to implement not more than two (2) projects as of 2019. Thus, there is no clear indication of how PPPs are more effective than other strategies in producing affordable housing. A prominent problem indicated is that certain projects delay during the conceptual phase⁵. From the government side of partnerships, a recurring challenge relates to the lengthy negotiations associated with the nature of housing projects as an official at the development bank emphasizes: 'negotiations take a long time and implementation of housing projects stalls' (Interview with PS05, 23 July 2019). However, it is also argued that projects run under PPPs take more time for execution, with partners highly vigilant about starting the development process without satisfactorily assuring conditions. For the same reason, housing projects undertaken through PPPs require lengthy feasibility studies, subjecting these projects to unexpected delays. In respect, feasibility studies are conducted by RHA on behalf of the government to respond to the demands of private partners. However, feasibility studies are also needed because partnership consortiums often undertake big projects, and partners need to be convinced that they are making a sound investment. The PPP strategy has proved to be less effective on the ground, even if it is one of the government's favourite approaches to deliver affordable housing.

⁵ This stage entails several activities including contractual agreements, feasibility study, land acquisition and planning and design of construction works.

4. Housing cooperatives

The last strategy used to deliver affordable housing entails cooperatives. In the housing policy, the cooperative housing strategy is described as a bottom-up approach that would be used in unplanned settlements upgrading, especially to improve the physical conditions of housing stock (ROR, 2015c). The strategy is depicted as a platform where land/house owners and private developers can collaborate to improve the existing housing. In doing so, the main objective would be to minimize the need for expropriation and redevelopment while keeping the same inhabitants in the concerned area even after the housing conditions have improved. However, we could not find any evidence of cooperatives operating the same way the NHP describes. Most importantly, the criteria requiring cooperative members to be landowners within the area of the proposed housing project only exists in the policy but not in reality. In practice, housing cooperatives members mostly share similar professions or employers than a neighbourhood. Most cooperatives start from scratch. They buy plots of land in patches and assemble them before initiating a housing project.

In the period post-2015, only two (2) affordable housing projects implemented by cooperatives were counted. In both cases, cooperatives have aimed to build and sell finished houses for profit, just like private actors. Cooperatives-led housing projects follow a similar procedure as other private developers to the point that it is not easy to distinguish them. This is in contradiction to the Prime Minister' instructions', which conceptualizes housing cooperatives as a medium that produces affordable housing for their members who, otherwise, are unable would afford to buy one in the market. For instance, article 5 of the Prime Minister's instructions No.001/03 of 23/02/2017) specifies that members of housing cooperatives should be landowners in a particular planning area:

The developer is a cooperative formed by individual landholders of the housing planning area. The members of the cooperative must fulfil the requirements specified in Article 7 of these instructions. (GOR, 2017, p.190).

Article 7 defines the required profile of a beneficiary for government-sponsored affordable housing. Thus, the same article also applies to the members of housing cooperatives undertaking affordable housing projects who would like to acquire a house in the project. Article 7 further stipulates that a beneficiary should:

Not possess real estate or a house in an urban area of lessee of such estate with a remaining lease period of above ten (10) years or not to be a legally married spouse of an owner of such real estate or house. (ROR, 2017, Art.7)

As it can be seen, articles 5 and 7 contradict each other. According to article 7, as also the NHP described them, cooperative members would not be eligible to benefit from houses built under the affordable housing program because they would have land or real estate, which is a disqualifying criterion. These contradictions could be a source of confusion for cooperatives or even limit them from seeking government funds for affordable housing projects. For instance, if a cooperative qualifies for government funds, its members automatically become ineligible to receive house units. Therefore, the criteria to be eligible for government support for cooperatives are not adapted to the unique structure of such entities, particularly the fact that cooperatives primarily produce homes for members as stated in policies.

Housing cooperatives as the least integrated approach

The cooperative housing strategy was introduced in the previous section. It highlighted the inconsistency between policies and the features of housing cooperatives operating on the ground. Amid such incongruences, the limited importance assigned to the strategy in housing policies is also reflected by the narrow participation of cooperative organisations in affordable housing provision. But this situation also suggests that cooperatives willing to intervene and those already engaged in affordable housing provision do not receive appropriate support from the state and stakeholders. First, let alone the number of cooperatives involved in the housing sector is limited, and their contribution to the industry is under-documented. While the contribution of cooperatives to the affordable housing sector remains limited, similar organisations undertaking housing and real estate development in Kigali exist but in a modest number. According to the information from Rwanda Cooperative Agency (RCA), cooperatives undertaking housing and real estate development represent only 6% (Table 6.22). Table 6.22 further indicates that housing cooperatives in Kigali count 19,073 members and a capital of RWF 3.1 billion.

Table 6.22 Registered cooperatives in Kigali by main economic activity

Economic sector	No. of coops.	%	Members	Capital (in RWF million)
Agriculture	329	22.7	15,228	794.4
Trading	288	19.9	55,753	3492.1
Services	415	28.7	61,838	1801.6
Handcraft	278	19.2	19,002	669.0
Transformation	22	1.5	51,53	98.1
Mining	12	0.8	27,54	75.9
Housing & real estate	87	6.0	19,073	3146.3
Other sectors	16	1.1	21,158	136.9
Total	1,447	100	199,959	10214.3

Source: RCA (2020) modified by the author.

The limited role of the cooperative strategy in affordable housing provision is also evident by looking at the impact of government support. Based on the Prime Minister's instructions determining government support for affordable housing development enacted in 2017, if cooperatives were supported by a strategy under AHP, a rise in the number of cooperatives engaged in housing would be a positive indication. On the contrary, the number of registered cooperatives decreased during four (4) years that followed 2017 compared to the same period predating the Prime Minister's instructions (Table 6.23). Although some precision lacks about the exact number of cooperatives exclusively engaged in the affordable housing development in Kigali, figures in Table 6.23 indicate that introducing government support has had no impact on cooperative strategy in the housing sector. Moreover, assuming the number of government-sponsored affordable housing projects executed by cooperative entities was another proxy indicator. In that case, it does not suggest anything more positive, with only two (2) projects recorded that account for 15% of funded affordable housing projects.

Table 6.23 Registered housing cooperatives in Kigali city (2013-2020)

Main economic activity	2013-2016	2017-2020
Members' homes	11	7
Residential houses to sell	8	8
Commercial real estate	23	5
Total	51	20

Source: (RCA, n.d) modified by the author.

In addition, further collected evidence also indicates that new cooperatives face uncertainties. Some of these are linked to formal registration and when engaging public institutions for support. The latter becomes more pronounced when the government fails to pay appropriate attention to their circumstances. Consequently, it undermines what housing cooperatives can contribute to improving the housing conditions of low-income households. Members of these cooperatives insist that public institutions do not engage them in the affordable housing program as a leader at one housing cooperative asserts:

Because of the limited capacity, engaging such institutions would require a lot of effort and time; and sometimes with the outcome is subject to uncertainties. We may not be aware of everything, but then it turns out to be the role of such organs to engage us (cooperatives) rather than us going to them. (Interview with CP03, 10 July 2019)

The government does not trust cooperatives that alone can undertake projects of large-scale nature like housing. They are primarily thought of as community networks with some resources at their disposal (e.g., land) that would necessarily require an established funding partner like a private developer to execute housing projects jointly. This situation reinforces cooperatives' image as under-resourced and hence unfit to implement affordable housing projects:

Community initiatives such as cooperatives are included in the policy, but to be realistic, people generally have limited capacity in terms of finance and organization to drive such initiatives. (Interview with PB03, 25 June 2019).

6.5 Discussion

The findings of the second research question paint a picture of a complex affordable housing sector. While many actors demonstrate vested interests in affordable housing provision, not all have legitimacy or necessary resources to influence responses. This situation is further reinforced by the institutional framework in place failing to lend proper support to actors beyond those aligned with the private sector. Instead, the national housing policy regards private sector-led housing as the main channel of affordable housing provision. Beyond the experience of Kigali, the use of the private sector housing approach has also spread globally, owing to the World Bank's enabling market approach and associated neoliberal policies (World Bank, 1993; Pugh, 1995). The enabling framework, seen as a response to the past failures of direct state involvement in housing, supports the idea that, instead of providing housing, the government's main responsibility should be to create a conducive environment for the housing market to work effectively (Angel, 2000; Mukhija, 2004). As a result, many governments have sought to outsource service provision to the private sector while restricting their role to regulation. In this view, the assumption that the private sector is a one-fits-all answer to affordable housing challenges is widespread across many parts of the world and in Africa in particular (Tipple, 2015; Bah, Faye and Geh, 2018).

Relying overly on private investors to deliver affordable housing reinforces the exclusion of complementary strategies. Among these strategies are those led by public institutions, cooperative/community-oriented approaches and integration/formalisation of informal housing provision strategies (Keivani and Werna, 2001a). This way, the findings in Kigali reinforce that perspective. In other instances, the basis on which profit-seeking corporations are entrusted with the task of delivering social-oriented housing (e.g., affordable housing) has been questioned (Soederberg, 2017b). In Kigali, while government incentives are explicitly tailored to private housing providers, it reduces the chances for other potential strategies to emerge. As a result, small-scale actors without large capital at their disposal face difficulties to qualify for institutional support.

Another aspect of the findings also entails a disjuncture between policy contents and practice. The national housing policy of 2015 stipulated that the main government's objective is to avail adequate and affordable housing for all people regardless of income segments. The government funds the affordable housing program, aiming to support housing projects that would benefit households unable to access housing from the market. However, in practice, the program delivers houses to people able to access mortgage finance, suggesting that only beneficiaries with stable income and formal employment can be eligible. Thus, there is no evidence that such recipients cannot truly

afford market rate housing based on the eligibility criteria set by policy. This concern becomes more important, discovering that developers identify beneficiaries in the first place. In some way, the situation reinforces a common stance that labels the universal goal of 'housing access to all' as somewhat elusive (Croese, Cirolia and Graham, 2016; Soederberg, 2017b).

Beyond the private sector strategy, other differences between policy and practice are observed. First, the housing cooperatives' structure and procedures to qualify for government support further underpin the view that their role is secondary. This further makes them less integrated and not competitive enough to be eligible for government incentives. Additionally, a centralized system of governance in place requires that major decisions such as incentive allocation be made at the ministerial level. In light of this structure, some actors require a certain level of influence to reach the top, becoming increasingly an entry barrier for start-ups and resource-poor social enterprises to intervene in affordable housing. The same circumstances also reflect the government's limited efforts in engaging and integrating microfinance institutions and landowners, although they play an essential role in the housing market.

6.6 Summary

To sum up, this chapter reported and discussed findings for the second research question. First, the chapter demonstrated that the affordable housing sector attracts interests from diverse actors, including public agencies, private sector actors, and entities aligned to the third sector. Regarding their roles, public agencies are mainly concerned with regulating and coordinating the sector, as discussed in section 6.2. On the other hand, the private sector plays a crucial role, being the main channel by which affordable housing is expected to be delivered under the current institutional setting. In the third sector, key actors include development agencies such as the World Bank, whose funding is critical to realising housing projects. Whereas the Swiss Development Cooperation (SDC) is another key actor supporting the creation of new construction technology and building materials. Although their role remains limited, housing cooperatives also constitute another essential channel of affordable housing provision.

Furthermore, various rules, policies and strategic plans refer to the affordable housing challenge. However, not all of them do it explicitly, as was highlighted in section 6.3. Section 6.4 examined the affordable housing provision by comparing the policy content and realities on the ground. In this respect, private sector-led housing draws maximum attention from policy discourse and receives state support in practice. With the government not ready to intervene directly, PPPs are regarded as a better compromise in the context where some private sector actors articulate concerns over investing in a risky sector. Also, cooperative-oriented housing constitutes the least supported strategy. To this end, the findings indicate that features and roles of these cooperatives on the ground do not match what is inscribed by the national housing policy and key supporting legislations. Section 6.5 has discussed the findings. To this end, we argue that although the key actors demonstrate some level of interest and commitment to intervene in affordable housing responses, the institutional framework does not recognize the peculiarities of each of them, hence failing to provide them with appropriate support. As a result of the cracks in the institutional setting, affordable housing providers face several constraints. The following chapter traces and elaborates further on those constraints.

CHAPTER 7

INSTITUTIONAL CONSTRAINTS FOR KEY AFFORDABLE HOUSING PROVIDERS

7.1 Introduction

This chapter discusses the findings for research question three (3): *What are the constraints affordable housing providers face given the institutional environment?* By analyzing interview data and official documents (i.e., laws and policies) that bear significant importance to the affordable housing provision process, this chapter addresses three objectives. First, it assesses how the formal rules affect the affordable housing efforts of key providers. This is covered in section 7.2, which sheds light on how certain formal rules at the origin of the transaction costs hinder key providers' interventions. Second, the chapter examines the implication of informal institutions on the conventional mechanisms of affordable housing delivery (see Section 7.3). Housing building takes place within an environment dominated by values, social norms, and customs that influence and shape specific ideals on housing quality and preferences. Thus, this section indicates how the underlying values and traditional practices about housing come into conflict with formal structures of affordable housing provision. Lastly, the chapter also draws on key actors' perspectives to identify potential paths to improve policy and stakeholders' responses to the affordable housing provision conundrum in Kigali, covered in section 7.4. After presenting the results, a brief synthesis will follow in section 7.5, discussing the findings against the broader body of literature. In the end, the chapter closes with a summary in section 7.6.

7.2 Constraints related to formal institutions

As it has been already introduced in the conceptual framework (see Chapter 3), some formal institutions may hinder the progress of certain actors in providing affordable housing in Kigali city. In the context of Kigali, the findings presented in this chapter reveal that some existing regulations make housing development more complex. As a result of that situation, key providers sustain various forms of transaction costs.

Regulations

The regulations affecting affordable housing providers are diverse in their nature and activities affected during housing development. Table 7.1 outlines regulation constraints according to the type of activity and nature of constraint. Activities affected include land acquisition, planning and construction, formal registration and tenure outcome. Whereas the nature of constraint is classified as stringent, vacuum and unclear regulations. The first category is labelled that way because it consists of regulations that impede or slow down the pace of key actors when executing various activities and programs. Regulation vacuum signifies absent but critical regulations to supporting affordable housing development. The last category includes legislations that, although enforced, are vague in certain ways that directly affect affordable housing providers. As the table below indicates, many regulations are stringent and affect activities such as formal registration of cooperatives, land acquisition, construction works and house occupation. Whereas regulations defining land transfer, incentives allocation and the formal establishment of cooperative entities are ambiguous. Furthermore, the vacuum left by the lacking tenant and landlord law affects tenure security and the prospect of rental housing.

Table 7.1 Regulation constraints by activity affected and nature of effect

Affected activity	Regulations	Nature of constraint		
		<i>Stringent</i>	<i>Ambiguous</i>	<i>Vacuum</i>
Land acquisition	• Procedures for expropriation of private land	×		
	• Land transfer process	×	×	
Planning and construction	• Kigali City Master Plan	×		
	• Building standards	×		
	• Rules governing government incentives	×	×	
Formal registration	• Cooperative registration	×	×	
Tenure outcome	• Landlord and tenant law			×
	• Rental income tax	×		

Source: Author

Procedures for expropriation of private land/property

Between 2008 and 2013, Rwanda undertook a countrywide exercise to register all land under the exercise known as ‘Rwanda Land Tenure Regularisation Program’ (RLTRP). Through RLTRP, customary land tenure was abolished and integrated with formal tenure, resulting in a unified land registry system. This exercise was expected to improve land administration and stimulate land-based economic activities (Ngoga, 2016). A major difference between before and after the RLTRP is that the state obtained the legal power to define property rights, which consequently increased its influence on land ownership. For example, it can acquire rights in individual private land whenever deemed necessary. Following the reform, most people own land through a limited-term leasehold from the government. This is in accordance with article 4 of Law No. 43/2013 of 16/06/2013 governing land in Rwanda, which stipulates: ‘the right to land is granted by the State in the form of emphyteutic lease’ (ROR, 2013, p. 26). The emphyteutic lease consists of a contract whereby the state grants the lessee rights to exploit land over a long-term period in exchange for predetermined fee payment as provided in article 2 of the same legislation. Although the government owns most of the land and leases it to individuals, most people rather believe they are the actual owners of their land, since many acquired

it from their ancestors and have held it under customary tenure for a long time. Therefore, we also use the terms 'owners of land' or 'landowners' even if they could refer to leaseholders or lessees.

Apart from the leasehold, interested individuals can also be granted freehold titles upon meeting specific criteria. Freehold differs from the emphyteutic lease in the period of tenure, which is limitless, unlike under the former. The Presidential Order No. 30/01 of 29/06/2007 determining the exact number of years for land lease sets out 20 years as the maximum leasehold period for land demarcated for urban residential use and 99 years as the term for the private land lease in rural areas (ROR, 2007b, Art.6&7). The shortness of leasehold term on land for residential uses did not arise in interviews as a major problem. However, this could be another reason why most developers invest in affordable housing for selling and not for renting. Once the developer has sold completed houses, leasehold shortness is no longer a concern for them. In contrast, 20 years could sound too short to recoup invested capital if housing rental housing was developed.

The emphyteutic lease confers to leaseholders a defined bundle of rights over their land (i.e., right to occupy, to use sub-lease; to transfer the lease terms through inheritance, sell⁶, gift and to use as collateral for a loan). But the state can dispossess their land through compulsory acquisition. Expropriation occurs under the pretext of the public interest, and none can oppose expropriation exercise on the grounds of self-centred interests (ROR, 2015b). Article 1 of Law No. 32/2015 of 11/06/2015 relating to expropriation in the public interest defines the term 'public interest' as: 'an act of Government, local entities with legal personality or public institutions, aiming at the interest or well-being of the general public' (ROR, 2015b, p.23).

A complete list of activities considered 'public interests' is also provided in article 5. In connection to housing development, expropriation can be undertaken if the proposed housing project is part of the 'activities to implement land use and development master plans'—also listed by article 5 as an activity of public interest. While the expropriation procedures directly impact landowners, as discussed in chapter 5, they also affect land acquisition in the affordable housing provision process since developers are supposed to acquire land with government support. Therefore, expropriation is a typical approach used to acquire needed land for major housing projects. However, developers claim that the nature of the expropriation process is complex and lengthy, which delays their plans:

⁶ In theory one should sell the bundle of rights for the remaining lease terms. However, this holds limited importance in transactions as many people do not understand the concept of leasehold and think are owners of their land. The term 'landowners' is also more common government policies.

The expropriation process, which entailed paying off occupants at the project site, took longer than expected, thereby compounding further delays in the planning process. Construction activities are expected to start early next year. (Interview with PS02, 15 July 2019)

According to Law No. 32/2015 of 11/06/2015 relating to expropriation in the public interest expropriation, only competent state organs have the power to approve and supervise the implementation of expropriation in the public interest. These organs include the executive committees at the Kigali city and district levels or any ministry relevant to the proposed expropriation exercise when it is of a national scale (Law No. 32/2015 of 11/06/2015, Article 7). Thus, only the government has the capacity to initiate expropriation in the public interest (Ibid, Article 3). The entity carrying out expropriation, also labelled 'expropriator' by the law, are required to compile and submit a complete application for the proposed expropriation project and must follow up the process until permission is granted. One cannot underestimate that caution is needed to ensure expropriation takes place for a justified purpose and that all parties are treated fairly, making expropriation a complex exercise. But, some studies have also pointed to the weaknesses in the implementation of expropriation, citing excessive delays in completing various steps, unjust compensation, and under-valuation of properties, among others things (Goodfellow, 2014; Mireille, Masengo and Knox, 2014; Uwayezu and De Vries, 2019).

In terms of time and procedures involved, expropriation exercise could take more than one year under normal circumstances (Table 7.2). During fieldwork, we have noted similar challenges from housing developers' reflections on the implementation of expropriation. In this respect, most participants attribute delays in delivering some of the affordable housing projects to the exercise's inefficiencies. Moreover, deficiencies in the expropriation are not only a burden to the developers. For example, affected property-owners also complain about delayed compensation and under-valuation of properties (Bizimungu, 2019), becoming more difficult for them to find and buy houses in other places. The latter is also a factor in the prolonged expropriation process, requiring additional appeal steps to challenge reported property values and compensation.

Table 7.2 Activities involved in the expropriation and time required

Activity	Time required (in days)	Cumulative time (in days)
(1) Consideration of relevance of project proposal	30	30
(2) Accepting relevance of project	15	45
(3) Approval of project proposal	15	60
(4) Publication of approval decision	15	75
(5) Application for appeal by affected persons	30	105
(6) Decision on the appeal	30	135
(7) Application for review of appeal by expropriator	15	150
(8) Decision on the application of appeal review	30	180
(9) Application for review of list of expropriated persons	15	195
(10) Decision on step 9	7	202
(11) Approval of the list of persons to be expropriated	7	209
(12) Completion of valuation of landed property to be expropriated	45	254
(13) Approval and publication of valuation report	15	269
(14) Signing approved fair compensation report	21	290
(15) Appealing assessed value of land and property	7	297
(16) Submitting counter-valuation report	10	307
(17) Analysis of report submitted under step 16	5	312
(18) Appeal for the court in case of dissatisfaction of expropriated person	15	327
(19) Payment of fair compensation to expropriated person	120	447
TOTAL	447	

Source: Law No. 32/2015 of 11/06/2015 relating to expropriation in the public interest (ROR, 2015b)

Land transfer process

In Rwanda, Law No. 43/2013 of 16/06/2013 governing land in Rwanda determines conditions and procedures for transferring land rights. According to this law, land can change hands only when some criteria are fulfilled. The procedures needed to carry out the transfer of land rights involve different steps to be made by both transacting parties. In this context, housing developers, the buyer's side in land acquisition, claim that processes are not well streamlined to help a fast-track transfer of land ownership, and consequently face uncertainty with projects delays:

One of the challenges of regulating land transactions is that even changing ownership will take years, and the government will only realize when the development is already in place. (Interview with AG03, 19 July 2019)

In addition, there are concerns regarding the limited efforts from the government side to sanction people that hold land vacant for many years for speculative purposes: 'land speculation is done mainly by middle-income people, and policy instruments will affect all people, even the vulnerable ones' (Interview with AG03, 19 July 2019). This is in breach of article 58 of Law No. 43/2013 of 16/06/2013 governing land in Rwanda, which prohibits land owners in urban areas to keep land vacant for more than three (3) years. Failure to meet this condition could lead to confiscation of unexploited land:

Land within the urban areas where a detailed physical plan was approved by competent authorities and it is clear that it has spent three (3) consecutive years unexploited is subject to confiscation. (ROR, 2013, pp. 53–54)

The law requires new owners to develop their land or put it into productive use, conforming to the area-specific land use plan not later than three (3) years after its acquisition. However, since it is rarely enforced, some landowners take advantage by holding it out for some more years, expecting value appreciation. While some developers in Kigali think that speculative land holding contributes to distortions in the land market by limiting the amount of land availed for housing construction, it is not necessarily true. Keuschnigg and Nielsen (1994, p.19) dismissed concerns about vacant land, describing it as “a transitory phenomenon only”. This is also in line with Sinn’s early paper, which concluded that although the speculative behaviours may retain too much vacant land than the minimum socially desirable level, in case anything wrong happens, it was more likely to be distortion caused by the income tax than by market failure (Sinn, 1986).

Kigali City Master Plan

The Kigali City Master Plan (KCMP) acts as a blueprint guide for the long-term spatial development of the city. It sets out permissible land uses based on particular zones (e.g., residential commercial, industrial land uses) and other fine details concerning requirements for land development within the city’s boundaries—mainly set by the zoning regulations (COK, 2013b). In relation to affordable housing development, KCMP defines the overall objective for Kigali city and identifies zones suitable for that housing typology. In terms of objective, KCMP aims to reach a housing stock, of which 60% will be affordable housing by 2035 (COK, 2013, p.34). In a bid to achieve this goal, the emphasis is put on developing medium-size townships in strategic areas and redeveloping existing informal/unplanned settlements. For this purpose, KCMP essentially counts on transforming Kigali into a slum-free city. As a result, redevelopment of derelict areas has been a common approach in the past. Although KCMP refers to the term “affordable

housing” in the overall objective, according to some study participants, the instrument is not explicit in terms of how it supports affordable housing development:

The master plan is not clear because it contains provisions for different uses in different areas. The urgency for affordable housing is not given appropriate emphasis. Yet, it should be better supported by the master plan. (Interview with PS03, 27 July 2019)

Another aspect of KCMP regarded as a challenge for some providers is high-density orientation. Kigali city seeks to apply the high-density principle in housing development to ensure efficient use of land resources. In this respect, this orientation constitutes a strong case amidst limited developable land resulting from the city’s hilly landscapes. In light of physical hindrances, KCMP prohibits building activities in areas with slopes higher than 20% (COK, 2013c). Based on that rule, land development is only possible in 43% of the entire area of Kigali. As one way to translate the vertical building (high density) directive in practice, affordable housing development is permitted in low rise and medium-rise residential zones. Table 7.3 shows various residential zones prescribed by the KMCP and corresponding characteristics, including the share of housing stock, population share, house size and required density (expressed as the number of dwelling units per hectare). As the table indicates, affordable housing development is carried out in areas with density requirements ranging between 90 and 160 dwelling units per hectare.

Table 7.3 Residential land use density requirements

Residential zones	Housing share (%)	Pop. Share (%)	House size (Sq.m.)	DUs/Ha.
Single family	55	28	250	40
Low rise	21	21	120	90
Medium rise	20	40	90	160
High rise	1	2.5	90	200

Source: Adapted from City of Kigali (2013, p.34)

Notes: Pop. =population, DUs= Dwelling Units; Sq.m.= square meter

Furthermore, KCMP envisaged an average density for the city to increase up to 210 households per hectare in 2035, from 70 in 2013 (COK, 2013c). Nevertheless, the master plan's high-density alignment creates concerns for some builders. Some actors emphasize that, given the underlying conditions, when affordable housing is conceptualized as high density alone, it becomes impossible for small-scale developers to meet the cost implication resulting from high-rise buildings. Therefore, such requirement can only make sense if targeted developers were big companies or consortiums of companies with the capacity to mobilise funds.

Building standards

Technical procedures for the construction of various building typologies have been regulated since 2007. The main code, also known as the Rwanda Building Code (RBC), outlines the construction industry's legal provisions. RBC was first promulgated in 2012 and later updated in 2019. Both legal instruments contain the standards and technical guidelines for construction activities in Rwanda. Therefore, any construction project building, including affordable housing schemes, should conform to the technical specification of permitted building materials.

Before building standards were established, restrictions on building materials did not exist. As a result, traditional and relatively affordable materials (e.g., adobe bricks) could be widely used in residential house construction. Later, once the standards came into force alongside the KCMP, the city authority banned them over suspicion of low quality but also because they were regarded as regressive—albeit the decision was arbitrarily made without a thorough assessment. Some have linked this move with the city's intention to slow down illegal building activities that were causing havoc with materials and construction skills available to many people. After some years of ban on adobe bricks, in 2019, the Rwanda Housing Authority (RHA) passed instructions⁷ on adobe bricks allowing the conditional use of the popular material.

The lift of the ban on the use of adobe bricks is also backed by the new building code, which recognizes adobe bricks as a legally accepted building material in the country (ROR, 2019c). Critics had questioned why such affordable material had been banned for a long time without scientific proof of its unsuitability. In the same way, certain actors contend that some of the building regulations unnecessarily make housing construction costly. To this end, some people pointed to the use of imported materials and

⁷ RHA instructions No.001 of 01/8/2019 determining conditions for use of adobe bricks in residential house building. They set out technical requirements for use of adobe bricks in construction of single-family residential houses.

construction technologies to meet some of the building regulations implying a costlier building process overall:

Housing supply chain makes housing expensive, from the sourcing of construction of materials and labour (most of the time foreign-sourced materials often required by building codes) to procedures to secure a building permit. (Interview with EX04, 10 July 2019)

For others, the main problem is the fact that building standards exhibit disconnection to the local realities. Enforcement of these standards implies that a significant funding source is necessary to undertake a large scale housing scheme. Yet, it remains a significant challenge to mobilise sufficient funds under the prevailing socio-economic circumstances:

Housing standards and levels of income do not match. One finds a disconnection between two important aspects: housing standards and income levels for the general population. (Interview with PB02, 21 June 2019).

Rules governing incentive provision

The government acknowledges that private actors are unable to deliver affordable housing without appropriate incentives. For this reason, different incentives were introduced to help mitigate challenges associated with the sector and to support increased participation of private actors as envisaged by the housing policy. Specific details concerning terms and conditions to access incentives are determined by the Prime Minister's instructions No. 001/03 of 23/02/2017 determining the conditions and procedures for obtaining government support for affordable and high-density (ROR, 2017b). These were first introduced in 2015 but later underwent review in 2017. The government's move to offer incentives indicates the political will to facilitate interested developers to intervene in the affordable housing sector. However, it is also a sign that the role of the government is indispensable to have any progress in affordable housing provision.

Despite the introduction of incentives, the key providers reiterate constraints related to some aspects of incentives allocation. First, one should note that developers do not receive funds directly once they have qualified for government support concerning the cover for basic infrastructure. Instead, through Rwanda Housing Authority (RHA), the government hires a sub-contractor to undertake the infrastructure works. The latter is also supposed to monitor the building process for infrastructure works. This support is assumed to account for up to 30% of the gross development cost. Considering that there

is no rule requiring that infrastructure works be undertaken in parallel with main construction works, it causes inconveniences to affordable housing developers:

With current incentives towards affordable housing development, there is a risk for developers. This is because the government does not build infrastructures in parallel to the project implementation. (Interview with PS01, 23 July 2019)

Such problems arise because the infrastructure development phase is undertaken separately from the main construction works (i.e., building houses). This situation may compel affordable housing developers to unplanned delays and losses. In some instances, they need to pause when the government sub-contractor starts building infrastructure works. For the same reason, they may also need to demolish some already built parts to allow for the installation of utility facilities because both phases are not planned together nor undertaken by the same contractor. In non-affordable housing projects, the common practice is that developers build roads from scratch (in the case of greenfield sites) or improve them if the project entails redevelopment of a brownfield. However, if the proposed project is considered a high-density residential development, even if it does not include affordable housing units, it is still eligible for government support towards infrastructure costs. In this context, the same procedures determining conditions to obtain support for affordable housing development also apply. Returning to how the approach used to provide infrastructure support affects the affordable housing provision, developers do not know in advance when and who will carry out infrastructure works, meaning that project planning is directly affected. Apart from that, poor coordination between the affordable housing project developer and infrastructure sub-contractor is not uncommon, and sometimes it turns into misunderstandings with each party protecting own interests. The overall implication entails disruptions and delays during the construction phase as a civil engineer who worked on a state-funded affordable housing project contends:

For instance, when it comes to implementing housing projects, you realize that energy or water distribution institutions are not engaged or are part of the project planning and implementation. This ends up affecting overall project cost and timeline. (Interview with CP01, 6 August 2019)

Secondly, affordable housing developers face another challenge in the final stage of development during the allocation of house units. Although it is not directly related to the incentives *per se*, PM instructions No. 001/03 of 23/02/2017 also govern the allocation of house units built under projects that benefited from government support. Specifically, article 4 requires developer applicants to submit profiles of potential buyers (i.e., end-

users for houses) as an addendum to the grant application (ROR, 2017b). Nevertheless, it contradicts article 8, which stipulates a different mechanism for beneficiary registration:

Any person interested in benefiting from a housing unit within the affordable and high-density housing development project and who fulfils requirements specified in article 7 of these instructions may register such interest at the District office 21 days from the day of announcement of the project proposal. (ROR, 2017b, p. 193)

Concerning the article above, two things confuse the affordable housing providers. First, limited clarity about which among government institutions leads the process of selecting beneficiaries, knowing that the City of Kigali and districts, RHA and BRD, all are referred to as responsible for the same exercise without a clear distinction of individual responsibilities. Second, if the government oversees identifying qualifying applicants, why should developers be required to submit a list of beneficiaries during their application for government incentives? On this issue, developers emphasize that they lack assurance for obtaining buyers after completion of housing development:

Another issue is that the process to identify beneficiaries of affordable housing projects is not complete. It is not clear enough for the developers in terms of how they will get buyers or tenants once their project is complete. A specific arrangement is missing that would oversee the identification of potential end-users of affordable housing, which would assure developers. (Interview with PS06, 15 July 2019)

Lacking legislation for rental housing

In Kigali city, more than half of the households have access to housing through the rental market. While the number of tenants has been on the rise in recent years, most policies remain mainly aligned towards helping people own their homes. This way, support for homeownership is clearly stated in the National Housing Policy:

[National Housing Policy] it generally promotes homeownership for social, economic, political stability and a private sense of belonging through private investment into the country as a contribution to peace, happiness, and loyalty. (ROR, 2015c, p.14)

The policy orientation for homeownership also influences developers' perceptions about the viability of each housing tenure option from an investment perspective. Housing providers prefer the 'build and sell' strategy over the 'build and rent', even if there is no rule compelling them to make that choice. For developers, the 'build and sell' strategy is best suited for local housing preferences:

Although the mind-set and tendency for developers has been more on ownership rather than rental and it is partly connected to the fact that most people prefer buying their own property. (Interview with PB02, 21 June 2019)

Despite inclination towards homeownership, it is also admitted that maintaining a proper balance of both tenures in upcoming affordable housing projects is crucial against the backdrop of rapid urbanisation in Kigali. One participant asserts that the younger generation is not under pressure to own a house; instead, they need affordable houses to rent: 'older generations prefer house ownership. But the trend is changing with the young people more interested in rental affordable housing' (Interview, PB04). With both policy and practice biased towards ownership, the rental-housing market operates without specific policy or legislation. As a result, transactions between different parties in the rental housing sub-sector are exposed to malpractices. Particularly, the lack of legislation governing relationships and transactions between landlords and tenants was stressed during interviews. As a result of gaps in the legal framework for rental housing, developers are reluctant to invest in affordable rental housing. They insist that rental housing presents more risks linked to higher operating costs and lacking legal framework:

Also, there is a lack of legislation to regulate the rental-housing sector. For instance, unlike other countries in Rwanda, we do not have a landlord and tenant act, which is important in harmonizing operations in the rental housing market. (Interview with AG01, 10 July 2019)

In addition, rental housing is narrowly referenced in the national housing policy. That way, one would argue that it is not seen as a major component within the present structure of housing provision. Hence, it does not get as much attention as homeownership. Nevertheless, the government have recently shown signs that it is aware of the potential of rental housing despite limited interventions to promote this tenure so far. Since 2019, the government has been in the process of enacting the first-ever rental housing strategy as a senior official in the Ministry of infrastructure reveals:

The main issue is that affordable rental housing was not a focus of policy and interventions until recently when an official from UN-Habitat raised during a conference, and now there are discussions taking place on how to integrate rental housing in affordable housing projects. (Interview with PB04, 26 June 2019)

Rental income tax

Like any other income-generating asset, rented residential houses are subject to taxation. The rental income tax rate is determined by Law No.75/2018 of 07/09/2018 determining the sources of revenue and property of decentralized entities⁸. This law provides the legal basis for determining the tax rate for rental income generated by different types of real estate. Article 47 defines the rental income tax base as follows:

The rental income tax is charged on income generated by an individual or any other person who is not subject to corporate tax from a rented immovable property located in Rwanda.

In terms of what rental income is subject to tax and how much of it is taxed, article 48 sets out that a tax is levied on the following: (1) income from any rented immovable properties in Rwanda, (2) income from any rented buildings and (3) income from any rented improvements⁹ (ROR, 2018b). Tax charges are calculated based on the annual rental income generated from the building. The following table provides a breakdown of rental income tax ratios and corresponding rental income ranges (Table 7.4).

Table 7.4 Rental income tax charges on immovable properties in Rwanda

Applied rental income tax ratio	Min. annual rental income (RWF)	Maximum Annual rental income (RWF)
0 %	1	180,000
20%	180,001	1,000,000
30%	1,000,001	-

Source: Law No.75/2018 of 07/09/2018, article 50&51 (ROR, 2018b)

Regarding how the tax amount is determined, the law requires that the taxable rental income is computed after deducting 50% from the annual rental income. The deducted amount is assumed to be the maintenance cost. However, one should also note that on top of rental income tax, the owner must also pay land leases (or land tax in case of freehold owners) charged separately based on rates determined by the local authority. Based on the tax rate breakdown illustrated in table 7.4, a standard residential house

⁸ Defined as 'local administrative entities having legal personality and enjoying administrative and financial autonomy'(ROR, 2018a, Art.1)

⁹ Immovable structures or amenities that are not buildings but increase the actual value of a plot of land or a building (Law No.75/2018 of 07/09/2018, Article 2). Based on this definition, one can cite a car park (if rented out), or a serviced vacant land rented for temporary uses as examples of improvements subject to rental income tax.

unit in Kigali will fall in the category of properties subject to the tax level of 30% of annual rental income. Developers concerned with rental income tax see it as a hindrance for those interested in affordable rental housing. Rental income tax adds to other expenses such as maintenance costs and potential credit repayments. As a result, all these costs do not guarantee rental housing as a viable investment option for affordable housing developers. For the same reason, developers favour the 'build then sell' strategy over building houses for renting out:

Also, there are taxes on rental housing. These charges make the sector not reliable in the investors' eyes. As a result, they prefer to build and sell upon completion of the project. (Interview with PB02, 21 June 2019)

Many developers do not consider rental housing as an attractive option to rush for, especially when they can freely choose between build-and-sell and build-to-rent strategies. Instead, they think that the government is in a better position to deliver affordable rental housing. Apart from this, the government's hesitancy to draw some attention to rental housing does not help to improve the sub-sector. For instance, there is no rule to reserve a specific share of houses for rental tenure in affordable housing projects benefiting from government support. Also, when beneficiaries rent out these houses, there is no such provision to ensure that the rent meets the affordability criteria. Therefore, as long as institutional support remains restricted, rental housing will remain a second option for different providers.

Cooperative registration

In chapter 6, we have shown that cooperative organisations are governed according to Law No. 5 0/2007 of 18/09/2007, determining the establishment, organization and functioning of cooperative organisations in Rwanda. Apart from defining the context of operation for cooperatives, this law also specifies the procedures and requirements for a new cooperative entity to be legally registered. In policies, cooperatives are depicted as entities with unique structure and purpose since they are a 'form of a self-help group, pooling members' resources to achieve economies of scope and scale while serving as a platform for policy dialogue and multi-dimensional promotion of the members' wellbeing' (ROR, 2018d, p.1). Consequently, from a tax perspective, cooperatives should, in principle, be treated as social enterprises and not corporate entities.

Housing cooperatives are one of the formal channels for providing affordable housing in Rwanda. The legitimacy of this strategy is further supported by the National Housing Policy and Prime Minister's instructions determining government support for affordable

housing development. However, cooperative organizations face some regulatory constraints. First, registering a cooperative alone entails a cumbersome and lengthy process. People interested in setting up housing cooperatives describe the registration process as ambiguous: ‘I would be interested in committing funds to such kind of arrangement, but the registration procedures involved seem difficult’ (Interview with PS04, 1 August 2019).

Formal registration of a new cooperative entails a three (3) tier application process. Figure 7.1 offers a diagrammatic illustration of the cooperative registration process. First, applicants have to file a complete application to the sector office. Once approved, the application is submitted to the district level in the second round. Once the district mayor approves the application, a final submission is made to the Rwanda Cooperative Agency (RCA) at the national level. If the application does not face rejection along the way, it will take a minimum of thirty-seven (37) days based on the process described by RCA (Figure 7.1). But one should also note that the decision to approve or reject the application is made independently at each tier irrespective of the decision outcome at the previous level. While the process described in the law illustrates many bureaucratic steps, in practice, it can be more unpredictable, taking longer than formally designated.

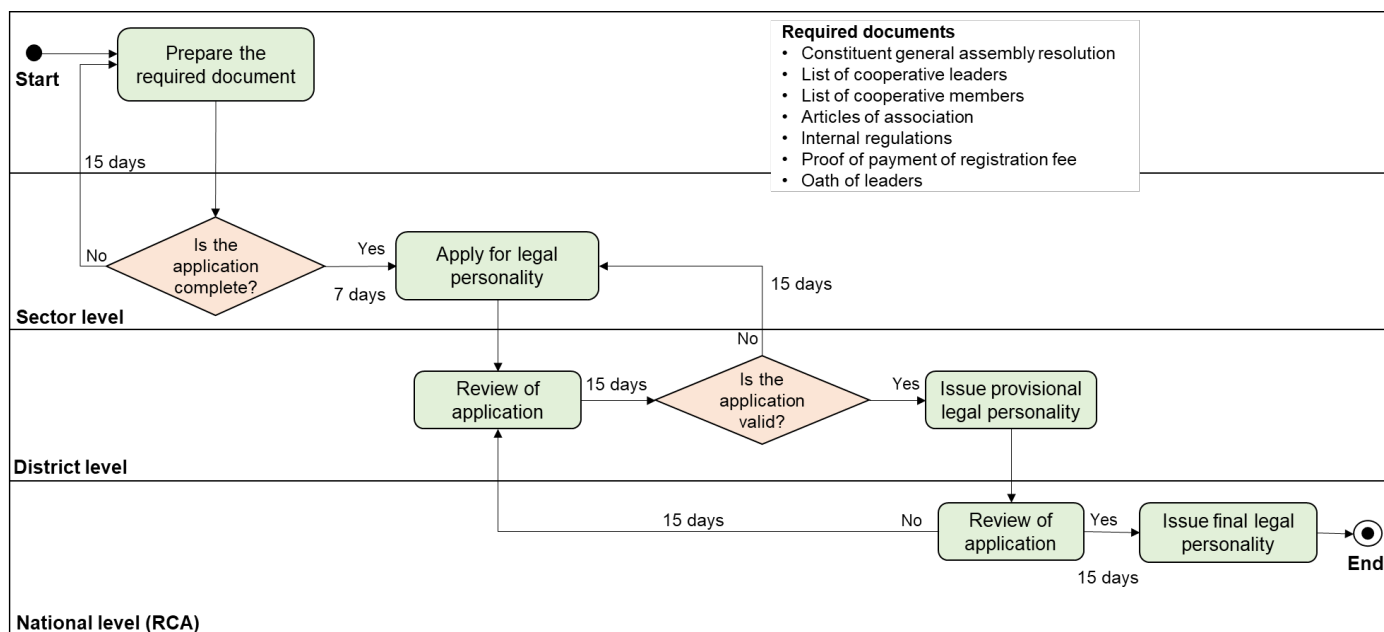


Figure 7.1 Cooperative registration process
 Source: Author elaboration based on ROR (2007a); RCA (2018).
 Note: RCA=Rwanda Cooperative Agency

Apart from being a key entry barrier for cooperatives in the initiation phase, a challenging registration process also reflects a remarkable contrast to a fast track and efficient procedure to register new private companies in Rwanda. Registration of a new company can be done online in simplified procedures that take less than twenty-four (24) hours, according to the Rwanda Development Board (RDB, n.d). In the view of some participants, this contrast is linked to the fact that cooperatives do not fiscally generate as much tax revenues as companies do. That way, the government intentionally makes the registration process stringent against the fear of losing a vital tax base should more cooperatives be permitted:

I think there is a tendency to underestimate the potential of cooperatives yet have a huge mobilisation capacity to drive local initiatives. But also, I believe cooperatives are overlooked because they do not pay taxes. (Interview with AG01, 10 July 2019)

In Rwanda, cooperative societies are subject to corporate income tax just like companies do¹⁰, unlike many countries where similar organisations are entitled to tax exemptions (Alliance Africa, 2019). Taxation¹¹ of cooperatives in Rwanda is governed by Law No. 016/2018 of 13/04/2018 establishing taxes on income. Article 45 of the same law identifies cooperatives as entities subject to taxation (ROR, 2018a). Nevertheless, the government stresses that enforcement of income tax for cooperatives is reportedly flexible and open to negotiations. To this end, cooperatives may qualify for special tax exemption so as not to undermine their impact on the economy (Alliance Africa, 2019). The possibility to wave some taxes for cooperatives is determined by studying the individual case of each cooperative, meaning that it is not guaranteed. However, such exemptions are not featured in any of the two main policy documents governing cooperatives in Rwanda (i.e., cooperative law and national policy for cooperatives).

The long and tedious cooperative registration process has further ramifications. For instance, some organizations that initially intended to become housing cooperatives may opt to register as companies instead. Some informants admitted to abandoning the cooperative registration process and turning their organizations into companies— the latter's registration process being a lot faster and easier compared to the cooperative's:

¹⁰ Like companies, cooperatives are also liable to trade license tax, which is charged annually based on enterprise size regardless of earned profit (a list of taxes is provided in section 6.2.3).

¹¹ From 2015 the government of Rwanda has opted to enforce corporate income tax to cooperatives in a move that aimed at increasing the tax revenues to fund the national expenditure (The Easter African, 2015).

Initially, we were interested in forming a cooperative and had started the registration process, but later was turned into a company because registering a cooperative involved a long process. (Interview with CP03, 10 July 2019)

The same issue was also raised during a conversation with an official of a cooperative. The participant revealed that after having faced a hectic cooperative registration, they decided to register a company instead:

You will realize people intend to pull their resources together but lack the necessary information about how they can proceed with this idea or where they can knock to request some needed support from the government. (Interview with NP01, 24 July 2019)

Within the scope of the study, we could not ask if a hostile institutional environment would impact the long-term growth of cooperatives in the early application stages. However, we noted that some cooperatives, in the middle of the registration process, choose to register as companies instead. In this context, they gave up on social and mutual help objectives—the foundation of a housing cooperative idea— to a more business and profit-driven housing agenda. Therefore, such sudden change implies that the affordable housing development objective was abandoned. In relation to this, not surprisingly, the government also admits that cooperative organizations still face institutional constraints. In one way, these relate to the outdatedness of cooperative legislation, a gap that can be taken advantage of by rent-seeking individuals:

To date there is no clear policy on cooperatives, and the current legislation governing cooperatives is outdated and inadequate. This lack of clarity in policy and flawed legislation has made cooperatives inefficient and ineffective as instruments of economic development. Instead, promoting and enhancing the interests of the common man they have been taken advantage of and abused by certain political interests to hinder economic development. (RCA, 2006, p.7)

On the other hand, with housing cooperatives having decreased in number over the past, their progress is also hindered by lack of appropriate policy guidance. The national policy on cooperatives further emphasizes this challenge as follows:

There is a high and rising number of cooperatives with significant potential to generate investment, but the policy framework is currently silent on how to encourage them to do so. Currently, there is no policy action about potential incentives (fiscal and non-fiscal) and facilitation that the Government might put in place to support the development of cooperatives. (ROR, 2018d, p. 15)

Transaction costs

The previous section discusses the various constraints arising from different formal regulations. These constraints imply that housing development is not a straightforward process. Instead, it reveals that housing providers face hurdles as a result of increased transaction costs. This section highlights sources of transaction costs that affect the affordable housing provision process. We draw on Buitelaar (2007) to classify transaction costs in housing development as search and information costs, negotiation costs and enforcement costs. In the context of Kigali, transaction costs arise along the process of housing development. Table 7.5 displays transaction costs by each development stage and affected housing provider. This table indicates that most transaction costs are concentrated in the pre-development stage. This is mainly linked to several bureaucratic procedures and negotiations required before the launch of construction works. Furthermore, the same table also shows that private developers and cooperatives are the most affected, which could be explained by the fact that they are also the most active actors in affordable housing development.

Table 7.5 Transaction costs in affordable housing development

Transaction costs by development stage	Type of TCs	Affected provider		
		PD	CP	PI
<i>Pre-development stage</i>				
Insufficient information about housing needs	I	✓	✓	
Tedious process of cooperative registration	E		✓	
Long process of feasibility studies	N	✓		✓
Difficulties to reach agreement between private investors and government on PPP projects	N	✓		✓
Lengthy expropriation procedures	N	✓		
<i>Development planning and design stage</i>				
Insufficient information on planning regulations	I		✓	
Insufficient information on finance options	I	✓	✓	
Insufficient information on government incentives	I		✓	
Lengthy and stressful building permitting process	N	✓	✓	
Onerous building standards	N		✓	
<i>Construction stage</i>				
Inefficient provision of infrastructure support	E	✓		
High professional fees	N	✓	✓	✓
Monitoring agreements and contracts	E	✓		✓
<i>Disposal/management stage</i>				
High rental income taxes	E	✓		
Unclear process to identify potential buyers	I	✓	✓	

Source: Author

Note: TCs=transaction costs; PD=private developers; CP=cooperatives; PI=public institutions

Search and information costs

Cooperatives are the most affected by search and information costs among housing providers. On the one hand, cooperatives are largely run at the community level. As such, most of them find it difficult to communicate directly with and create formal relations with institutions in charge of housing at the national level. Thus, they are unable to lobby for changes in the decision-making arenas such as the parliament and the national committee in charge of approving government support for affordable housing projects. On the other hand, the government is also blamed for limited efforts in engaging housing cooperatives. Consequently, the overall impression is that housing cooperatives, being distant from the government and other key actors, are not well integrated into the formal affordable housing program. As a result of this situation, housing cooperatives have limited access to information about planning regulations or technical requirements for housing development. Notably, people emphasize that new initiatives for housing cooperatives are constrained by limited access to essential information about government support and other resources necessary to implement their programs:

You will realize people are willing to pull their resources together through a cooperative but lack necessary information with regard to how their can proceed with such idea and where (or if) they can access some sort of support from the government. (Interview with NP01, 24 July 2019)

Moreover, it could also be argued that search and information costs result from lacking data to support the decision-making process. A typical example concerns lack of data about housing needs, which could serve as a basis for selecting beneficiaries. This affects both developers and government organs, lacking adequate evidence when they need to examine beneficiaries' applications. In addition, developers have no clear understanding of the purchasing power and thus the risk level they would take by engaging in a particular project. Lack of data on socio-economic conditions of the potential affordable housing beneficiaries could also keep some financiers out of the sector. If such data were available, they would also help design different mortgage packages to match various income levels—thus, responding to different housing needs. For developers, search and information costs raise uncertainty and are one of the reasons some actors are reluctant to intervene in the sector:

Lack of a reliable database of how many people need what type of housing remains a significant challenge only for the government but, more importantly, for developers and investors who might be interested in the sector. (Interview with PS05, 23 July 2019)

There is still a lack of data on the income levels of residents. However, we usually use the national welfare stratification and other surveys done by the districts. However, they are not sufficiently detailed to provide a real picture of the problem and inform our decisions. (Interview with PS06, 15 July 2019)

Lastly, poor coordination between various institutions also contributes to the information costs. Such deficiency is demonstrated by a rupture in the flow of information from central government institutions to the local-level actors. Collaboration at the national level shows some prospects. Particularly, when it entails housing projects of large scale, government institutions are actively engaged and supporting the lead developer (or consortium) by all means. In contrast to cases involving small scale housing projects primarily undertaken by local housing developers. In this respect, to improve communication and information flow, some housing providers propose the creation of a department or unit in charge of coordinating activities within the affordable housing provision chain:

There is a need for effective channels of communication to enable the flow of information from one institution to another. This should be a specific unit within one of the institutions, for example, in Rwanda Housing Authority if they are given the capacity to coordinate all interventions and aspects of issue including financial, technical, social and others we mentioned earlier. (Interview with IO01, 28 June 2019)

Negotiation costs

Negotiation costs are the second form of transaction costs taking place within the affordable housing development process. Housing providers encounter negotiation costs at different stages of housing development. Private developers are the most affected since they are the dominant actors. However, housing cooperatives, though to a limited extent, also face similar constraints. The sources of negotiation costs are diverse. Some are related to the lengthy and cumbersome procedures when applying for a building permit. In this case, some developers stressed that service delivery is comparatively slow and inefficient at the district and Kigali city:

From a developer perspective, there is incompetence among professionals involved in the housing supply chain. For instance, when you look at how an official from the city of Kigali or district one-stop centre handles some project proposals and interactions you have with them, you wonder what the problem is. (Interview with PS06, 15 July 2019)

The bureaucratic challenges in housing building remain unsolved, although the government has made some reforms. Some of these include an online building permit application system. According to a World Bank report, the process for applying for a building permit entails fifteen steps completed within 120 days at an estimated cost of up to 40% of the total building value (World Bank, 2017a). However, these figures are based on the description of procedures provided by the city of Kigali, and the process takes more time, as emphasized in the previous statement. In the same vein, delays in issuing construction permits are attributed to the low capacity of certain officials operating at the one-stop centres. These refer to a specialised office hosted at the Kigali city and districts to deal specifically with construction permitting and building inspections (these centres also exist in secondary cities' governance structures). One interviewee also reiterated the same challenge, stressing the need to improve the capacity of people running urban planning offices: 'there is lack of sense of responsibility in the development of plans and our professionals do not have the capacity to sustain that character' (Interview with EX04, 10 July 2019).

Furthermore, the process and conditions to apply for the government incentive undermine small-scale enterprises like cooperatives. For the same reason, small enterprises like housing cooperatives stand slim chances to qualify for government funding. For instance, the applicant must have to secure the building permit from the city of Kigali before compiling an application for the grant as stipulated in article 4 of the Prime Minister's instructions no. 001/03 of 23/02/2017 (ROR, 2017, p.188). This way, the enterprise seeking incentives needs to undertake two lengthy and costly processes. Yet, it would be more convenient and cost-effective for developers if both applications were combined. In addition, if it was done that way, it would be easy to implement, considering that the city of Kigali is a member of the national incentive approval committee.

In addition, negotiation costs are equally encountered when acquiring land through expropriation. It is an exercise that entails several lengthy procedures even if the government is involved, as was already elaborated in the previous section. Another contributor to the negotiation costs that cannot be ignored is high professional costs, which become unavoidable in the construction phase. At this stage, developers deal with and seek the services of different professionals as they must adhere to the strict requirements for the building permit application and other bureaucratic processes. In this regard, when you are a big housing development company or construction firm, you can easily afford someone who specialises in these bureaucratic issues (e.g., specialists in building and property law, architects, engineers, surveyors, etc.). Then the cost per unit

of dwelling is small. In contrast, a cooperative or small-scale developer with few dwelling units project cannot do the same due to high administrative costs per dwelling.

Enforcement costs

The enforcement costs arise when housing providers are compelled to bear costs associated with compliance to various formal rules (e.g., legislations, policies, and instructions). In the context of affordable housing provision, enforcement costs are mainly a burden for small enterprises like cooperatives. From the onset, they operate under tight budgets, with the nature of such organizations disadvantaging them in securing funds from private financiers. Therefore, they are heavily affected whenever their project plans face unexpected costs. Nevertheless, enforcement costs can similarly be entry barriers for low-budget housing initiatives irrespective of the type of developers (Table 7.5). In the course of housing development, developers have to comply with some regulations, most of which were discussed in chapter 5. In this case, legislations leading to enforcement costs include complying with building regulations, procedures to register cooperatives, land law and the rental income tax law (Table 7.5).

However, one should also note that not all enforcement costs are linked to the nature of legislations. These costs could also arise from limited institutional capacity during the enforcement of legislations. For instance, it was contended that officials at the district and Kigali city level in charge of processing land transfer or construction permits are unprofessional. The same problem was identified in some government agencies, such as the Rwanda Housing Authority and the City of Kigali/districts, facing difficulties in monitoring contracts and agreements with affordable housing investors. While participants were not precise regarding the nature of unprofessionalism encountered at local government offices, corruption could be one form of the challenge. A study¹² undertaken by Transparency International Rwanda in 2017 found that perception of corruption was very high in land-related services, with 10.5% of respondents having personally encountered corruption in the previous three years (TIR, 2017). Enforcement costs affect housing developers by delaying their projects and increasing the necessity to hire professionals to assist overcome such situations.

¹² The objective of the study was to measure the level of corruption in service delivery for land services, as well as gather public opinion. The survey was conducted in the 4 provinces and the city of Kigali and sampled 2,194 people (TIR, 2017).

7.3 Constraints related to informal institutions

In the previous section, we have explored constraints arising from formal institutions. Besides these, however, there are also constraints linked to informal institutions. In this respect, by the informal institutions, we refer to North (1990) definition of the concept as elaborated in the conceptual framework (see Chapter 3). Affordable housing providers face constraints linked to values, traditions and practices dominating housing construction in Rwanda. Culture holds an important position in every society whereby lifestyles reflect a diversity of cultural practices. Similarly, this section assesses the linkages between housing and value and practices by examining how expressions about favourite features of and ideals about housing constrain affordable housing developers within the existing institutional environment. The findings reveal three (3) major forms of constraints linked to informal institutions: alienation to single-family housing, susceptibility to unfamiliar construction technology, and prevalence of self-building approach.

Alienation to single-family housing

Urban planning legislations promote high density to ensure efficient use of land and urban compactness. These efforts were pursued primarily because Kigali city's landscape is predominantly made of hilly terrains and wetlands. Therefore, planning instruments led by the master plan in 2013 highly encouraged multi-family residential housing typology. For example, the master plan requires a minimum of 120 units per ha in areas designated as medium density zone (COK, 2013c). The density aspect is equally emphasized in affordable housing development, with projects seeking government funding required to exceed the area-specific density by 25% as stipulated in article 5 of the Prime Minister's instructions for government support for affordable housing projects (ROR, 2017b). However, in practice transitioning to high-density housing has been taking place at a slow pace. In this respect, there was a slight increase in the share of households accommodated in multi-family housing, equivalent to 0.2% between 2010 and 2017 (NISR, 2012, 2018b). As a result, single-family housing remains the most popular house type among residents accounting for 49.5% in 2017 (NISR, 2018b). Also, a survey undertaken by the state housing body reported that over 80% of public employees would prefer to have an individual house than living in apartments (RHA, 2011). This evidence further reaffirms an antagonism between culture and formal rules that cannot be underestimated.

The study findings also show that even if housing providers are required to build multi-family residential housing, affinity to single-family housing remains strong and influential on households' housing practices. One aspect closely associated with single-family detached housing typology is its privacy to the occupants, which is highly valued within the Rwandan tradition. In fact, the architectural characteristics of a house and its surrounding objects are closely linked to the Rwandan notions of status and privacy (Eramian, 2020). In Kigali, people do not like the fact that living in multi-family housing deprives one of access to an individual courtyard, which also means limited space and privacy. Therefore, in the face of this apathy, housing developers find it unsafe to invest in housing typology that is less attractive to the public, as some explain:

People are still a long way to changing their mindsets about rental housing, living in small houses and discarding the culture of building big individual houses. (Interview with EX02, 28 June 2019)

Also, part of the problem is the mindset of people in terms of the use of space. There is a tendency among residents to occupy big houses even if one has a small family. This should change in order to develop multiple units accommodating a large number of tenants. (Interview with RE04, 14 August 2019)

Also, people are not familiar with high-density housing designs and that environment as a whole. I have helped some residents who formerly lived in public high-density housing to relocate to back neighbourhoods with single-family housing. (Interview with AG03, 19 July 2019)

Susceptibility to unfamiliar construction technologies

In Rwanda, houses are built using a variety of both local and imported materials. Common traditional building materials include mud bricks, burnt clay bricks, concrete blocks, iron sheets and tiles. In the search for cost-efficient materials, developers are encouraged to explore other varieties of materials that could reduce building costs in the local environment. However, some housing developers interested in such innovations encounter resistance from residents who exhibit susceptibility to the quality of housing built with unfamiliar construction materials. As a result, private housing developers face the challenge of low acceptance if new materials are introduced. Consequently, it represents a hindrance to the further development of new materials:

People generally are reluctant to trust the quality and performance of materials, which explains the slow market penetration of our straw panel products. However, we know well that our materials are more durable than certain masonry walling materials such as concrete bricks. (Interview with PS03, 27 July 2019)

Furthermore, limited integration of socio-cultural aspects into the housing building process also emerges as a challenge. This is mainly in relation to the emphasis placed on the physical aspect of housing, which directly influences the production cost and affordability. Whereas the social aspect of housing overall attracts less attention. In this respect, some of the participants expressed their worries about issues of limited privacy and designs in emerging projects that do represent local preferences, which turn out to undermine the attractiveness of the houses built under new housing schemes:

There is still a journey to integrate housing with the socio-cultural aspects of Rwanda. For instance, Rwandese value privacy and some of the designs ignore this aspect, which is rather important to consider. This could reduce the attractiveness of projects or, even worse, when disregarded, it can lead to some social problems in the long run. (Interview, PS02, 15 July 2019)

Prevalence of self-building practice

In Kigali, like in the rest of Rwanda, most residents procure their own houses through self-building mechanisms. Access to housing via this strategy accounts for more than 80% compared to 6% that acquire houses through direct purchase (World Bank, 2018). Self-building has been a dominant practice and is closely linked to the long-standing tradition of homeownership across the country. This way, self-building has remained until now the most common way of transitioning from renting to owning a home. Households who succeeded to build own homes are highly regarded in society and are seen as self-sufficient and more stable than renters (Eramian, 2020). Moreover, building a house to accommodate one's future family also marks the transition to manhood¹³, with young men traditionally supposed to build one before marriage (Sommers, 2012). Compared to house purchases, self-building is more flexible and affordable for many aspiring homeowners. However, as highlighted in chapter 5, restricted access to finance means that few people can afford to buy houses available on the market. Unlike house purchase, the self-building approach allows flexibility to undertake construction works in phases as the owner accumulates funds, eliminating the need to secure all funds in advance. Although there is no rule barring people from building their own houses through a self-building strategy, the national housing policy emphasizes the importance of shifting from traditional housing building practices to acquiring up-to-standard houses built by

¹³ According to the Rwandan tradition, the father was responsible to build a house for his son(s) when they approached the age to marry. But, over time this practice has disappeared. Instead, young men build their houses as part of the preparations to establish own families.

professional developers. The self-building mechanism is sometimes associated with low-quality housing and neighbourhoods. A local planning expert points to this issue, saying:

Environmental quality for housing is still a challenge, given that self-built mechanisms are still dominant. You will find that neighbourhoods lack quality streets and amenities that should be integrated into housing development. (Interview with IO02, 24 June 2019)

Based on the above statement, self-building mechanisms pose concerns over the quality of houses and amenities at the neighbourhood level. Moreover, there are also worries about wasting developable land with the tendency to build single-family detached houses that require a relatively large area. For the same reason, as it is also mentioned in housing policies, there is a conviction that supporting mass housing development through established developers is one way to attain high-density housing. However, policies fail to address how this objective would be achieved in the face of prevailing contextual challenges. The Kigali City Master Plan of 2013, for instance, sets out that affordable housing shall be developed in areas designated as middle or high-density zones where required building height can reach nine (9) stories. But the tendency is that high-rise housing—locally called ‘apartments’—is associated with modern urban lifestyles and mainly accommodates affluent households.

From the perspective of housing providers and private developers, uncontained self-building practices reduce the demand for their completed affordable houses. Although this practice seems to be closely embedded in the culture, they also think the government should do more to prevent people from building individual houses and leave it to professional developers to lead the housing supply. Developers maintain that as long as people can choose between self-building and buying a complete house, they will most likely go for the former. In their opinion, the prevalence of that practice undermines their efforts in affordable housing provision.

7.4 Perspectives on conditions to enable affordable housing delivery

In the previous sections, we discussed the institutional constraints affordable housing providers face in their interventions. With previous sections having assessed institutional constraints, who is affected and how, this section focuses on the key actors' perspectives vis-à-vis what could be done to reverse the affordable housing situation in Kigali city. Considering the actors' exposure to and familiarity with processes in affordable housing provision, they are ideally positioned to describe what could be done better to have effective responses to the constraints discussed in chapters 5, 6 and 7. Overall, five (5) broad categories emerged from the analysis. To this end, enabling progress in addressing the affordable housing problem would depend on how much the affordable housing end-users' context is valued, undertaking policy reforms, increasing the government's role in housing and improving support for affordable housing providers. Table 7.6 provides further details about areas needing change for each identified factor.

Table 7.6 Conditions for improved affordable housing provision

Category	Needed changes
Valuing context of end-users	<ul style="list-style-type: none"> – House designs based on end-users' needs – Mind-set change about living in small spaces and multi-family housing – Integrating self-construction approach – Integrating MFIs in affordable housing scheme
Policy reforms	<ul style="list-style-type: none"> – Contextualizing policies (e.g., Master plan) – Refined definition of affordable housing – Incentives for rental housing – Legislations for rental housing market – Selecting accessible locations of affordable housing projects – Requirement for a wide range of house prices – Requiring rental units in affordable housing projects – Less expropriation and focus on upgrading of derelict areas
Increased government role	<ul style="list-style-type: none"> – Assess impact of affordable housing projects – Government should reinforce sites and services – Releasing state-owned land at low rates – Improve interactions with and coordination of key actors – Tax exemptions/reduction (e.g., rental housing, materials)
Housing providers	<ul style="list-style-type: none"> – Self-organization of affordable housing developers – More engagement of co-ops in affordable housing provision

Source: Author

The key actors in the affordable housing sector expressed concern that housing provision is conceived in disconnection to the context of end-users. Therefore, they emphasize the need to pay more attention to the prevailing economic conditions such as income levels and employment conditions. In addition, the socio-cultural aspects of housing should be considered by exploring possibilities to integrate and support the self-building approach since it is the primary strategy to acquire private housing among ordinary residents. In this regard, the emphasis could be put on engaging currently excluded yet essential institutions, mainly microfinance institutions. It is largely believed that MFIs would be more accessible for several potential beneficiaries than commercial banks and regular financiers currently are. Under this theme, however, a point of discord concerns space arrangement within houses. While most tenants and occupants prefer to live in a self-contained detached dwelling unit associated with increased privacy and seen as more suitable to the households' needs (e.g., household size), both housing providers and the government underline the necessity to educate the urban residents about the advantages of space-saving multi-family residential units. Such mobilisation would potentially influence a mindset shift towards increased acceptance of small plots and multi-family housing designs.

Secondly, reform of housing-related institutions is another aspect of affordable housing provision to improve. More precisely, the need to adapt some policies to better reflect realities on the ground was highlighted. Several actors mentioned that comprehensive definitions of affordable housing and affordability concepts are currently lacking, which affects the price-setting for affordable houses and the selection of beneficiaries. For instance, if the maximum affordable house price is higher than the appropriate range, beneficiaries may include even those able to afford market housing (although it should not be the case). Also, planning instruments like the Kigali master plan need to reflect local conditions better. However, we acknowledge that the master plan was under review when the dissertation was written. Thus, it is possible that some of these aspects were taken into consideration.

Also raised is the need to reduce the need to undertake expropriation or improve the procedures for the exercise process to minimize displacements of property owners. Instead, actors recommend that land acquisition for housing projects be built on partnerships between existing landowners and developers with an option that the latter can obtain house units in the proposed housing scheme—adopting a strategy like Skat's Mpazi housing model discussed in chapter 6. These partnerships would ensure affordable housing is developed in convenient locations, not in peripheral areas, as is usually the case. Policy reforms would also require giving rental housing more

consideration. Housing policies have been traditionally pro-ownership. Thus, the lack of legislation for private rental housing emerges as a remarkable gap. Most actors agree on the necessity to support affordable rental housing since it does not require high financial capacity from beneficiaries from the onset, unlike in owner-occupation. Thus, a critical condition to support rental housing entails regulating landlord and tenant relationships and introducing tailored incentives for private rental housing developers.

Thirdly, there are also calls for an increased government role in affordable housing provision. With the state's contribution mainly restricted to regulating and facilitating the providers through incentives, as discussed in chapter 6, many think it is far from being enough. Therefore, the areas needing further government involvement were identified. First, because land is a crucial element in the housing development process, the government should lead the strategic acquisition of land for future affordable housing projects. One approach that could also reduce the need to undertake expropriation includes releasing some state-owned land in the private domain¹⁴ for affordable housing development at a lower cost. Alternatively, the government could envisage strong collaborations with existing individual landowners, whereby the former could offer their land in exchange for a dwelling unit in completed affordable housing projects. In the same vein, rigorous enforcement of land laws would prevent wasteful use of land resources. Second, the government should support and implement sites and services. This would facilitate developers in starting housing construction when sites are serviced with basic infrastructure. While this is already integrated into the affordable housing incentives, implementation still requires being streamlined and scaled-up to reach a bigger number of developers engaged in affordable housing. In addition, coordination of actors requires further improvement, with some feeling not properly engaged by the relevant government authorities. To this end, improved coordination would entail increased interactions among different actors, especially the less influential ones like cooperatives and the end-users. With the government being the lead coordinator, it holds a key role in facilitating collaborations with various stakeholders beyond those confined to the private sector.

Finally, housing providers pointed to the need for increased support both before and when implementing affordable housing projects. In their opinion, without substantial government support, it is impossible to develop houses and sell them at below-market

¹⁴ According to Article 14 of the Law No. 43/2013 of 16/06/2013 governing land in Rwanda, state land in the private domain consists of all the land that is not included in State land reserved for public activities or infrastructures and land that does not belong to public institutions or local authorities or individuals (ROR, 2013).

prices without enduring losses. They stressed that current government support offered to affordable housing developers is insufficient. Thus, success in affordable housing provision would depend on the better engagement of providers. Private developers particularly complain about the lack of a platform to express their concerns in decision-making circles. Yet, surprisingly, the Private Sector Federation (PSF) hosts a department that oversees the construction sector, which is supposed to represent the interests of members operating in the construction industry. From the developers' perspective, self-organization is necessary to lobby for their interests and demands and facilitate exchange within the platform and between them and other stakeholders in the industry.

7.5 Discussion

The empirical results presented in chapter 7 indicate various constraints linked institutional environment and how they affect the efforts of key affordable housing providers. These findings feed into some past calls that stressed the significance of the institutional environment on housing outcomes, urging governments to pay more attention to the institutional reform that would integrate both informal and formal housing provision strategies (World Bank, 1993; UNCHS, 1996). In this vein, as the findings in the Kigali context demonstrated, some formal rules make the process of affordable housing provision more complex, time-consuming and costly. As a result, key housing providers face uncertainty when intervening in a sector associated with more risks than gains.

In some contexts, evidence shows that formal rules such as regulations may impact the efficiency of housing development. For example, some studies drew links between planning regulations and housing unaffordability or effects of restrictions on density and bureaucratic processes on the overall housing development cost (Dawkins and Nelson, 2002; Somerville and Mayer, 2003). Although some of these regulations may be introduced with good intentions, such as enforcing standards seen as appropriate for the city's urban development, they might also act as an implicit tax on housing for the poor (Glaeser, Gyourko and Saks, 2005; Bertaud, 2010). In the same vein, Ram and Needham (2016a) and Tan et al. (2017) indicated that weak institutional settings undermined affordable housing delivery in India and Malaysia, respectively. As such, findings in the context of Kigali enhance the common concerns in developing countries. This is in reference to the gaps in regulations, particularly for the rental housing sub-sector, non-contextualized planning policies and bureaucratic inefficiencies, which increase transaction costs in affordable housing provision. The incidence of transaction costs partly stems from information search. Although it may not sound unusual given the

nature of housing development, the findings reveal concerned actors do not receive the same level of attention from the government. Other costs originate from challenging bureaucratic processes and from using and enforcing the rules in use.

Besides the formal institutional context, it is essential to consider the wider institutional environment in which formal rulers are embedded. This dimension is of great importance considering the influence of culture, traditions and values on prevailing housing practices. The findings of this study reinforce the importance of adapting housing provision strategies to the cultural context. The study found that one of the factors explaining the limited attraction of new affordable houses includes the construction technology and design contravening what is idealized about the physical and social aspects of a home (e.g., ability to provide privacy, sufficient space, detached house units). Amidst the low popularity of developer-built houses, many households prefer the traditional way of procuring housing through a self-building strategy. Therefore, one could argue that it is valuable for the government to think about housing not only in terms of its physical materiality but also give more consideration to the social and cultural aspects.

7.6 Summary

In short, chapter 7 presented results for the third research question: ‘what constraints do affordable housing providers face given the institutional environment?’ After an introduction, the chapter content was organized around three (3) themes. The first two themes were on two categories of institutional constraints. Section two has focused on the constraints related to formal institutions, whereas section three has covered those related to informal institutions. Regarding the former, it was found that certain regulations impede the key providers of affordable housing as a result of stringency, ambiguity, or the absence of specific legislations. The impact of such defective institutions on the affordable housing provision process is manifested through different transaction costs that the providers must bear. In this case, it was observed that private developers suffer mostly from the negotiation costs, whereas housing cooperatives are affected by search and information-related transaction costs. Furthermore, the informal institutions in the form of traditions and housing-related practices equally constitute barriers to the progress of affordable housing provision, as shown in section 3. Such constraints include held traditions such as alienation to single-family detached housing design, susceptibility to unfamiliar building technology and prevalence of self-building mechanisms—all of which increase providers’ uncertainty over low desirability for their houses in the local context. Lastly, section 4 presented the key factors perceived as critical to enabling progress in the provision of affordable housing. The next chapter discusses the main findings and draws implications of the study.

CHAPTER 8

CONCLUSION AND IMPLICATIONS

8.1 Introduction

This concluding chapter synthesizes results from the empirical study and presents implications. The synthesis draws explicitly on the findings presented in chapters 5, 6 and 7. The study aimed to assess facets of the affordable housing problem in Kigali city by examining institutional constraints hindering affordable housing delivery. To achieve this objective, the study has sought to answer three questions: *(1) has housing affordability improved for tenant family households in Kigali city in recent years? (2) How does the underlying institutional framework support key actors' interests, objectives and strategies for affordable housing provision? (3) What are the constraints affordable housing providers face given the institutional environment?* The dissertation has addressed all aspects of the research questions with content structured around eight chapters. The thesis organization followed a logical order for the most part, albeit the empirical components were treated in parallel since each chapter's results were analyzed and interpreted independently.

Apart from the view of housing as a private good, it is also considered as a merit good or social good. From the view of housing as a merit good, welfare is considered improved if, within the society, households have access to a defined minimum standard of housing (Whitehead, 2007). However, the enormous cost and complex process in producing housing imply that not everyone can afford decent housing—hence, making a case for the government's intervention to correct distributional and efficiency failures in housing provision.

Fast urbanizing cities in developing countries are an example of such contexts where housing shortages are not only linked to the increasing urban populations. Instead, they also reflect the failure of prevailing institutions to shape compelling responses to affordable housing provision. To shed light on why responding to the affordable housing problem is slow, and by far the government's efforts have failed to achieve desirable outcomes in Kigali city, the study drew on the New Institutional Economics concepts of institutions and transaction costs. In this light, a conceptual framework illustrating the institutional structure for affordable housing provision in Kigali city was identified, featuring different types of institutions and transaction costs and their relationships defined and elaborated based on prominent literature on the topic.

The study contributed to a better understanding of the multiple facets of the affordable housing problem in Kigali, particularly how underlying institutional setting affects affordable housing provision. The remainder of the concluding chapter presents a summary of findings ordered by research questions. Thereafter, the chapter features a reflection on the research contributions to the theory and research methods. In the last section, the dissertation makes final remarks on the implications for further research on the same topic and housing policy and practice.

8.2 Results summary

(1) A family tenant households' perspective on the evolution of housing affordability

The findings from analysis of the household surveys indicate that housing affordability for family tenant households has not improved between 2010/2011 and 2016/2017. In this respect, the share of family households able to afford a standard two-bedroom unit decreased by 1.1% during the same period considering a 30% rent-to-income affordability benchmark (Table 5.1). Besides this, the study also found that the share of tenant family households living in overcrowding conditions increased by 9.4% during the same period. This insight reveals the magnitude of the housing affordability challenge, which worsened in recent years. Moreover, a rise in the number of households facing overcrowding in their accommodations further validates the deepening housing affordability problem. Based on these findings, one could argue that, beyond being a symptom of persistent housing unaffordability, overcrowding also constitutes a coping mechanism for tenant households burdened by housing-related expenses.

On the other hand, by examining tenants' perceptions, this thesis found different sets of obstacles preventing ordinary residents from securing affordable housing. First, the socio-economic situation constitutes an obstacle to access affordable housing. In this context, low wages and informal employment conditions imply that low-income tenants cannot benefit from the affordable housing program (strict on applicant's formal employment status and ability to secure mortgage finance). Second, limited access to housing finance is another key hindrance. Most tenants cannot qualify for conventional mortgage finance because neither do they hold borrower profiles required by credit lenders nor can they afford bank charges and lending criteria targeting high-income earners. Third, tenants also face constraints linked to the regulatory environment. Some tenants that otherwise would procure own house via self-building strategy can no longer easily do it due to the stringent planning requirements. Also, it was found that some of the constraints stem from some non-existent legislations—mainly laws that can improve the welfare of informally employed people and tenant-landlord relationship law. In the

former case, the gap in the legal framework makes it difficult for tenants to expect improved job conditions, including wage increases and securing formal contracts. While in the latter case, the absence of the law undermines tenants' security, exposing them to landlord malpractices. Furthermore, this situation reduces the possibility of turning rental housing into a viable alternative or, at least, a safe intermediary tenure along the way to owning a home.

The study also found that, due to some obstacles, tenants cannot access houses availed by the government-sponsored affordable housing program. The programme is primarily targeted at first home buyers. Based on this criterion, tenants stand out as potential beneficiaries. However, the study found that eligibility requirements to be the programme's beneficiary reduce low-income tenants' chances considering their economic status. For instance, one of the eligibility criteria challenging to meet is the income threshold required to apply for affordable housing. This criterion prioritizes financially stable workers with the ability to obtain mortgage finance. Besides this, the beneficiary selection process is unclear and non-transparent. Also, despite the government's role in setting prices of finished houses, these are still claimed to be high considering the overall income levels. In addition, the programme is biased towards homeownership, in line with most housing policies. However, disregarding rental tenure makes the responses unbalanced. With many people still earning too little income to purchase a home, rental housing would be more accessible. Lastly, most of the sites for affordable housing schemes are located in peripheral areas being relatively easier to acquire and consolidate large land. However, these locations appear unsuitable for potential beneficiaries since they are situated farther from major employment centres. Therefore, the view of housing affordability as a house building cost problem alone does not offer comprehensive solutions whenever some relevant factors such as transport cost and accessibility are disregarded.

(2) Affordable housing provision: Who? How? What rules?

The second research question sought to identify the key actors involved in the affordable housing sector, provision strategies and examine the institutions governing the delivery process. The findings show that affordable housing provision attracts the interests of diverse actors. In terms of the sector's institutional organisation, the government regulates and coordinates the sector in a centralized system in which significant decisions are made at the ministerial level. In this light, the local authority— i.e., the city of Kigali and districts, assures enforcement. The government is persuaded that instead of direct intervention in house building, incentivizing and facilitating the private, affordable

housing providers would yield better outcomes, albeit the national housing policy does not also rule out strategic interventions of government subsidiaries. Beyond stakeholders aligned to public-private sectors, also development agencies are essential partners contributing in terms of finance (i.e., World Bank) and knowledge (i.e., Swiss Agency for Development and Cooperation). This thesis also found that the formal channels of affordable housing delivery consist of private sector developers, public-private partnerships, public subsidiaries and housing cooperatives. With policies tailored towards primarily supporting market actors, private sector-led housing is regarded as the mainstream strategy.

On the one hand, the government views PPPs as a prospective way to reassure and attract reluctant private. Although public-private partnerships (PPPs) remain a privileged strategy, they have had a limited impact by far. On the other hand, the housing cooperatives strategy remains under-explored, alongside direct public housing. Cooperatives engaged in housing and real estate development exist in small numbers, but their contribution to affordable housing remains insignificant. The study found that this situation is linked to the inconsistencies in policies and legislation regarding their contribution to the sector, further enhanced by lacking appropriate incentives tailored to their capacity and organisation peculiarities. Beyond cooperatives, microfinance institutions (MFIs), despite playing a significant role in making finance accessible to low-income people, are not integrated into the institutional framework. Consequently, it reduces the chances of low-income earners and small enterprises, unserved by commercial banks, to obtain affordable finance. Lastly, the thesis found also that even if the government incentives for affordable housing developers are meant to minimize uncertainties associated with the sector, they are not sufficient to remove all concerns. In addition, the government's partial commitment and poor coordination in some aspects of the affordable housing sector remain problematic and further discourage the participation of certain actors. Therefore, despite government and stakeholders' endeavours, the underlying institutional setting is not made to sustain different housing provision strategies. Eventually, the overreliance on the private sector to deliver affordable housing obscures other strategies that can potentially contribute to various aspects of the housing problem.

(3) Institutional constraints for key affordable housing providers

The third research question examined the institutional constraints that hinder interventions of key affordable housing providers. This thesis found two forms of constraints. Some are related to formal institutions, while others are associated with informal institutions. In the former cases, constraints emerge from stringent, ambiguous regulations or the effects of absent legislation. Regarding stringent regulations, hindrances arise from procedures set by expropriation law, planning and construction rules, including those provided by the master plan and building regulations. Other regulations being unclear are the source of uncertainty for housing providers. They include land law provisions on the prevention of landholding and transfer of land ownership, which increase land acquisition costs. Besides this, the law governing cooperatives sets out a restrictive and unclear registration process. In terms of absent regulations, lacking rental housing legislation discourages providers who would otherwise be interested in this type of housing. As a result of constraints linked to formal regulations, housing providers encounter different transaction costs during housing development. In this light, private developers mainly encounter high negotiation costs for planning approvals and lengthy and complex expropriation processes. On the other hand, information costs affect housing cooperatives more than the rest of housing providers because they have limited access to information on available support, finance, planning legislation, and weak relations with government institutions in charge. On the other hand, enforcement costs such as the cost to comply with contracts and agreements and monitoring of housing projects execution affect private developers and public entities alike.

The thesis also found that informal institutions in the form of values and practices held vis-à-vis house building undermine developers' efforts and reduce the attractiveness of finished houses. The underlying formal institutions describe desired housing as one which is structurally safe, abiding by density requirements and ideally built by professional developers. Nevertheless, this is against dominant alienation towards single-family detached housing. The latter is commended as it offers sufficient space and desired privacy to the occupants—both are highly valued culturally and a quality marker for ideal housing. In addition to that, there is susceptibility to unfamiliar construction materials. With most people sceptical about houses built with new and less known construction materials, it discourages innovations in cost-effective building technologies. Finally, the prevalence of self-building is linked to economic conditions, as discussed in Chapter 5. But it is also deeply entrenched in the culture of self-sufficiency—a critical condition for young people's transition to adulthood in the Rwandan culture.

Nevertheless, the practice constitutes a major barrier, with many aspiring house-owners finding no need to buy a finished house when they can build one themselves. While policies remain indiscriminate about the practice, it reduces developers' confidence to obtain buyers for their projects.

8.3 Research contribution

This study on tenants' housing affordability and housing provision challenge in Kigali, Rwanda, makes an original contribution to the literature on housing policy and practice. In this respect, the study's contribution can be divided into theory and housing literature, and methods of housing research. Finally, the study also makes a contribution in terms of limitations in the research process and the researcher's experience in undertaking fieldwork in the case study context.

Theory and housing literature

The findings from this study make contributions to the existing literature and the housing practice. First, the study expands the literature on housing affordability challenges for urban low-income residents. We demonstrated how rules that determine when, how and who can benefit from state-sponsored affordable housing are rather designed to respond to the housing needs of the middle-class. To this end, the study has identified gaps in the policy's one-side perspective on the underlying 'affordable housing challenge' as mainly a supply-side problem and failure to integrate the end-users context into responses. Second, the study also contributed to a better understanding of how governance arrangements affect affordable housing production by shaping providers' decisions. More precisely, the study has shed light on the limitations and impact of increased reliance on the private sector and market logic to deliver affordable housing, which is reflected in the public sector's hesitancy to increase its role and extend support to other potential actors and strategies. Third, the study contributed to the application of NIE conceptual tools of institutions and transaction costs as a lens to examine the failures in affordable housing provision in Kigali. NIE being traditionally aligned to economic tradition and its positivism epistemology orientation, there is a strong bias in the use of quantitative methods. In the present study applying an interpretative approach offered another perspective, which values the lived experiences of individuals directly affected by everyday housing unaffordability and the actors actively engaged in responses concerning affordable housing delivery as a reliable source of knowledge.

The study findings feed into ongoing international debates on the affordable housing problem in fast urbanizing cities (UNCHS, 1996; Keivani and Werna, 2001b; Ward, 2012; Smets, Bredenoord and Van Lindert, 2014) and on the institutional environments that shape outcomes of various responses (Karruna, 2013; Ram, 2017; Gbadegesin, 2018). This dissertation is novel in terms of examining a global problem (limited responses to affordable housing shortfalls) in a contextualized institutional environment using a holistic approach to the affordable housing system. The findings on the impact of institutions on affordable housing responses show that key housing providers struggle to access required resources (e.g., finance, land, appropriate incentives) in the face of an underlying institutional framework. Some institutions act as barriers to their participation in the affordable housing sector. Similarly, the study findings emphasize the role of traditions and practices held about housing in terms of housing building and features of an ideal home, influence trust in and attraction to government-sponsored housing schemes.

The study also dealt with a subject of significant relevance to practice. That way, it also contributes to the practice of affordable housing. This research was conducted to identify flaws in how the affordable housing problem is dealt with in Kigali and examine links between slow and limited responses and the institutional setting. The findings identified obstacles to implementing existing affordable housing provision strategies and why these are inadequate. It stressed the need for conceptual clarity about what constitutes 'affordable housing'—for instance, defining targeted end-users, the nature of incentives needed and how they are allocated—a critical step to ensure the relevance of policy response to the problem on the ground. Besides filling knowledge gaps in the case study context, the study findings have the potential to inform governments and stakeholders when dealing with low-income housing provision in other cities like Kigali.

Methods

In chapter three, we demonstrated the interdisciplinarity of the housing research field. The unique nature of housing offers researchers the flexibility to approach the housing question from different theoretical perspectives within social sciences. In the same way, the study applied NIE conceptual tools of institutions and transaction costs that formed an analytical framework to examine the facets of the affordable housing provision challenge in Kigali.

Due to the unprecedented pace of urbanisation, meeting the demand for affordable and decent housing is a more pressing concern in cities across the developing world than elsewhere (UN-Habitat, 2016b). Although the political, economic and social conditions differ across these cities, how the housing problem emerged and expanded bears resemblances. That way, the methodology adopted in this study presents the potential to be replicated in studies undertaken in other cities with comparable features. In addition, one would argue that institutions do not matter only when investigating affordable housing, which suggests that the same research process could be relevant to the study of other housing typologies delivered through both market (i.e., full market rent housing) and non-market (i.e., social housing) arrangements.

Chapter four described why and how the study applied a mixed-methods approach making use of qualitative and quantitative data collection techniques. In order to study the implication of institutions on low-income tenants' housing affordability context and slow provision of affordable housing, the dissertation drew from the perspectives of multiple actors having a stake in the affordable housing sector, including housing practitioners, developers, policymakers, experts and tenants in semi-structured interviews held in Kigali. Applying a qualitative approach was beneficial in the sense that it enabled the researcher to investigate the phenomenon giving a voice to the people directly concerned with or affected by the affordable housing problem. Therefore, the approach permitted the researcher to learn from participants' own construction of meaning of the problem under investigation. The use of quantitative data, on the other hand, helped to supplement the qualitative component. The survey data was used to describe the housing affordability situation for the demand-side for affordable housing, and the insights generated were further elucidated through the qualitative interviews.

Methodological limitations

While the study has generated valuable insights, the research process encountered some limitations. First, the present research was undertaken in the context where data on housing and building parameters such as rents, building costs and prices are not available. This challenge was also emphasized in other studies on Kigali (Bachofer and Murray, 2018; Bower *et al.*, 2019). Thus, lack of reliable data may have affected the descriptive rigour of the quantitative analysis component. Second, some key informants showed little or no interest in participating in interviews, with some choosing to repeatedly postpone appointments until it became impossible to hold interviews with them. Related to that, a few interviewees exhibited signs of reservation avoiding some topics and questions, which may not sound unusual considering the underlying highly politicised research practice and the post-conflict context (Jessee, 2012). Some researchers similarly have stressed challenges related to participants' distrust (Manirakiza, 2018) and selective telling (King, 2009) during their field research in Rwanda. Therefore, in cases where the researcher was unable to probe further not to violate participants' rights, we may have missed out on some valuable information for the study.

8.4 Implications of the study

The researcher hopes that dissertation findings contribute to better understanding affordable housing provision challenges in fast urbanizing cities. Moreover, the methodology applied has some implications for researching housing policy and practice in developing countries.

Implications for further research

Reliable data are critical to continuous monitoring of housing affordability and for evidence-backed policy responses. It is possible to capture the actual housing conditions for different households only when detailed housing data is available. In this study, while we have relied on national datasets that include a limited number of housing parameters, this study proposes a more profound examination of housing affordability, taking into account of inherent features for different types of households (e.g., social, economic and spatial). Also, the study has highlighted limited access to mortgage finance as one aspect constraining low-income tenants to afford quality housing. It opens another avenue for investigating if and how micro-finance institutions could serve as an alternative source of housing finance to the beneficiaries of affordable housing.

The study has focused on the role of institutions at the macro-level to explore why responses to the affordable housing problem have been slow and limited in number. However, we cannot rule out the implication of the internal structure of various key organisations that participate in affordable housing development. While it was beyond the scope of this dissertation, resource limitations also could not allow the researcher to investigate linkages between the internal structure of affordable housing providers and their contribution to housing provision. Particularly, cooperative entities have fragile leadership structures that, in some instances, undermine their growth and perhaps their contribution to housing responses. However, it was also clear that these organisations operate in a context of hostile institutions that fail to recognize their potential and unique challenges. In this view, further research is needed to explore how existing policy support for affordable housing (i.e., policy incentives) can also reach small-scale housing providers like housing cooperatives. Also, the condominium law in effect for the past ten years was supposed to encourage collaborative housing delivery solutions through condominium associations. Although in principle, the law should provide a legal basis and an opportunity for community-led partnerships in affordable housing development, further research is needed to explore the potential of condominiums as another affordable housing delivery option and why such arrangement does not feature among affordable housing strategies.

8.6 Implications for housing policy and practice

In developing affordable housing programs and strategies, it is necessary to take a holistic approach. First, it is essential to recognize that housing is an asset of high social and policy relevance. Socially, housing represents much more than the physical structure. Yet, there is a tendency among housing policies to emphasise quality (i.e., structure compliance with standards) and to overlook the social aspect, which leads to poorly targeted programs. The national housing policy explicitly favours homeownership over rental tenure, even though it is impossible to make every resident own a house. This dissertation has indicated that ignoring rental housing in affordable housing programs deprives low-income tenants of an opportunity to improve housing conditions. For this reason, affordable housing programs need to be streamlined, taking into account factors like tenure balance and social and cultural perspectives about shelter and housing market conditions in specific contexts.

Affordable housing development entails a process that occurs within a complex set of interactions of social relations among actors and institutions. The underlying institutional environment establishes the legal context for affordable housing provision and directly

affects the outcomes. For instance, the government established incentives to help affordable housing developers build and sell houses at below-market rates without making losses. But these are judged insufficient to make affordable housing an attractive business. In this light, if private developers do not find affordable housing as a profitable business while the government is coy about direct housing building, then the question is how else the affordable housing provision dilemma could be approached. This underpins the need to reform institutions to support a variety of affordable housing delivery strategies and let new innovative responses emerge. To this end, procedures and rules at the origin transaction costs need to be improved to enhance efficiency and reduce difficulties inherent in affordable housing provision.

In developing countries, institutional support for low-income housing has been partial and not properly targeted. Emphasis on the supply-side of the housing system did little to improve the housing conditions of poor urban households. In many cases, policies acknowledge the significance of housing beyond providing shelter to occupants, conceptualizing it as an integral element to development policies. For instance, housing is a source of employment and can serve as collateral during access to and exchange for funding. In this respect, in place of a piecemeal approach to the affordable housing problem, long-term strategies need to give equal attention to the flaws in all components of the housing system (i.e., demand, supply and institutional setting) to ensure that responses are tailored to the reality of the housing challenge on the ground.

BIBLIOGRAPHY

- Abdul-Aziz, A.-R. and Kassim, P. S. J. (2011) 'Objectives, success and failure factors of housing public-private partnerships in Malaysia', *Habitat International*, 35, pp. 150–157. doi: 10.1016/j.habitatint.2010.06.005.
- Acioly, C. and French, M. (2012) 'Housing Developers: Developing World', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00443-4.
- Alexander, E. R. (2001) 'Governance and transaction costs in planning systems: A conceptual framework for institutional analysis of land-use planning and development control-the case of Israel', *Environment and Planning B: Planning and Design*, 28(5), pp. 755–776. doi: 10.1068/b2759.
- Alexander, E. R. (2005) 'Institutional transformation and planning: From institutionalization theory to institutional design', *Planning Theory*, 4(3), pp. 209–223. doi: 10.1177/1473095205058494.
- Allen, C. (2005) 'Reflections on housing and social theory: An interview with Jim Kemeny', *Housing, Theory and Society*. Taylor and Francis Ltd., pp. 94–107. doi: 10.1080/14036090510034608.
- Alliance Africa (2019) *Legal Framework Analysis: Rwanda National Report*. Kigali. Available at: [https://coops4dev.coop/sites/default/files/2019-10/Rwanda Legal Framework Analysis_0.pdf](https://coops4dev.coop/sites/default/files/2019-10/Rwanda%20Legal%20Framework%20Analysis_0.pdf) (Accessed: 8 July 2020).
- Ambrose, P. (1994) *Urban Process and Power*. London, New York: Routledge.
- Ambrose, P. J. (1991) 'The housing provision chain as a comparative analytical framework', *Scandinavian Housing and Planning Research*, 8(2), pp. 91–104. doi: 10.1080/02815739108730263.
- Anacker, K. B. (2019) 'Introduction: housing affordability and affordable housing', *International Journal of Housing Policy*. Routledge, pp. 1–16. doi: 10.1080/19491247.2018.1560544.
- Andreasen, M. H. et al. (2021) 'Self-builder landlordism: exploring the supply and production of private rental housing in Dar es Salaam and Mwanza', *Journal of Housing and the Built Environment*, 36(3), pp. 1011–1031. doi: 10.1007/s10901-020-09792-y.
- Andreasen, M. H., Agergaard, J. and Møller-Jensen, L. (2017) 'Suburbanisation, homeownership aspirations and urban housing: Exploring urban expansion in Dar es Salaam', *Urban Studies*, 54(10), pp. 2342–2359. doi: 10.1177/0042098016643303.
- Angel, S. (2000) *Housing Policy Matters: A Global Analysis*. Oxford: Oxford University Press.
- Armitage, L. and Susilawati, C. (2004) 'Do Public Private Partnerships Facilitate Affordable Housing Outcomes in Queensland?', *Australian Property Journal*. Edited by P. Lunghini, 38(3), pp. 184–187. Available at: <http://eprints.qut.edu.au>.
- Bachofer, F. and Murray, S. (2018) *Remote Sensing for Measuring Housing Supply in Kigali: Final Report*. Kigali. Available at: <https://www.theigc.org/project/remote-sensing-measuring-housing-supply-kigali/> (Accessed: 5 June 2019).
- Baffoe, G., Ahmad, S. and Bhandari, R. (2020) 'The road to sustainable Kigali: A contextualized analysis of the challenges', *Cities*, 105, pp. 1–12. doi: 10.1016/j.cities.2020.102838.
- Bah, E., Faye, I. and Geh, Z. (2018) *Housing Market Dynamics in Africa*. London: Macmillan. Available at: <http://www.repository.utl.pt/handle/10400.5/4576>.
- Baken, R.-J. and Linden, J. van der (1993) "Getting the Incentives Right": Banking on the Formal Private Sector', *Planning Review*, 15(1), pp. 1–22.
- Balchin, P. and Rhoden, M. (2002) *Housing: The Essential Foundations*. London: Routledge.
- Ball, M. (1986) 'Housing Analysis: Time For a Theoretical Refocus?', *Housing Studies*, 1(3), pp. 147–166. doi: 10.1080/02673038608720573.
- Ball, M. (2003) 'Markets and the structure of the housebuilding industry: An international perspective', *Urban Studies*, 40(5–6), pp. 897–916. doi: 10.1080/0042098032000074236.
- Ball, M., Lizieri, C. and MacGregor, B. D. (1998) *The economics of commercial property markets*. London: Routledge.
- Balmer, I. and Gerber, J. D. (2018) 'Why are housing cooperatives successful? Insights from Swiss affordable housing policy', *Housing Studies*, 33(3), pp. 361–385. doi: 10.1080/02673037.2017.1344958.
- Bates, S. R. and Jenkins, L. (2007) 'The Profession: Teaching and Learning Ontology and Epistemology in Political Science', *Politics*, 27(1), pp. 55–63.

- Behuria, P. (2018) 'Examining Effectiveness and Learning in Rwandan Policymaking: The Varied Outcomes of Learning from Failure in Productive Sector Policies', *Journal of International Development*, 1043(June), pp. 1023–1043. doi: 10.1002/jid.3375.
- Bengtsson, B. (2001) 'Housing as a Social Right: Implications for Welfare State Theory', *Scandinavian Political Studies*, 24(4), pp. 255–275.
- Bengtsson, B. (2012) 'Housing Politics and Political Science', in Clapham, D. F., Clark, W. A. V., and Gibb, K. (eds) *The Sage Handbook of Housing Studies*. London: Sage publications, pp. 206–229.
- Benken, E. E. (2017) *Nowhere to go : Informal Settlement Eradication in Kigali, Rwanda*. University of Louisville. doi: 10.18297/honors/127.
- Berg, B. L. (2004) *Qualitative Research Methods*. 5th edn, *Qualitative Research Methods for the Social Sciences*. 5th edn. Edited by J. Lesser. Boston: Allyn & Bacon.
- Bertaud, A. (2010) *Land Markets, Government Interventions, and Housing Affordability*. 18. Washington, DC. Available at: www.brookings.edu/global (Accessed: 17 July 2021).
- Bhaskar, R. (1998) 'Philosophy and scientific realism', in Margaret, A. et al. (eds) *Critical realism: Essential readings*. London: Routledge, pp. 16–47.
- Bhattacharjee, A. (2012) *Social Science Research: Principles, Methods, and Practices*. 2nd edn. Tampa: University of South Florida. Available at: http://scholarcommons.usf.edu/oa_textbooks (Accessed: 15 June 2018).
- Biderman, C. (2008) *Informality in Brazil: Does Urban Land Use and Building Regulation Matter?, Land Lines*. WP08CB1. Available at: <http://hdl.handle.net/10535/7618> (Accessed: 5 March 2019).
- Bizimungu, J. (2019) 'Financiers revived stalled Nyamirambo affordable housing project', *Property magazine*, 8 March, pp. 1–1. Available at: <https://propertymagazinerwanda.com/financiers-revived-stalled-nyamirambo-affordable-housing-project/> (Accessed: 12 May 2020).
- Bloomberg, L. D. and Volpe, M. (2012) *Completing Your Qualitative Dissertation: A Roadmap from Beginning to End*. 2nd edn. Edited by L. D. Bloomberg and M. Volpe. Thousand Oaks, CA: Sage publications .
- BNR (2017) *Towards Becoming A World Class Central Bank: Annual Report*. Kigali. Available at: <https://www.bnr.rw/index.php?id=82> (Accessed: 23 August 2020).
- Boamah, N. (2011) 'Housing Affordability in Ghana: A focus on Kumasi and Tamale', *Ethiopian Journal of Environmental Studies and Management*, 3(2010), pp. 1–11. doi: 10.4314/ejesm.v3i3.63958.
- van Bortel, G. and Gruis, V. (2019) 'Innovative Arrangements between Public and Private Actors in Affordable Housing Provision: Examples from Austria, England and Italy', *Urban Science*, 3(2), p. 52. doi: 10.3390/urbansci3020052.
- Bovaird, T. (2004) 'Public-private partnerships: From contested concepts to prevalent practice', *International Review of Administrative Sciences*, 70(2), pp. 199–215. doi: 10.1177/0020852304044250.
- Bowen, G. A. (2009) 'Document Analysis as a Qualitative Research Method', *Qualitative Research Journal*, 9(2), pp. 27–40. doi: 10.3316/QRJ0902027.
- Bower, J. et al. (2019) *Housing need in Kigali*. C-48406-RWA-1. kigali. Available at: <https://www.theigc.org/wp-content/uploads/2019/07/Bower-et-al-2019-Final-report.pdf> (Accessed: 1 February 2020).
- Bradley, K. (2009) *Just environments :Politicising sustainable urban development*. Royal Institute of Technology. Available at: <http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A209293&dswid=4726> (Accessed: 6 November 2019).
- Bramley, G. (1990) 'Access, affordability and housing need', in *Paper presented at ESRC Housing Studies Conference*. Bristol: University of Bristol.
- Bramley, G. (2012) 'Affordability, poverty and housing need: Triangulating measures and standards', *Journal of Housing and the Built Environment*, 27(2), pp. 133–151. doi: 10.1007/s10901-011-9255-4.
- Bratt, R. G. (2008) 'Nonprofit and for-profit developers of subsidized rental housing: Comparative attributes and collaborative opportunities', *Housing Policy Debate*, 19(2), pp. 323–365. doi: 10.1080/10511482.2008.9521638.
- Bratt, R. G. (2019) 'The Role of Nonprofits in Meeting the Housing Challenge in the United States', *Urban Research and Practice*, 12(1), pp. 7–37. doi: 10.1080/17535069.2017.1341951.

- BRD (2016) *Department of Housing Investments, BRD website*. Available at: <https://www.brd.rw/brd/department-of-housing-investments/> (Accessed: 2 July 2020).
- BRD (2017) *Annual Report 2017*. Kigali. Available at: www.brd.rw (Accessed: 9 April 2020).
- BRD (2018a) *Annual Report 2018*. Kigali. Available at: www.brd.rw (Accessed: 6 September 2019).
- BRD (2018b) 'Ndera Affordable Housing Project', *BRD/Official statement*. Kigali : Development Bank of Rwanda, pp. 1–10. Available at: www.brd.rw (Accessed: 9 April 2020).
- BRD (2019) *Refocusing to Deliver Better: 2019 Integrated Annual Report*. Kigali. Available at: www.brd.rw (Accessed: 9 April 2020).
- BRD (2020) 'Application form for a housing-Rwanda Housing Finance Project', *BRD website*. Kigali: Development Bank of Rwanda (BRD), pp. 1–2. Available at: www.brd.rw (Accessed: 9 April 2020).
- Bredenoord, J. (2016) 'Sustainable Housing and Building Materials for Low-income Households', *Journal of Architectural Engineering Technology*, 5(158), pp. 1–9. doi: 10.4172/2168-9717.1000158.
- Bredenoord, J. and van Lindert, P. (2010) 'Pro-poor housing policies: Rethinking the potential of assisted self-help housing', *Habitat International*, 34(3), pp. 278–287. doi: 10.1016/j.habitatint.2009.12.001.
- Bredenoord, J. and Van Lindert, P. (2014) 'Backing the self-builders: Assisted self-help housing as a sustainable housing provision strategy', in Bredenoord, J., Van Lindert, P., and Smets, P. (eds) *Affordable Housing in the Urban Global South: Seeking Sustainable Solutions*. London: Routledge.
- Bredenoord, J. and Montiel, C. L. (2014) 'Affordable housing for low-income groups in Mexico and urban housing challenges of today', in Bredenoord, J., van Lindert, P., and Smets, P. (eds) *Affordable Housing in the Urban Global South: Seeking Sustainable Solutions*. London and New York: Taylor and Francis, pp. 1–412. doi: 10.1017/9781315849539.
- Brenner, N. and Theodore, N. (2002) 'Cities and the Geographies of "Actually Existing Neoliberalism"', *Antipode*, 34(3), pp. 349–379.
- Bromley, D. W. (1989) 'Property Relations and Economic Development: The Other Land Reform', *World Development*, 17(6), pp. 867–877.
- Brown, T. and Yates, N. (2012) 'Public-Private Housing Partnerships', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00474-4.
- Brueckner, J. K. and Lall, S. V (2014) 'Cities in Developing Countries: Fueled by Rural-Urban Migration, Lacking in Tenure Security, and Short of Affordable Housing', in G. Duranton, J.V. Henderson, and W. Strange (eds) *Handbook of Regional and Urban Economics*. Washington, D.C: Routledge.
- Bryman, A. (2012) *Social Research Methods*. 4th edn. Edited by A. Bryman. New York: Oxford University Press.
- Bryman, A. and Bell, E. (2011) *Business research methods*. 3rd edn. Edited by A. Bryman and E. Bell. Oxford: Oxford University Press.
- Buckley, R. M. and Kalarickal, J. (2005) 'Housing Policy in Developing Countries: Conjectures and Refutations', *The World Bank Research Observer*, 20(2), pp. 233–257. doi: 10.1093/wbro/lki007.
- Buitelaar, E. (2004) 'A transaction-cost analysis of the land development process', *Urban Studies*, 41(13), pp. 2539–2553. doi: 10.1080/0042098042000294556.
- Buitelaar, E. (2007) *The Cost of Land Use Decisions: Applying transaction cost economics to planning and development*. Oxford: Blackwell publishing.
- Burgess, R. (1992) 'Helping Some to Help Themselves: Third World Housing Policies and Development Strategies', in Kosta, M. (ed.) *Beyond self-help housing*. London: Mansell, pp. 75–94.
- Burke, T. and Hulse, K. (2010) 'The institutional structure of housing and the sub-prime crisis: An Australian case study', *Housing Studies*, 25(6), pp. 821–838. doi: 10.1080/02673037.2010.511161.
- Burton, E. (2003) 'Housing for an urban renaissance: Implications for social equity', *Housing Studies*, 18(4), pp. 537–562. doi: 10.1080/026730303004249.
- Buttler, T. and Hamnett, C. (2012) 'Social Geographic Interpretations of Housing Spaces', in Clapham, D. F., Clark, W. A. ., and Gibb, K. (eds) *The Sage Handbook of Housing Studies*. London: Sage publications, pp. 147–162.
- CAHF (2018) *Africa Housing Finance Yearbook 2018*. Johannesburg. Available at:

- <https://www.cgidd.com/> (Accessed: 19 June 2020).
- CAHF (2019) *Housing Finance in Africa: A Review of Africa's Housing Finance Markets*. Johannesburg. Available at: <https://housingfinanceafrica.org/documents/2019-housing-finance-in-africa-yearbook-10th-anniversary-edition/> (Accessed: 4 February 2021).
- Cameron, S. (2003) 'Gentrification, housing redifferentiation and urban regeneration: "Going for growth" in Newcastle upon Tyne', *Urban Studies*, 40(12), pp. 2367–2382. doi: 10.1080/0042098032000136110.
- Cao, J. A. and Keivani, R. (2014) 'The Limits and Potentials of the Housing Market Enabling Paradigm: An Evaluation of China's Housing Policies from 1998 to 2011', *Housing Studies*, 29(1), pp. 44–68. doi: 10.1080/02673037.2013.818619.
- Carter, W. H., Schill, M. H. and Wachter, S. M. (1998) 'Polarisation, public housing and racial minorities in US cities', *Urban Studies*, 35(10), pp. 1889–1911. doi: 10.1080/0042098984204.
- Chen, S. and Webster, C. (2012) 'Institutional Economics: New', *International Encyclopedia of Housing and Home*. Edited by J. Smith et al. Amsterdam: Elsevier.
- Chirisa, I., Bandaiko, E. and Mutsindikwa, N. T. (2015) 'Distributive politics at play in Harare, Zimbabwe: case for housing cooperatives', *Bandung: Journal of the Global South*, 2(15), pp. 1–13. doi: 10.1186/s40728-015-0015-9.
- Chitengi, H. S. (2018) 'Regulations and housing informality in African cities: appropriating regulatory frameworks to factors that influence resilience', *Housing and Society*, 45(1), pp. 14–41. doi: 10.1080/08882746.2018.1453721.
- Chiu, R. L. H. (2010) 'The transferability of Hong Kong's public housing policy', *International Journal of Housing Policy*, 10(3), pp. 301–323. doi: 10.1080/14616718.2010.506746.
- Cigdem, M. and Wood, G. (2012) 'Choice and Government Intervention in Housing Markets', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00212-5.
- Clapham, D. (2002) 'Housing pathways: A post modern analytical framework', *Housing, Theory and Society*, 19(2), pp. 57–68. doi: 10.1080/140360902760385565.
- Clapham, D. (2005) 'Housing pathways', in *The meaning of housing: A pathways approach*. Bristol: Bristol University Press, pp. 7–35.
- Clapham, David (2012a) 'Approaches', in Clapham, D. F., Clark, W. A. V., and Gibb, K. (eds) *The Sage Handbook of Housing Studies*. Los Angeles: Sage publications, pp. 107–247.
- Clapham, D. (2012) 'Cooperative Housing/Ownership', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00487-2.
- Clapham, David (2012b) 'Social Constructionism and Beyond in Housing Research', in Clapham, D. F., Clark, W. A. V., and Gibb, K. (eds) *The Sage Handbook of Housing Studies*. London: Sage publications, pp. 164–187.
- Clapham, David (2012c) 'Social Policy Approaches to Housing Research', in Clapham, D. F., Clark, W. A. V., and Gibb, K. (eds) *The Sage Handbook of Housing Studies*. London: Sage publications, pp. 163–173.
- Clapham, D. (2018) 'Housing Theory, Housing Research and Housing Policy', *Housing, Theory and Society*, 35(2), pp. 163–177. doi: 10.1080/14036096.2017.1366937.
- Clapham, D. and Kintrea, K. (2000) 'Community-based housing organisations and the local governance debate', *Housing Studies*, 5(4), pp. 533–559. doi: 10.1080/02673030050081096.
- Clark, J. and Kearns, A. (2012) 'Housing Improvements, Perceived Housing Quality and Psychosocial Benefits From the Home', *Housing Studies*, 27(7), pp. 915–939. doi: 10.1080/02673037.2012.725829.
- Cohen, M. (2017) 'A systematic review of urban sustainability assessment literature', *Sustainability (Switzerland)*, 9(2048), pp. 1–16. doi: 10.3390/su9112048.
- COK (2012) *Housing market demand, housing finance and housing preferences for the city of Kigali*. Kigali. Available at: https://www.kigalicity.gov.rw/fileadmin/templates/Documents/reports/1_Executive_Summary_Synopsis_Housing_Demand_study.PDF (Accessed: 23 August 2018).
- COK (2013a) *City development plan (2013-2018)*. Kigali. Available at: https://kigalicity.gov.rw/fileadmin/templates/Documents/policies/Kigali_City_Development_Plan_2013-2018_City_development_Plan_.pdf (Accessed: 8 July 2019).
- COK (2013b) *Detailed District Physical Plans: Gasabo District Zoning Plan Report*. Kigali. Available at:

- http://www.masterplan2013.kigalicity.gov.rw/downloads/Docs/RWF1101_11_Gasabo_Zoning_Report_04062013-s.pdf (Accessed: 23 August 2018).
- COK (2013c) *Kigali City Master Plan Report: Detailed physical plan for Gasabo and Kicukiro, Kigali, Rwanda*. Kigali. Available at: http://www.masterplan2013.kigalicity.gov.rw/downloads/Docs/RWF1101_03_Kigali_City_Master_Plan_Report_03062013-s.pdf (Accessed: 6 March 2018).
- COK (2014) *Kigali City Master Plan 2013: Towards a Centre Of Urban Excellence*. Kigali. Available at: https://kigalicity.gov.rw/fileadmin/templates/Documents/reports/KIF_29.01.2014_Master_Plan_Presentation.pdf (Accessed: 14 August 2020).
- COK (2020) *Vision and mission*. Available at: <https://kigalicity.gov.rw/index.php?id=61> (Accessed: 19 April 2020).
- Collier, P. and Venables, A. J. (2014) *Housing and Urbanization in Africa Unleashing a Formal Market Process*. 6871. Washington DC.
- Conway, J. (2000) *Housing Policy*. London: Routledge.
- Corry, O. (2010) 'Defining and theorizing the third sector', in Taylor, R. (ed.) *Third Sector Research*. New York: Springer, pp. 11–20. doi: 10.1007/978-1-4419-5707-8_2.
- Coupe, T. (2020) 'How global is the affordable housing crisis?', *International Journal of Housing Markets and Analysis*, ahead-of-p(ahead-of-print), p. undefined. doi: 10.1108/IJHMA-04-2020-0040.
- Creswell, J. W. (2007) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 2nd edn, Book. 2nd edn. Thousand Oaks: Sage publications. doi: 10.1016/j.aenj.2008.02.005.
- Creswell, J. W. (2009) *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. 3rd edn. Los Angeles.
- Croese, S., Cirolia, L. R. and Graham, N. (2016) 'Towards Habitat III: Confronting the disjuncture between global policy and local practice on Africa's "challenge of slums"', *Habitat International*, 53(2016), pp. 237–242. doi: 10.1016/j.habitatint.2015.11.037.
- Croese, S. and Pitcher, M. A. (2017) 'Ordering power? The politics of state-led housing delivery under authoritarianism – the case of Luanda, Angola', *Urban Studies*, 56(2), pp. 401–418. doi: 10.1177/0042098017732522.
- Crotty, M. (1998) *The Foundations of Social Research: Meaning and perspective in the research process*. London: Sage.
- Czischke, D. (2018) 'Collaborative housing and housing providers: towards an analytical framework of multi-stakeholder collaboration in housing co-production', *International Journal of Housing Policy*, 18(1), pp. 55–81. doi: 10.1080/19491247.2017.1331593.
- Czischke, D. and van Bortel, G. (2018) 'An exploration of concepts and policies on "affordable housing" in England, Italy, Poland and The Netherlands', *Journal of Housing and the Built Environment*, pp. 1–21. doi: 10.1007/s10901-018-9598-1.
- Darabi, H. and Jalali, D. (2019) 'Illuminating the formal–informal dichotomy in land development on the basis of transaction cost theory', *Planning Theory*, 18(1), pp. 100–121. doi: 10.1177/1473095218779111.
- Dawkins, C. J. and Nelson, A. C. (2002) 'Urban containment policies and housing prices: an international comparison with implications for future research', *Land Use Policy*, 19(1), pp. 1–12. doi: 10.1016/S0264-8377(01)00038-2.
- Denzin, N. K. and Lincoln, Y. S. (2011) *The Sage handbook of qualitative research*. Edited by N. K. Denzin and Y. S. Lincoln. Thousand Oaks: Sage.
- Dodson, J. (2007) *Government discourse and housing*. Hampshire: Ashgate.
- Durand-Iasserve, A. (2007) 'Market-driven eviction processes in developing country cities: The cases of Kigali in Rwanda and Phnom Penh in Cambodia', *Global Urban Development*, 3(1), pp. 1–14.
- Duranton, G. and Puga, D. (2014) 'Urban Land Use', in Duranton, G., Henderson, V. J., and Strange, W. S. (eds) *Handbook of Regional and Urban Economics*. 5th edn. New York: Elsevier. Available at: <https://real-estate.wharton.upenn.edu/profile/21470/>.
- Eby, J., Kitchen, P. and Williams, A. (2012) 'Perceptions of Quality Life in Hamilton's Neighbourhood Hubs: A Qualitative Analysis', *Social Indicators Research*, 108(2), pp. 299–315. doi: 10.1007/s11205-012-0067-z.
- Ehwi, R. J. (2019) *The Proliferation of Gated Communities in Ghana: A New Institutionalism Perspective. Thesis presented in fulfilment of the requirement for the award of the degree of Doctor of Philosophy*. University of Cambridge.

- Elsinga, M. (2015) 'Changing Housing Systems and their Potential Impacts on Homelessness', *European Journal of Homelessness*, 9(1).
- Elster, J. (1989) 'From here to there; or, If Cooperative Ownership Is So Desirable, Why Are There So Few Cooperatives?', *Social Philosophy and Policy*, 6(2), pp. 93–111. doi: 10.1017/S0265052500000650.
- Ensminger, J. (1996) *Making a Market: The Institutional Transformation of an African Society*. Cambridge: Cambridge University Press.
- Eramian, L. (2020) 'Moving on by settling down? Ambiguities of urban housing and home in post-genocide Rwanda', *Housing Studies*, pp. 1–19. doi: 10.1080/02673037.2020.1729962.
- Erguden, S. (2001) 'Low-cost Housing: Policies and Constraints in Developing Countries', in *International Conference on Spatial Information for Sustainable Development*. Nairobi: UN Habitat.
- Eriksson, P. and Kovalainen, A. (2008) *Qualitative research in business studies*. London: Sage.
- Escobar, L. and Grubbauer, M. (2021) 'Housing microfinance, saving and credit cooperatives, and community development in low-income settings in Mexico', *Community Development Journal*, 56(1), pp. 141–160. doi: 10.1093/cdj/bsaa051.
- Fainstein, S. S. (2010) *Redevelopment Planning and Distributive Justice in the American Metropolis*, SSRN. doi: 10.2139/ssrn.1657723.
- Fainstein, S. S. (2021) 'State domination in Singapore's public-private partnerships', *Journal of Urban Affairs*, 43(5), pp. 270–287. doi: 10.1080/07352166.2017.1406787.
- Finn, B. (2018) 'Quietly Chasing Kigali: Young Men and the Intolerance of Informality in Rwanda's Capital City', *Urban Forum*, 29(2), pp. 205–218. doi: 10.1007/s12132-017-9327-y.
- Finscope (2016) *Financial inclusion in Rwanda 2016*. Kigali. Available at: <https://www.statistics.gov.rw/publication/finscope-rwanda-2016> (Accessed: 29 August 2019).
- Fiori, J. and Ramirez, R. (1992) 'Notes on the Self-Help Housing Critique: Towards a Conceptual Framework for the Analysis of Self-Help Housing Policies in Developing Countries', in Mathey, K. (ed.) *Beyond self-help housing*. London: Mansell, pp. 13–31.
- Fletcher, A. J. (2017) 'Applying critical realism in qualitative research: methodology meets method', *International Journal of Social Research Methodology*, 20(2), pp. 181–194. doi: 10.1080/13645579.2016.1144401.
- Flyvbjerg, B. (2006) 'Five misunderstandings about case-study research', *Qualitative Inquiry*, 12(2), pp. 219–245. doi: 10.1177/1077800405284363.
- Fox, S. (2014) 'The Political Economy of Slums: Theory and Evidence from Sub-Saharan Africa', *World Development*, 54(February 2014), pp. 191–203. Available at: <http://www.elsevier.com/authorsrights>.
- Freeman, A., Chaplin, R. and Whitehead, C. M. . (1997) *Rental affordability: A review of international literature*. 88. Cambridge.
- Fruet, G. M. (2005) 'The low-income housing cooperatives in Porto Alegre, Brazil: A state/community partnership', *Habitat International*, 29(2), pp. 303–324. doi: 10.1016/j.habitatint.2003.10.004.
- Fullarton, F. (2005) 'Public private partnerships for affordable housing: A comparison of case studies from Australia and the Netherlands', *Australian Planner*, 42(2), pp. 28–31. doi: 10.1080/07293682.2005.9982415.
- Fulong, W. (1996) 'Changes in the Structure of Public Housing Provision in Urban China', *Urban Studies*, 33(9), pp. 1601–1627.
- Furubotn, E. G. and Richter, R. (1998) *Institutions and Economic Theory: The Contribution of the New Institutional Economics*. Ann Arbor: University of Michigan.
- Gabriel, M. et al. (2005) *Conceptualising and measuring the housing affordability problem*. Melbourne . Available at: <https://www.ahuri.edu.au/research/nrv-research-papers/nrv3-1> (Accessed: 23 August 2018).
- Galster, G. and Lee, K. O. (2020) 'Housing affordability: a framing, synthesis of research and policy, and future directions', *International Journal of Urban Sciences*, pp. 1–4. doi: 10.1080/12265934.2020.1713864.
- Gan, Q. and Hill, R. J. (2009) 'Measuring housing affordability: Looking beyond the median', *Journal of Housing Economics*, 18(2), pp. 115–125. doi: 10.1016/j.jhe.2009.04.003.
- Ganapati, S. (2010) 'Enabling housing cooperatives: Policy lessons from Sweden, India and the United States', *International Journal of Urban and Regional Research*, 34(2), pp. 365–

380. doi: 10.1111/j.1468-2427.2010.00906.x.
- Ganapati, S. (2014) 'Housing cooperatives in the developing world', in Bredenoord, J., Van Lindert, P., and Smets, P. (eds) *Affordable Housing in the Urban Global South: Seeking Sustainable Solutions*. London: Routledge, pp. 102–114.
- Gardner, D. and Pienaar, J. (2019) *Benchmarking Housing Construction Costs Across Africa: Using CAHF's Housing Cost Benchmarking methodology to analyse housing costs in fifteen African countries*. Johannesburg. Available at: <https://housingfinanceafrica.org/app/uploads/Benchmarking-Housing-Construction-Costs-Across-Africa-FINAL-19-May-2019.pdf> (Accessed: 4 February 2021).
- Gbadegesin, J. T. (2018) *Towards a new policy direction for an improved housing delivery system in Nigerian cities Theoretical, Empirical and Comparative Perspectives*. Technische Universiteit Delft.
- Gerring, J. (2007) *Case study research: principles and practices*. Edited by J. Gerring. New York: Cambridge University Press. doi: 10.5860/choice.45-1530.
- Gibb, K. (2009) 'Housing studies and the role of economic theory: An (applied) disciplinary perspective', *Housing, Theory and Society*, 26(1), pp. 26–40. doi: 10.1080/14036090802704262.
- Gibb, K. (2012) 'Institutional Economics', in Clapham, D., Clark, W. A. ., and Gibb, K. (eds) *The Sage handbook of Housing Studies*. London: Sage publications, pp. 131–146.
- Gibb, K. and Nygaard, C. (2006) 'Transfers, contracts and regulation: A new institutional economics perspective on the changing provision of social housing in Britain', *Housing Studies*, 21(6), pp. 825–850. doi: 10.1080/02673030600917719.
- Gilbert, A. (2008) 'Viewpoint: Slums, tenants and home-ownership: On blindness to the obvious', *International Development Planning Review*, 30(2), pp. 1–10. doi: 10.3828/idpr.30.2.1.
- Gilbert, A. (2012a) 'Housing Subsidies in the Developing World', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00127-2.
- Gilbert, A. (2012b) 'Rental Market and Rental Policies in Less Developed Countries', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00075-8.
- Gilbert, A. and Varley, A. (1990) 'Renting a home in a third world city: choice or constraint?', *International Journal of Urban and Regional Research*, 14(1), pp. 89–108. doi: 10.1111/j.1468-2427.1990.tb00822.x.
- Gilmour, T. and Milligan, V. (2012) 'Housing affordability, affordable housing and policy agenda', in Tomlinson, R. (ed.) *Australia's unintended cities: the impact of housing on urban development*. Melbourne, pp. 51–68.
- Glaeser, E. and Joshi-Ghani, A. (2013) *The Urban Imperative: Toward Shared Prosperity*. 84259. Washington. Available at: <https://openknowledge.worldbank.org/bitstream/handle/10986/17581/842590WP0Glaes0Box0382134B00PUBLIC0.pdf;sequence=1> (Accessed: 5 June 2020).
- Glaeser, E. L. (2014) 'A world of cities: The causes and consequences of urbanization in poorer countries', *Journal of the European Economic Association*, 12(5), pp. 1154–1199. doi: 10.1111/jeea.12100.
- Glaeser, E. L., Gyourko, J. and Saks, R. E. (2005) *Why have housing prices gone up?* 11129. Cambridge, Massachusetts. doi: 10.1257/000282805774669961.
- Goodfellow, T. (2013) 'Planning and development regulation amid rapid urban growth: Explaining divergent trajectories in Africa', *Geoforum*, 48, pp. 83–93. doi: 10.1016/j.geoforum.2013.04.007.
- Goodfellow, T. (2014) 'Rwanda's political settlement and the urban transition: expropriation, construction and taxation in Kigali', *Journal of Eastern African Studies*, 8(2), pp. 311–329. doi: 10.1080/17531055.2014.891714org/10.1080/17531055.2014.891714.
- Goodfellow, T. (2017) 'Taxing property in a neo-developmental state: The politics of urban land value capture in Rwanda and Ethiopia', *African Affairs*, 116(465), pp. 549–572. doi: 10.1093/afraf/adx020.
- Gooding, T. (2016) 'Low-income housing provision in Mauritius: Improving social justice and place quality', *Habitat International*, 53, pp. 502–516. doi: 10.1016/j.habitatint.2015.12.018.
- Gou, Z. et al. (2018) 'Quality of life (QoL) survey in Hong Kong: Understanding the importance of housing environment and needs of residents from different housing sectors',

- International Journal of Environmental Research and Public Health*, 15(2), pp. 1–16. doi: 10.3390/ijerph15020219.
- Goytia, C. and Pasquini, R. (2016) *Housing Informality: The Land Use Regulation link to Informal Tenure in Developing Countries*. Buenos Aires. Available at: <https://www.oicrf.org/-/housing-affordability-the-land-use-regulation-link-to-informal-tenure-in-developing-countries> (Accessed: 23 August 2019).
- Griffin, L. (2004) *Creating Affordable Housing in Toronto Using Public-Private Partnerships consent from the publisher, FES Outstanding Graduate Student Paper Series*. 92. Toronto. Available at: <https://yorkspace.library.yorku.ca/xmlui/bitstream/handle/10315/18084/lara-griffin.pdf?sequence=1> (Accessed: 25 March 2020).
- Gunter, A. and Massey, R. (2017) 'Renting Shacks: Tenancy in the informal housing sector of the Gauteng Province, South Africa', *Bulletin of Geography*, (37), pp. 25–34. doi: 10.1515/bog-2017-0022.
- Gyourko, J. and Molloy, R. (2015) 'Regulation and Housing Supply', in Duranton, G., Henderson, V., and Strange, W. (eds) *Handbook of Regional and Urban Economics*. 2nd edn. Amsterdam: Elsevier, pp. 1289–1337. doi: 10.1016/B978-0-444-59531-7.00019-3.
- Gyourko, J. and Saiz, A. (2006) 'Construction Costs and The Supply of Housing Structure', *Journal of Regional Science*, 46(4), pp. 661–680.
- Hamiduddin, I. and Gallent, N. (2016) 'Self-build communities: the rationale and experiences of group-build (Baugruppen) housing development in Germany', *Housing Studies*, 31(4), pp. 365–383. doi: 10.1080/02673037.2015.1091920.
- Hancock, K. E. (1993) "can pay? "Won't pay?" or economic principles of affordability', *Urban Studies*, 30(1), pp. 127–145.
- Hansson, A. G. (2019) 'City strategies for affordable housing: the approaches of Berlin, Hamburg, Stockholm, and Gothenburg', *International Journal of Housing Policy*, 19(1), pp. 95–119. doi: 10.1080/19491247.2017.1278581.
- Harwell, M. R. (2011) 'Research Design in Qualitative/Quantitative/ Mixed Methods', in *The SAGE Handbook for Research in Education: Pursuing Ideas as the Keystone of Exemplary Inquiry*. New York: Sage, pp. 147–182. doi: 10.4135/9781412961288.n380.
- Hawkesworth, I. (2011) 'From Lessons to Principles for the use of Public-Private Partnerships', in *32nd Annual meeting of Working Party of Senior Budget Officials*. Luxembourg: OECD, pp. 1–17. Available at: <https://www.oecd.org/gov/budgeting/48144872.pdf> (Accessed: 5 June 2020).
- Hawtrey, K. (2009) *Affordable Housing Finance*. New York: Palgrave Macmillan.
- He, S. and Wu, F. (2007) 'Socio-spatial impacts of property-led redevelopment on China's urban neighbourhoods', *Cities*, 24(3), pp. 194–208. doi: 10.1016/j.cities.2006.12.001.
- Healey, P. (1992) 'An institutional model of the development process', *Journal of Property Research*, 9(1), pp. 33–44. doi: 10.1080/09599919208724049.
- Hearne, R. (2009) *Origins, development and outcomes of public private partnerships in Ireland: the case of PPPs in social housing regeneration*. Dublin: Combat Poverty Agency. Available at: <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.990.7662&rep=rep1&type=pdf> (Accessed: 13 September 2020).
- Hegedüs, J. (2020) 'Understanding housing development in new european member states-a housing regime approach', *Critical Housing Analysis*, 7(1), pp. 49–62. doi: 10.13060/23362839.2020.7.1.503.
- Hermans, L. M. and Cunningham, S. W. (2018) *Actor and Strategy Models: Practical Applications and Step-wise Approaches*. Hoboken: John Wiley & Sons.
- Hermans, L. M. and Thissen, W. A. H. (2009) 'Actor analysis methods and their use for public policy analysts', *European Journal of Operational Research*, 196(2), pp. 808–818. doi: 10.1016/j.ejor.2008.03.040.
- Hitayezu, P., Rajashekar, A. and Stoelinga, D. (2018) *The dynamics of unplanned settlements in the City of Kigali*. Kigali. Available at: www.laterite.com (Accessed: 5 January 2019).
- Hodge, G. and Greve, C. (2005) *The Challenge of Public-private Partnerships: Learning from International experience*. Edited by G. Hodge and C. Greve. Cheltenham: Edward Elgar.
- Howenstine, E. J. (1983) *Attacking Housing Costs: Foreign Policies and Strategies*. New Brunswick: Rutgers University, Center for Urban Policy Research.
- Huba, N. (2016) 'Access to Housing through Cooperatives: Potentials and Challenges from Tanzania', *International Journal of Humanities, Social Sciences and Education*, 3(9), pp.

- 100–114. doi: 10.20431/2349-0381.0309012.
- Huchzermeyer, M. and Misselwitz, P. (2016) 'Coproducing inclusive cities? Addressing knowledge gaps and conflicting rationalities between self-provisioned housing and state-led housing programmes', *Current Opinion in Environmental Sustainability*, 20, pp. 73–79. doi: 10.1016/j.cosust.2016.07.003.
- Hulchanski, J. D. (1995) 'The Concept of Housing Affordability: Six Contemporary Uses of the Housing Expenditure-to-Income Ratio', *Housing Studies*, 10(4), pp. 471–491. doi: 10.1080/02673039508720833.
- Ibem, E. O. (2011) 'The contribution of Public-Private Partnerships (PPPs) to improving accessibility of low-income earners to housing in southern Nigeria', *Journal of Housing and the Built Environment*, (26), pp. 201–217. doi: 10.1007/s10901-011-9213-1.
- IFC (2008) *IFC and Government of Rwanda Launch Program to Improve Housing*, Presse release. Available at: <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=24452> (Accessed: 10 August 2020).
- IFC (2011) *IFC Invests \$5 million in KCB Bank to Support Affordable Mortgages in Rwanda*, Presse release. Available at: <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=15403> (Accessed: 10 August 2020).
- IFC (2019) *IFC Project Information and Data Portal: Kinyinya, summary of investment information*. Available at: <https://disclosures.ifc.org/project-detail/ESRS/40409/kinyinya>.
- Iheme, J. O. (2017) *Factors for the Implementation of Affordable Federal Public Housing Policies in South-South Region of Nigeria*. University of Salford. Available at: <https://core.ac.uk/download/pdf/151171654.pdf> (Accessed: 6 April 2019).
- Imrie, R. (2005) *Accessible housing: Quality, disability and design*, *Accessible Housing: Quality, Disability and Design*. New York: Routledge. doi: 10.4324/9780203616734.
- Jacobs, K., Kemeny, J. and Manzi, T. (2003) 'Power, discursive space and institutional practices in the construction of housing problems', *Housing Studies*, 18(4), pp. 429–446. doi: 10.1080/02673030304252.
- Jacobs, K. and Manzi, T. (2000) 'Evaluating the social constructionist paradigm in housing research', *Housing, Theory and Society*, 17(1), pp. 35–42. doi: 10.1080/140360900750044764.
- Jaganyi, D. et al. (2018) *Rwanda: National Urban Policies and City Profiles for Kigali and Huye*. Kigali. Available at: <http://www.centreforsustainablecities.ac.uk/wp-content/uploads/2018/10/Research-Report-Rwanda-National-Urban-Policies-and-City-Profiles-for-Kigali-and-Huye.pdf> (Accessed: 3 July 2018).
- Janssen-Jansen, L. B. and Schilder, F. P. W. (2015) 'How healthy and sustainable is the Dutch housing mix? Measuring and comparing the theoretical housing market balance of Dutch regional housing markets', *Urban, Planning and Transport Research*, 3(1), pp. 88–108. doi: 10.1080/21650020.2015.1054565.
- Jenkins, P., Smith, H. and Wang, Y. P. (2007) *Planning and Housing in the Rapidly Urbanising World*. London and New York: Routledge. Available at: www.routledge.com/informabusiness.
- Jessee, E. (2012) 'Conducting fieldwork in Rwanda', *Canadian Journal of Development Studies*, 33(2), pp. 266–274. doi: 10.1080/02255189.2012.687356.
- Jonkman, A. and Janssen-Jansen, L. (2018) 'Identifying Distributive Injustice Through Housing (Mis)Match Analysis: The Case of Social Housing in Amsterdam', *Housing, Theory and Society*. doi: 10.1080/14036096.2017.1348392.
- Kabona, E. (2018) 'RSSB moves to recover funds stuck in Vision City project', *The EastAfrican*, 13 April. Available at: <https://www.theeastafrican.co.ke/tea/rwanda-today/rssb-moves-to-recover-funds-stuck-in-vision-city-project-1388102> (Accessed: 19 February 2021).
- Kalabamu, F. T. and Lyamuya, P. K. (2017) 'An Assessment of Public-Private-Partnerships in Land Servicing and Housing Delivery: The Case Study of Gaborone, Botswana', *Current Urban Studies*, 5, pp. 502–519. doi: 10.4236/cus.2017.54029.
- Kalamagye, J. (2015) 'Rwanda doing business reforms set in motion new meaning on the construction landscape', *Construction Magazine Rwanda*, 1(1), pp. 1–52. doi: 10.1017/CBO9781107415324.004.
- Kallergis, A. et al. (2018) *Housing Affordability in a Global Perspective*. WP18AK1. New York. Available at: <https://www.lincolnst.edu/pt-br/publications/working-papers/housing-affordability-global-perspective> (Accessed: 7 May 2019).
- Karruna, R. (2013) *Institutional ignorance in an urbanising world: Does new institutional*

- economics provide a useful tool for understanding the provision of land and housing to the poor?* 154. London. Available at: www.bartlett.ucl.ac.uk/dpu (Accessed: 16 September 2020).
- Kavishe, N. and Chileshe, N. (2019) 'Critical success factors in public-private partnerships (PPPs) on affordable housing schemes delivery in Tanzania: A qualitative study', *Journal of Facilities Management*, 17(2), pp. 188–207. doi: 10.1108/JFM-05-2018-0033.
- Keivani, R. and Werna, E. (2001a) 'Modes of housing provision in developing countries', *Progress in Planning*, 55(2), pp. 65–118. doi: 10.1016/S0305-9006(00)00022-2.
- Keivani, R. and Werna, E. (2001b) 'Refocusing the housing debate in developing countries from a pluralist perspective', *Habitat International*, pp. 191–208.
- Kemeny, J. (1988) 'Defining Housing Reality: Ideological Hegemony and Power in Housing Research', *Housing Studies*, 3(4), pp. 205–218. doi: 10.1080/02673038808720631.
- Kemeny, J. (1992) *Housing and Social Theory*. London: Routledge.
- Kemeny, J. (1995) *From public housing to the social market: Rental policy strategies in comparative perspective*. London and New York: Routledge. doi: 10.4324/9780203308554.
- Kemp, P. A. (2012) 'Access and Affordability: Housing Allowances', *International Encyclopedia of Housing and Home*. Edited by S. J. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00205-8.
- Keogh, G. and D'Arcy, E. (1999) 'Property Market Efficiency: An Institutional Economics Perspective', *Urban Studies*, 36(13), pp. 2401–2414.
- Keuschnigg, C. and Nielsen, S. B. W. (1994) *Housing Markets and Vacant Land*. 1. Vienna. Available at: <https://www.econstor.eu/bitstream/10419/68554/1/735209758.pdf> (Accessed: 15 December 2021).
- Kieti, R. M. and K'Akumu, O. A. (2018) 'Critical factors affecting affordability of mortgage housing in Kenya', *Journal of Housing and the Built Environment*, 33(1), pp. 111–131. doi: 10.1007/s10901-017-9547-4.
- King, E. (2009) 'From Data Problems to Data Points: Challenges and Opportunities of Research in Postgenocide Rwanda', *African Studies Review*, 52(3), pp. 127–148.
- King, P. (2000) 'Can we use rights to justify housing provision?', *Housing, Theory and Society*. doi: 10.1080/140360900750044755.
- King, P. (2003) 'Housing as a freedom right', *Housing Studies*. doi: 10.1080/02673030304259.
- Krabben, E. (1993) *An Institutional Economic Approach to land and property markets*. Tilburg University.
- Krabben, E. V. and Lambooy, J. G. (1993) *A Theoretical Framework for the Functioning of the Dutch Property Market*, *Urban Studies*.
- Van Der Krabben, E. (1995) *Urban Dynamics: A Real Estate Perspective An institutional analysis of the production of the built environment*. Tilburg University.
- Kutty, N. K. (2005) 'A new measure of housing affordability : Estimates and analytical results A New Measure of Housing Affordability : Estimates and', *Housing policy debate*, 16(1), pp. 37–41. doi: 10.1080/10511482.2005.9521536.
- Kvale, S. and Brinkmann, S. (2009) *InterViews: Learning the Craft of Qualitative Research Interviewing*. 2nd edn. Edited by S. Kvale and S. Brinkmann. London: Sage publications .
- Labuschagne, A. (2003) *Qualitative Research - Airy Fairy or Fundamental?* Available at: <https://nsuworks.nova.edu/tqr/vol8/iss1/7>.
- Lai, L. and Chung, W. (1994) 'The Economics of Land-Use Zoning: A Literature Review and Analysis of the Work of Coase', *Source: The Town Planning Review*, 65(1), pp. 77–98. doi: 10.3828/tpr.65.1.j15rh7037v511127.
- Lai, Y. and Tang, B. (2016) 'Institutional barriers to redevelopment of urban villages in China: A transaction cost perspective', *Land Use Policy*, 58, pp. 482–490. doi: 10.1016/j.landusepol.2016.08.009.
- Lang, R. and Stoeger, H. (2018) 'The role of the local institutional context in understanding collaborative housing models: empirical evidence from Austria', *International Journal of Housing Policy*, 18(1), pp. 35–54. doi: 10.1080/19491247.2016.1265265.
- Lawson, J. (2009) 'A review of structurally inspired approaches in housing studies-concepts, contributions and future perspectives', in *C43 International conference: Housing Assets, Housing People*. Glasgow: TU Delft.
- Lawson, J. M. (2006) *Critical Realism and Housing Research*. New York: Routledge.
- Lens, M. C. and Monkkonen, P. (2016) 'Do Strict Land Use Regulations Make Metropolitan Areas More Segregated by Income?', *Journal of the American Planning Association*,

- 82(1), pp. 6–21. doi: 10.1080/01944363.2015.1111163.
- Levine, C. (1988) 'Has AIDS Changed the Ethics of Human Subjects Research?', *Journal of law, medicine and ethics*, 16(4), pp. 167–173.
- Lima, V. (2020) 'The financialization of rental housing: Evictions and rent regulation', *Cities*, 105, pp. 1–9. doi: 10.1016/j.cities.2020.102787.
- Lincoln, Y. S. and Guba, E. G. (1985) *Naturalistic Inquiry*. Newbury Park: Sage publications.
- Llanto, G. M. (2007) 'Shelter finance strategies for the poor: Philippines', *Environment and Urbanization*, 19(2), pp. 409–423. doi: 10.1177/0956247807082821.
- Londerville, J. (2012) 'Private Sector Housing Management: North America', *International Encyclopedia of Housing and Home*. Edited by J. Smith et al. Amsterdam: Elsevier.
- MacLennan, D. and More, A. (1997) 'The future of social housing: Key economic questions', *Housing Studies*, 12(4), pp. 531–547. doi: 10.1080/02673039708720914.
- MacLennan, D. and Williams, R. (1990) *Affordable Housing in Britain and the United States*. Edited by D. W. R. MacLennan. New York: Joseph Rowntree Foundation.
- Madanipour, A., Miciukiewicz, K. and Vigar, G. (2018) 'Master plans and urban change: the case of Sheffield city centre', *Journal of Urban Design*, 23(4), pp. 465–481. doi: 10.1080/13574809.2018.1435996.
- Mainardes, E. W., Alves, H. and Raposo, M. (2012) 'A model for stakeholder classification and stakeholder relationships', *Management Decision*, 50(10), pp. 1861–1879. doi: 10.1108/00251741211279648.
- Majale, M. (2004) 'Improving access to adequate and affordable housing for the urban poor through an integrated approach', in *Affordable and Adequate Housing for All*. Toronto: University of Toronto, pp. 1–12. Available at: <http://www.itdg.org>.
- Maliene, V., Howe, J. and Malys, N. (2008) 'Sustainable communities: Affordable housing and socio-economic relations', *Local Economy*, pp. 267–276. doi: 10.1080/02690940802407989.
- Malpezzi, S. (1990) *Urban Housing and Financial Markets : Some International Comparisons, Urban Studies*.
- Malpezzi, Stephen (1999) 'A Simple Error Correction Model of House Prices*', *Journal of Housing Economics*, 8, pp. 27–62. Available at: <http://www.idealibrary.comon>.
- Malpezzi, S. (1999) 'Economic Analysis of Housing Markets in Developing Economies', in Mills, E. S. and Cheshire, P. (eds) *Handbook of Regional and Urban Economics*. New York: Elsevier.
- Manirakiza, R. (2014) '“Modernizing Kigali”: The struggle for space in an urban context', in Ansoms, A. and Hilhorst, T. (eds) *Everyday Forms of Land Grabbing in the Great Lakes Region of Africa*. Brussels: James Currey.
- Manirakiza, V. (2015) *La problématique de l'urbanization spontanée face à la modernisation de la ville de Kigali (Rwanda)*. Université Catholique de Louvain.
- Manirakiza, V. (2018) 'Field research ethical challenges in a post-conflict Rwandan society: mistrust experienced in data collection in Kigali City', *Rwandan Journal of Education*, 4(2), pp. 85–93. Available at: https://study.cardiffmet.ac.uk/AcSkills/Documents/Research/Research_Ethics_elesson/page_03.htm.
- Manzi, T., Haworth, A. and Kemeny, J. (2004) 'Social constructionism and international comparative housing research', in Jacobs, K., Kemeny, J., and Manzi, T. (eds) *Social Constructionism in Housing Research*. Aldershot: Ashgate, pp. 159–185.
- Marcus, P. (1992) 'Why Conventional Self-Help Projects Won't Work?', in Mathey, K. (ed.) *Beyond self-help housing*. London: Mansell.
- Marshall, C. and Rossman, G. B. (2011) *Designing Qualitative Research*. 5th edn. Edited by C. Marshall and G. B. Rossman. Thousand Oaks, CA: Sage Publications.
- Marshall, M. N. (1996) 'Sampling for qualitative research', *Family Practice © Oxford University Press*, 13(6).
- Mayer, C. J. and Somerville, C. T. (2000) 'Land use regulation and new construction', *Regional Science and Urban Economics*, 30(6), pp. 639–662. doi: 10.1016/S0166-0462(00)00055-7.
- Mayring, P. (2000) 'Qualitative Content Analysis', *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 1(2), p. Art.20. doi: <http://nbn-resolving.de/urn:nbn:de:0114-fqs0002204>.
- McCord, M. et al. (2011) 'The implications of mortgage finance on housing market affordability', *International Journal of Housing Markets and Analysis*, 4(4), pp. 394–417. doi:

- 10.1108/17538271111172175.
- McGaffin, R., Spiropoulos, J. and Boyle, L. (2019) 'Micro-developers in South Africa: a Case Study of Micro-property Developers in Delft South and Ilitha Park, Cape Town', *Urban Forum*, 30, pp. 153–169. doi: 10.1007/s12132-018-9347-2.
- McKee, K. (2008) 'Transforming Scotland's public-sector housing through community ownership: The reterritorialisation of housing governance?', *Space and Polity*, 2(2), pp. 183–196. doi: 10.1080/13562570802173265.
- McKee, K. (2011) 'Sceptical, disorderly and paradoxical subjects: Problematizing the "will to empower" in social housing governance', *Housing, Theory and Society*, 28(1), pp. 1–18. doi: 10.1080/14036091003788120.
- McKee, K. et al. (2017) "'Generation Rent" and The Fallacy of Choice', *International Journal of Urban and Regional Research*, 41(2), pp. 318–333. doi: 10.1111/1468-2427.12445.
- Megbolugbe, I. F., Marks, A. P. and Schwartz, M. B. (1991) 'The Economic Theory of Housing Demand: A Critical Review', *Source: The Journal of Real Estate Research*, 6(3), pp. 381–393. Available at: <https://about.jstor.org/terms>.
- Merriam, S. B. (1998) *Qualitative Research and Case Study Applications in Education*. San Francisco: Jossey-Bass Publishers.
- Miceli, T. J. and Sirmans, C. F. (2007) 'The holdout problem, urban sprawl, and eminent domain', *Journal of Housing Economics*, 16(3–4), pp. 309–319. doi: 10.1016/j.jhe.2007.06.004.
- Milligan, V. et al. (2007) *Approaches to evaluation of affordable housing initiatives in Australia*. Research Paper No. 7. Sydney.
- Milligan, V. and Gilmour, T. (2012) 'Affordable Housing Strategies', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier.
- MININFRA (2020) *Housing sub-sector*. Available at: <https://www.mininfra.gov.rw/index.php?id=269> (Accessed: 30 September 2020).
- Mireille, K., Masengo, F. and Knox, A. (2014) *Implementation of the expropriation law in Rwanda: Challenges and Ways Forward*. Kigali. Available at: <https://www.land-links.org/document/rwanda-land-policy-research-brief-implementation-of-expropriation-law-in-rwanda-challenges-and-ways-forward/> (Accessed: 20 June 2018).
- Mitlin, D. (2012) 'Housing Policies in Developing Countries: Sites-and-Services and Aided Self-Help', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00238-1.
- Mohit, M. A., Ibrahim, M. and Rashid, Y. R. (2010) 'Assessment of residential satisfaction in newly designed public low-cost housing in Kuala Lumpur, Malaysia', *Habitat International*. doi: 10.1016/j.habitatint.2009.04.002.
- Monkkonen, P. (2013) 'Urban land-use regulations and housing markets in developing countries: Evidence from Indonesia on the importance of enforcement', *Land Use Policy*, 34(2013), pp. 255–264. doi: 10.1016/j.landusepol.2013.03.015.
- Mukhija, V. (2004) 'The contradictions in enabling private developers of affordable housing: A cautionary case from Ahmedabad, India', *Urban Studies*, 41(11), pp. 2231–2244. doi: 10.1080/0042098042000268438.
- Murphy, L. M. (1995) 'Mortgage Finance and Housing Provision in Ireland, 1970–90', *Urban Studies*, 32(1), pp. 135–154.
- Myers, M. D. (2013) *Qualitative research in business and management*. Edited by M. D. Myers. London: Sage.
- National Institute of Statistics of Rwanda (NISR), Ministry of Health (MOH) and ICF International (2015) *Demographic and Health Survey RDHS / 2014–15: District Health Chart Book - City of Kigali*. Kigali. Available at: www.DHSprogram.com. (Accessed: 7 April 2019).
- Ndubueze, O. J. (2009) *Urban Housing Affordability and Housing Policy Dilemmas in Nigeria*. The University of Birmingham.
- Nduwayezu, G. (2015) *Modeling urban growth in Kigali city Rwanda*. University of Twente. doi: 10.4314/rj.v1i1S.7D.
- Nduwayezu, G. et al. (2021) 'Urban Growth and Land Use/Land Cover Changes in the Post-Genocide Period, Kigali, Rwanda', *Environment and Urbanization ASIA*, 12(1), pp. 127–146. doi: 10.1177/0975425321997971.
- Newman, P. (2014) 'Density, the sustainability multiplier: Some myths and truths with application to perth, Australia', *Sustainability (Switzerland)*. MDPI AG, pp. 6467–6487. doi: 10.3390/su6096467.
- Ng, D. (2017) 'Working hard to create a mini-Singapore-in Africa', pp. 1–8. Available at:

- <https://www.channelnewsasia.com/singapore/working-hard-create-mini-singapore-africa-1025911> (Accessed: 9 August 2020).
- Ngoga, T. (2016) *Land Governance Assessment Framework: Final Report/Rwanda*. Kigali. Available at: <https://www.sipotra.it/old/wp-content/uploads/2017/10/FINAL-REPORT-RWANDA.pdf> (Accessed: 3 February 2021).
- Nikuze, A. *et al.* (2019) 'Livelihood impacts of displacement and resettlement on informal households - A case study from Kigali, Rwanda', *Habitat International*, 86(September 2018), pp. 38–47. doi: 10.1016/j.habitatint.2019.02.006.
- NISR (2012) *The Third Integrated Household Living Conditions Survey (EICV3): Main indicators report*. Kigali. Available at: <https://www.statistics.gov.rw/publication/eicv-3-main-indicators-report>.
- NISR (2016) *Rwanda National Data Archive: Rwanda - Integrated Household Living Conditions Survey 2010-2011*. Kigali. Available at: <http://microdata.statistics.gov.rw/index.php> (Accessed: 26 August 2019).
- NISR (2018a) *Rwanda National Data Archive: Rwanda - Integrated Household Living Conditions Survey (EICV5), 2016-2017, Cross-Sectional Sample*. Kigali. Available at: <http://microdata.statistics.gov.rw/index.php> (Accessed: 26 August 2019).
- NISR (2018b) *The Fifth Integrated Household Living Conditions Survey (EICV5) 2016/17: Main indicators report*. Kigali. Available at: www.statistics.gov.rw (Accessed: 21 June 2019).
- Njoh, A. J. (1995) 'Building and Urban Land-Use Controls in Developing-Countries - a Critical-Appraisal of the Kumba (Cameroon) Zoning-Ordinance', *Third World Planning Review*, 17(3), pp. 337–356.
- North, D. (1990) *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge University Press.
- North, D. C. (1991) 'Institutions', *Journal of Economic Perspectives*, 5(1), pp. 97–112.
- North, D. C. (1993) *The New Institutional Economics Recent Progress; Expanding Frontiers*, *Journal of Institutional and Theoretical Economic*. Available at: <https://www.jstor.org/stable/40751576>.
- Nygaard, C., Gibb, K. and Berry, M. (2007) 'Ownership transfer of social housing in the UK: A property rights approach', *Housing, Theory and Society*, 24(2), pp. 89–110. doi: 10.1080/14036090601070550.
- O'Neill, A. (2021) *Rwanda: Inflation rate from 1986 to 2026 (Compared to the previous year)*, *Statista*. doi: 10.35%.
- O'Sullivan, T. and Gibb, K. (2003) *Housing Economics and Public Policy Blackwell Science*. Oxford: Blackwell.
- Obeng-Odoom, F. (2015) 'The Social, Spatial, and Economic Roots of Urban Inequality in Africa: Contextualizing Jane Jacobs and Henry George', *American Journal of Economics and Sociology*, 74(3), pp. 550–585. doi: 10.1111/ajes.12101.
- OECD (2006) *Competitive Cities in a Global Economy*. Paris: OECD Publishing.
- Oxley, M. (2012a) 'Supply-Side Subsidies for Affordable Rental Housing', *International Encyclopaedia of Housing and home*. Edited by J. Smith *et al.* Amsterdam: Elsevier.
- Oxley, M. (2012b) 'Supply-Side Subsidies for Affordable Rental Housing', *International Encyclopaedia of Housing and home*. Edited by J. Smith *et al.* Amsterdam: Elsevier.
- Oz Architecture (2007) *Kigali Conceptual Master Plan*. Kigali. Available at: [https://openknowledge.worldbank.org/bitstream/handle/10986/16564/782290WP0P13290pdate00Last0Version0.pdf?sequence=1%5Cnhttp://nctspm.gatech.edu/sites/default/files/u46/Barrella_elise_m_201208_phd_Strategic planning for a sustainable transportation system](https://openknowledge.worldbank.org/bitstream/handle/10986/16564/782290WP0P13290pdate00Last0Version0.pdf?sequence=1%5Cnhttp://nctspm.gatech.edu/sites/default/files/u46/Barrella_elise_m_201208_phd_Strategic%20planning%20for%20a%20sustainable%20transportation%20system).
- Patel, A. *et al.* (2016) 'The epidemiology of road traffic injury hotspots in Kigali, Rwanda from police data', *BMC Public Health*, (2016), pp. 1–10. doi: 10.1186/s12889-016-3359-4.
- Patel, B., Byahut, S. and Bhatha, B. (2018) 'Building regulations are a barrier to affordable housing in Indian cities: the case of Ahmedabad', *Journal of Housing and the Built Environment*, 33, pp. 175–195. doi: 10.1007/s10901-017-9552-7.
- Pätsch, C. (2017) *The capacity of institutional innovation following the diffusion of urban plans: Explorations of the impact of an urban master plan in Kigali, Rwanda*. Brandenburg University of Technology Cottbus-Senftenberg.
- Pattillo, M. (2013) 'Housing: Commodity versus right', *Annual Review of Sociology*. doi: 10.1146/annurev-soc-071312-145611.
- Paul, J. and Harry, S. (2001) 'An Institutional Approach to Analysis of State Capacity in Housing Systems in the Developing World: Case Studies in South Africa and Costa Rica', *Housing*

- Studies*, 16(4), pp. 485–507. doi: 10.1080/0267303012006656.
- Pawson, H., Milligan, V. and Martin, C. (2019) 'Building Australia's affordable housing industry: capacity challenges and capacity-enhancing strategies', *International Journal of Housing Policy*, 19(1), pp. 46–68. doi: 10.1080/19491247.2018.1469108.
- Payne, G. (1999) *Making Common Ground: Public-Private Partnerships in Land for Housing*. Edited by Geoffrey Payne. London: Intermediate Technology.
- Phang, S.-Y. *et al.* (2010) 'Supply Elasticity of Housing Supply Elasticity of Housing' Forthcoming in: *International Encyclopaedia of Housing and Home*. Available at: http://ink.library.smu.edu.sg/soe_research/1253.
- Phang, S.-Y. and Helble, M. (2016) 'Housing Policies in Singapore', in Helble, M. and Yoshino, N. (eds) *The housing challenge in emerging Asia : Options and solutions*. Tokyo: Asian Development Bank Institute, p. 379.
- Polit, D. F. and Beck, C. T. (2004) *Nursing Research: Principles and Methods*. 7th edn. Edited by D. F. Polit and C. T. Beck. Philadelphia : Lippincott Williams & Wilkins.
- Pollock, A. M., Shaoul, J. and Vickers, N. (2002) 'Private finance and "value for money" In NHS hospitals: A policy in search of a rationale?', *BMJ*, 324(7347), pp. 1205–1209. doi: 10.1136/bmj.324.7347.1205.
- Porter, L. (2011) 'The land formalisation process and the peri-urban zone of Dar es Salaam, Tanzania', *Planning Theory and Practice*, 12(1), pp. 115–153. doi: 10.1080/14649357.2011.545626.
- Pugh, C. (1995) 'The role of world bank in housing', in Aldrich, B. and Sandhu, R. S. (eds) *Housing the Urban Poor: Policy and Practice in Developing Countries*. London: Zed Books, pp. 34–93.
- Pugh, C. (2001) 'The theory and practice of housing sector development for developing countries, 1950-99', *Housing Studies*. doi: 10.1080/02673030120066527.
- PWC (2015) 'A guide to taxation in Rwanda: 2015 tax facts and figures'. Kigali: PWC, pp. 1–52. Available at: www.pwc.com/rw (Accessed: 28 July 2021).
- Quastel, N., Moos, M. and Lynch, N. (2012) 'Sustainability-as-density and the return of the social: The case of Vancouver, British Columbia', *Urban Geography*, 33(7), pp. 1055–1084. doi: 10.2747/0272-3638.33.7.1055.
- Quaye, B. A. (2013) *Formal and Informal Land Institutions, Land Information Deficiencies, and the Development of Urban Land Markets in Ghana*. University of Otago.
- Quigley, J. M. and Raphael, S. (2004) 'Is Housing Unaffordable? Why Isn't It More Affordable?', *Journal of Economic Perspectives*, 18(1), pp. 191–214.
- Rakodi, C. (1995) *Rental Tenure in the Cities of Developing Countries, Source: Urban Studies*.
- Ram, P. (2014) *Promoting an Affordable Housing Using Market: An Institutional Analysis*. University of Cambridge.
- Ram, P. (2017) 'The Cyclical Interaction of Institutional Constraints to Formal Affordable Housing Market in Raipur, India', in Pellissery, S., Davy, B., and Jacobs, H. M. (eds) *Land Policies in India*. Singapore: Springer, pp. 147–165. doi: 10.1007/978-981-10-4208-9_8.
- Ram, P. and Needham, B. (2016a) 'The provision of affordable housing in India: Are commercial developers interested?', *Habitat International*, 55, pp. 100–108. doi: 10.1016/j.habitatint.2016.03.002.
- Ram, P. and Needham, B. (2016b) 'Why is Public Policy for Affordable Housing in India Changing So Slowly: Explaining Institutional Inertia', *Environment and Urbanization ASIA*, 7(2), pp. 177–195. doi: 10.1177/0975425316664634.
- Ramsamy, E. (2006) *The World Bank and Urban Development*. Edited by E. Ramsamy. New York: Routledge.
- Ratner, C. (2002) 'Subjectivity and Objectivity in Qualitative Methodology', *Forum Qualitative Sozialforschung / Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 3(3), p. Art.16. doi: <http://nbn-resolving.de/urn:nbn:de:0114-fqs0203160>.
- RCA (2006) *National policy on promotion of cooperatives*. Kigali. Available at: http://www.rca.gov.rw/uploads/media/POLICY_DOCUMENT__FINAL__March_2006.pdf (Accessed: 15 April 2020).
- RCA (2018) *Requirements for registering cooperatives*. Available at: <http://www.rca.gov.rw/shortcut/business-services/requirements-for-registering/#.YOc-KUzRbcs> (Accessed: 8 July 2020).
- RCA (2019) 'Politiki y'Amakoperative mu Rwanda [Policy of cooperatives in Rwanda]', *Koperative Magazine*, June, pp. 1–24. Available at: www.rca.gov.rw (Accessed: 15 July 2020).

- RCA (2020) *Cooperatives Statistics in Rwanda*. Kigali. Available at: https://www.rca.gov.rw/fileadmin/user_upload/RCA/Publications/REPORTS/Rwanda_Cooperatives_Statistics_Report__Nov_2020.pdf (Accessed: 11 August 2020).
- RCA (no date) *Publications, Documents/list of cooperatives registered*. Available at: https://www.rca.gov.rw/publications?tx_filelist_filelist%5Baction%5D=list&tx_filelist_filelist%5Bcontroller%5D=File&tx_filelist_filelist%5Bpath%5D=%2Fuser_upload%2FRCA%2FPublications%2FLIST_OF_COOPERATIVE_REGISTERED%2F&cHash=b0d2ddd9ca132722b7202c98952abd (Accessed: 15 August 2021).
- RDB (no date) *Company Act Simplified*. Kigali. Available at: <http://rdb.rw/wp-content/uploads/2018/02/Company-Booklet1.pdf> (Accessed: 8 July 2020).
- Reardon, M. and Dymén, C. (2015) 'Towards the just city: Addressing poverty and social exclusion in the Stockholm Region', *Local Economy*, 30(7), pp. 838–856. doi: 10.1177/0269094215601821.
- REMA (2013) 'Kigali state of environment and outlook', p. 142. Available at: http://na.unep.net/siouxfalls/publications/Kigali_SOE.pdf.
- RHA (2011) *Affordable housing development project in Rwanda*. Kigali. Available at: <https://docplayer.net/15164097-Affordable-housing-development-project-in-rwanda.html> (Accessed: 7 April 2020).
- Robinson, J., Scott, A. J. and Taylor, P. J. (2016) *Working, Housing: Urbanizing*. Jena: Springer. Available at: <http://www.springer.com/series/15387> (Accessed: 9 June 2020).
- Rolnik, R. (2013) 'Late Neoliberalism: The Financialization of Homeownership and Housing Rights', *International Journal of Urban and Regional Research*, 37(3), pp. 1058–1066. doi: 10.1111/1468-2427.12062.
- ROR (2000) *Rwanda Vision 2020*. Kigali. Available at: [https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/RWANDA\) Rwanda Vision 2020.pdf](https://www.greengrowthknowledge.org/sites/default/files/downloads/policy-database/RWANDA%20Rwanda%20Vision%202020.pdf) (Accessed: 5 February 2019).
- ROR (2007a) *Law No.50/2007 of 18/09/2007 determining the establishment, organization and functioning of cooperative organisations in Rwanda, as amended to date*. Rwanda: Official Gazette. Available at: http://www.rca.gov.rw/uploads/media/ITEGEKO_No_502007_RYO_KUWA_18092007_RI_GENGA_AMAKOPERATIVE_NK_UKO_RYAVUGURUWE_KUGEZA_UBU..pdf.
- ROR (2007b) *Presidential order No.30/01 of 29/06/2007 determining the exact number of years for land lease, JO No.13 of 07/01/2007*. Rwanda: Office of the Prime Minister. Available at: <http://www.primature.gov.rw/journal/01.07.07.doc> (Accessed: 15 May 2020).
- ROR (2008) *National Urban Housing Policy for Rwanda*. Kigali. Available at: https://urbanlex.unhabitat.org/sites/default/files/urbanlex/national_urban_housing_policy_dec_23.pdf (Accessed: 12 March 2019).
- ROR (2009) *Updated version of the National Human Settlement Policy in Rwanda*. Kigali. Available at: [https://bpmis.gov.rw/asset_uplds/files/National human settlement policy.pdf](https://bpmis.gov.rw/asset_uplds/files/National%20human%20settlement%20policy.pdf) (Accessed: 3 February 2019).
- ROR (2010) *Law No. 15/2010 of 07/05/2010 creating and organizing condominiums and setting up procedures for their registration, Official Gazette*. Kigali: Republic of Rwanda. Available at: https://www.environment.gov.rw/fileadmin/user_upload/Moe/Publications/Laws/Condominium_Law_gazetted_on_14.05.2010.pdf.
- ROR (2012) *Law No.10/2012 of 02/05/2012 governing urban planning and building in Rwanda, Official Gazette Special Issue of 30 May 2012*. Rwanda: Official Gazette.
- ROR (2013) *Law No. 43/2013 of 16/06/2013 governing land in Rwanda, Official Gazette No. Special of 16/06/2013*. Rwanda: Official Gazette. Available at: [http://gmo.gov.rw/fileadmin/user_upload/laws and policies/Law_N_____43-2013_of_16-06-2013_governing_land_in_Rwanda.pdf](http://gmo.gov.rw/fileadmin/user_upload/laws%20and%20policies/Law_N_____43-2013_of_16-06-2013_governing_land_in_Rwanda.pdf) (Accessed: 15 May 2020).
- ROR (2015a) *Law No. 06/2015 of 28/03/2015 relating to investment promotion and facilitation, Official Gazette*. Kigali, Rwanda: Official Gazette numero Special of 27/05/2015. Available at: [https://rdb.rw/wp-content/uploads/publications/Investment Promotion Law 2015 \(Investment code\)\).pdf](https://rdb.rw/wp-content/uploads/publications/Investment%20Promotion%20Law%202015%20(Investment%20code).pdf) (Accessed: 2 July 2020).
- ROR (2015b) *Law No. 32/2015 of 11/06/2015 relating to expropriation in the public interest, Official Gazette no.35 of 31/08/2015*. Rwanda.
- ROR (2015c) *National Housing Policy*. Kigali. Available at: https://www.rha.gov.rw/fileadmin/user_upload/documents/General_documents/Housing_regulations_and_standards/Policies/National_Housing_Policy.pdf (Accessed: 26 March

- 2018).
- ROR (2015d) *National Youth Policy: Towards a HAPPi Generation*. Kigali. Available at: https://www.muhanga.gov.rw/fileadmin/user_upload/National_Youth_Policy_2015.pdf (Accessed: 11 November 2020).
- ROR (2015e) *Vision 2050*. Kigali. Available at: https://www.minecofin.gov.rw/fileadmin/user_upload/Minecofin/Publications/REPORTS/National_Development_Planning_and_Research/Vision_2050/English-Vision_2050_Abridged_version_WEB_Final.pdf (Accessed: 13 September 2020).
- ROR (2016a) *Abbreviated Resettlement Action Plan: Development of Urban Infrastructure in Agatare Area of Nyarugenge District in the City of Kigali, Final Report*. Kigali. Available at: <https://documents1.worldbank.org/curated/en/570131468295823096/pdf/Abbreviated-resettlement-action-plan-in-Agatare-area-of-Nyarugenge-district-in-the-city-of-Kigali.pdf> (Accessed: 10 August 2020).
- ROR (2016b) *National informal Urban Settlement Upgrading Strategy*. Kigali. Available at: https://www.mininfra.gov.rw/publications?tx_filelist_filelist%5Baction%5D=list&tx_filelist_filelist%5Bcontroller%5D=File&tx_filelist_filelist%5Bpath%5D=%2Fuser_upload%2FMininfra%2FPublications%2FPolicies%2F&cHash=b7a85e73249a2272b2c7d580985ffa19.
- ROR (2017a) *Made in Rwanda Policy*. Kigali. Available at: [https://rwandatrade.rw/media/2017/MINICOM_Made_in_Rwanda_Policy_\(1\).pdf](https://rwandatrade.rw/media/2017/MINICOM_Made_in_Rwanda_Policy_(1).pdf) (Accessed: 23 August 2020).
- ROR (2017b) *Prime Ministers' instructions No. 001/03 of 23/02/2017 determining the conditions and procedures for obtaining government support for affordable and high density housing projects, Official Gazette Special Issue of 23/02/2017*. Rwanda: Official Gazette. Available at: https://www.rlrc.gov.rw/fileadmin/user_upload/LawsofRwanda/Laws_of_Rwanda/7._Administrative/5.14._Urbanisation/5.14.10._PMO_NO_001-03-2017_government_support_for_affordable_and_high_density_housing_projects.pdf (Accessed: 15 May 2020).
- ROR (2018a) *Law No. 016/2018 of 13/04/2018 establishing taxes on income*. Official Gazette No.16 of 16/04/2018. Available at: https://www.rra.gov.rw/fileadmin/user_upload/new_income_tax_law_2018.1_new.pdf (Accessed: 9 July 2020).
- ROR (2018b) *Law No.75/2018 of 07/09/2018 determining the sources of revenue and property of decentralized entities*. Kigali, Rwanda: Official Gazette no. 44 of 29/10/2018. Available at: https://www.primature.gov.rw/index.php?id=42&no_cache=1&tx_drblob_pi1%5BdownloadUid%5D=736 (Accessed: 7 July 2020).
- ROR (2018c) *Ministerial Order No.06/CAB.M/018 of 08/06/2018 amending Ministerial Order No.06/CAB.M/015 of 08/06/2015 determining the instructions of categorisation of buildings, conditions and procedure for application of building permits, Official Gazette*. Rwanda: Official Gazette No. Special of 26/04/2018. Available at: [https://www.primature.gov.rw/index.php?id=42&no_cache=1&L=192&tx_drblob_pi1\[downloadUid\]=472](https://www.primature.gov.rw/index.php?id=42&no_cache=1&L=192&tx_drblob_pi1[downloadUid]=472) (Accessed: 4 August 2020).
- ROR (2018d) *National Policy on Cooperatives in Rwanda*. Kigali. Available at: http://www.rca.gov.rw/uploads/media/2019_03_20_Cooperative_Policy__ENGLISH.___5_.pdf (Accessed: 10 May 2020).
- ROR (2018e) *Urbanisation and Rural Settlement - Sector Strategic Plan for National Strategy for Transformation 2018/2019-2023/2024*. Kigali. Available at: http://www.minecofin.gov.rw/fileadmin/templates/documents/NDPR/Sector_Strategic_Plans/Urbanization_and_Rural_Settlement.pdf (Accessed: 9 July 2019).
- ROR (2019a) 'Public Private Partnership (PPP) Guidelines in Affordable Housing Development', in *Rwanda Housing Day*. Kigali: Republic of Rwanda - Ministry of Infrastructure, pp. 1–8.
- ROR (2019b) 'Request for expressions of interest for the development of affordable houses in Kicukiro, Gasabo, Nyarugenge, Nyanza, Nyagatare, Rwamagana, Rusizi, Huye and Muhanga'. Kigali: Republic of Rwanda/Rwanda Housing Authority (RHA), pp. 1–15.
- ROR (2019c) *Rwanda Building Code: Version 2*. Rwanda: Official Gazette No.Special of 16/04/2019. Available at: http://197.243.22.137/rhanew/fileadmin/user_upload/documents/General_documents/Laws_And_Regulations/rwanda_building_code_2019.pdf (Accessed: 15 May 2020).
- ROR (2021) *Law No.007/2021 of 05/02/2021 governing companies, Official Gazette No.04 ter of 08/02/2021*. Rwanda: Official Gazette. Available at: <https://gazettes.africa/archive/rw/2021/rw-government-gazette-dated-2021-02-08-no->

- 4ter.pdf (Accessed: 28 January 2021).
- Rosenthal, S. S. and Strange, W. C. (2004) 'Evidence on the Nature and Sources of Agglomeration Economies', in Henderson, J. V. and Thisse, J. F. (eds) *Handbook of Urban and Regional Economics*. Amsterdam: Elsevier, pp. 2119–2172. Available at: <http://www.econ.brown.edu/Faculty/henderson/WillAndStuart.pdf> (Accessed: 2 September 2019).
- Rowley, J. (2002) 'Using Case Studies in Research', *Management Research News*, 25(1), pp. 16–27.
- RSSB (2019) *RSSB Action Plan 2019-2020*. Kigali. Available at: https://www.rssb.rw/fileadmin/user_upload/RSSB_Action_Plan_2019_-_2020_Signed_.pdf (Accessed: 10 January 2020).
- Rukundo, J. B. (2015) 'Understanding Informal sector Employment in Rwanda', *International Review of Research in Emerging Markets and the Global Economy*, 1(2), pp. 2311–3200. Available at: www.globalbizresearch.org.
- Sadalla, E. K., Vershure, B. and Burroughs, J. (1987) 'Identity symbolism in housing', *Environment and Behaviour*, 19(5), pp. 569–587.
- Saunders, M. N. K., Lewis, P. and Thornhill, A. (2007) *Research methods for business students*. 4th edn. Edited by M. N. K. Saunders, P. Lewis, and A. Thornhill. Essex : Pearson Education Limited.
- SCE (2008) *Singapore Cooperation Enterprise and Surbana Urban Planning Group Appointed By Kigali City, Republic Of Rwanda as Consultants to Share Urban Planning Services*, News Release. Available at: <http://sce.org.sg/pdf/newsroom/2008/September-2008/Rwanda-Urban-Planning-Agreement-News-Release.pdf> (Accessed: 9 August 2020).
- Schwandt, T. (1997) *Qualitative Inquiry: A Dictionary of Terms*. Thousand Oaks, CA: Sage publications .
- Schwartz, D. (2016) 'The importance of affordable housing to economic competitiveness', *Economic Development Journal* , 15(1), pp. 40–46. Available at: <http://www.bls.gov/cpi/#data>.
- Scotland, J. (2012) 'Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms', *English Language Teaching*, 5(9), pp. 9–16. doi: 10.5539/elt.v5n9p9.
- Scott, M. (2004) 'Building institutional capacity in rural Northern Ireland: The role of partnership governance in the LEADER II programme', *Journal of Rural Studies*, 20(1), pp. 49–59. doi: 10.1016/S0743-0167(03)00042-1.
- Sengupta, U. (2006) 'Government intervention and public-private partnerships in housing delivery in Kolkata', *Habitat International*, 30(3), pp. 448–461. doi: 10.1016/j.habitatint.2004.12.002.
- Sengupta, U. et al. (2018) 'Between enabling and provider approach: Key shifts in the national housing policy in India and Brazil', *Environment and Planning C: Politics and Space*, 36(5), pp. 856–876. doi: 10.1177/2399654417725754.
- Sengupta, U. (2019) 'State-led housing development in Brazil and India: a machinery for enabling strategy?', *International Journal of Housing Policy*, 19(4), pp. 509–535. doi: 10.1080/19491247.2018.1510076.
- Sheppard, S. (1999) 'Hedonic Analysis of Housing Markets', in Mills, E. S. and Cheshire, P. (eds) *Handbook of Regional and Urban Economics*. Elsevier.
- Shin, H. B. (2009a) 'Property-based redevelopment and gentrification: The case of Seoul, South Korea', *Geoforum*, 40(5), pp. 906–917. doi: 10.1016/j.geoforum.2009.06.009.
- Shin, H. B. (2009b) 'Residential redevelopment and the entrepreneurial local state: The implications of Beijing's shifting emphasis on urban redevelopment policies', *Urban Studies*, 46(13), pp. 2815–2839. doi: 10.1177/0042098009345540.
- Sinn, H.-W. (1986) 'Vacant Land and the Role of Government Intervention', *Regional Science and Urban Economics*, 16, pp. 353–385.
- Skat (2019) 'The PROECCO Programme: Promoting Climate Responsive Building Material Production and Off-farm Employment in the Great Lakes Region'. Kigali, pp. 1–6. Available at: <https://skat.ch/portfolio-item/the-proecco-programme/> (Accessed: 3 May 2019).
- Skat Consulting Ltd. (2021) *SKAT Consulting Annual Report 2020*. St. Gallen. Available at: https://skat.ch/wp-content/uploads/2021/06/SC-Annual-Report_2020.pdf (Accessed: 2

- May 2021).
- Smets, P. (1999) 'Housing finance trapped in a dilemma of perceptions: Affordability criteria for the urban poor in India questioned', *Housing Studies*, 14(6), pp. 821–838. doi: 10.1080/02673039982560.
- Smets, P., Bredenoord, J. and Van Lindert, P. (2014) 'Governance, Sustainability and affordability of low-income housing', in Smets, P., Bredenoord, J., and Van Lindert, P. (eds) *Affordable Housing in the Urban Global South*. New York: Routledge, pp. 1–12. doi: 10.1017/9781315849539.
- Smith, J. L. (2012) 'Access and Affordability: Developed Countries', *International Encyclopedia of Housing and Home*. Edited by J. E. M. E. S. O. F. W. S. Smith. Amsterdam: Elsevier.
- Soederberg, S. (2017a) 'The rental housing question: Exploitation, eviction and erasures', *Geoforum*, 89, pp. 1–10. doi: 10.1016/j.geoforum.2017.01.007.
- Soederberg, S. (2017b) 'Universal Access to Affordable Housing? Interrogating an Elusive Development Goal', *Globalizations*, 14(3), pp. 343–359. doi: 10.1080/14747731.2016.1253937.
- Sogunro, O. A. (1997) 'Impact of Training On Leadership Development: Lessons From a Leadership Training Program', *Evaluation Review*, 21(6), pp. 713–737. doi: <https://doi.org/10.1177/0193841X9702100605>.
- Somerville, T. C. and Mayer, C. J. (2003) 'Government regulation and changes in the affordable housing stock', *FNBY Economic Policy Review*, (June), pp. 45–62. Available at: <https://www.newyorkfed.org/medialibrary/media/research/epr/03v09n2/0306some.pdf> (Accessed: 30 March 2018).
- Sommers, M. (2012) *Stuck: Rwandan youth and the struggle for adulthood*. Athens, GA: University of Georgia Press. doi: 10.1093/afraf/adt050.
- Sørvoll, J. and Bengtsson, B. (2018) 'The Pyrrhic victory of civil society housing? Co-operative housing in Sweden and Norway', *International Journal of Housing Policy*, 18(1), pp. 124–142. doi: 10.1080/14616718.2016.1162078.
- Stake, R. E. (2005) 'Qualitative Case Studies', in Denzin, N. K. and Lincoln, Y. S. (eds) *The Sage handbook of qualitative research*. 3rd edn. Thousand Oaks, CA: Sage Publications, pp. 443–466.
- Steele, M. (2012a) 'Access and Affordability: Housing Vouchers', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00206-X.
- Steele, M. (2012b) 'Housing Statistics', *International Encyclopedia of Housing and Home*. Edited by J. S. E. M. E. S. O. O. F. L. W. S. Smith. Amsterdam: Elsevier.
- Stewart, J. (2001) *Environmental Health and Housing: Clay's Library of Health and the Environment: Volume I*. London: Spon Press.
- Stone, M., Burke, T. and Ralston, L. (2011) 'The residual income approach to housing affordability: the theory and the practice authored by', in.
- Stone, M. E. (1993) *Shelter poverty: New ideas on housing affordability*. Philadelphia: Temple University Press.
- Stone, M. E. (2004) 'Shelter Poverty: The Chronic Crisis of Housing Affordability', *New England Journal of Public Policy*, 20(1), pp. 107–119. Available at: <http://scholarworks.umb.edu/nejpphttp://scholarworks.umb.edu/nejpp/vol20/iss1/16>.
- Stone, M. E. (2006) 'What is housing affordability? The case for the residual income approach', *Housing Policy Debate*, 17(1), pp. 151–184. doi: 10.1080/10511482.2006.9521564.
- Sukumar, G. (2001) 'Institutional potential of housing cooperatives for low-income households: The case of India', *Habitat International*, 25, pp. 147–174.
- Sullivan, O. (1994) 'Processes of housing access: Dynamic approach to housing consumption', *Sociology*, 28(4), pp. 679–697.
- Swartz, R. and Miller, B. (2002) *Welfare reform and housing*. Washington D.C: The Welfare Reform & Beyond initiative, The Brookings Institution.
- Tacoli, C., McGranahan, G. and Satterthwaite, D. (2015) *Urbanisation, rural – urban migration and urban poverty*. London. Available at: <http://pubs.iied.org/10725IIED>.
- Tajudeen, A. and Basirat, M.-A. (2017) 'Constraints of affordable housing through cooperative societies in tertiary institutions in Lagos State, Nigeria', *Journal of Geography and Regional Planning*, 10(3), pp. 39–46. doi: 10.5897/jgrp2016.0599.
- Tan, T. H., Samihah, H. K. and Phang, S. N. (2017) 'Building affordable housing in urban Malaysia: Economic and institutional challenges to housing developers', *Open House International*, 42(4), pp. 28–35. doi: 10.1108/ohi-04-2017-b0004.

- Taruvunga, B. G. (2019) *Market Solutions to the Low-income Housing Challenge – A Case Study of Bulawayo, Zimbabwe*. University of Cape Town.
- Teraji, S. (2018) 'Institutions and the Economics of Behavior I', in *The Cognitive Basis of Institutions: A Synthesis of Behavioural and Institutional Economics*. London: Academic Press, pp. 33–76.
- The EasterAfrican (2015) 'Rwanda revenue law seeks to make co-operatives pay income tax', *Rwanda Today*, 19 June. Available at: <https://www.theeastafrican.co.ke/tea/rwanda-today/rwanda-revenue-law-seeks-to-make-co-operatives-pay-income-tax--1337290> (Accessed: 9 July 2020).
- Tibaijuka, A. K. (2007) *Building Prosperity: Housing and Economic Development*. London: Earthscan.
- Times Reporter (2015) 'Govt studies Singaporean model on satellite cities', *The New Times*. Available at: <https://www.newtimes.co.rw/section/read/193500> (Accessed: 9 August 2020).
- Times Reporter (2018) 'Why more real estate developers have embraced affordable housing', *The New Times*, 20 March, pp. 1–1. Available at: <https://www.newtimes.co.rw/section/read/231190> (Accessed: 5 July 2020).
- Tipple, A. G. and G. Willis, K. (1991) *Housing the Poor in the Developing World: Methods of Analysis, Case Studies and Policy*. Edited by A. G. Tipple and K. G. Willis. London: Routledge.
- Tipple, G. (2015) 'Housing policy-making in Africa: Ten common assumptions', *Habitat International*, 49, pp. 413–418. doi: 10.1016/j.habitatint.2015.06.003.
- TIR (2017) *Service Delivery in the Land Sector in the City of Kigali and Secondary Cities of Rwanda: Assessing Users' Perception and Incidence of Corruption*. Kigali. Available at: https://tirwanda.org/IMG/pdf/01112017_final_land_study.pdf (Accessed: 27 December 2021).
- Tiwari, P. and Hingorani, P. (2014) 'An institutional analysis of housing and basic infrastructure services for all: The case of urban India', *International Development Planning Review*, 36(2), pp. 227–256. doi: 10.3828/idpr.2014.14.
- Triple, G. (1994) 'A Matter of Interface: the Need for a Shift in Targeting Housing Interventions', *Habitat International*, 18(4), pp. 1–15.
- Trochim, W. M. . (2006) *The Research Methods Knowledge Base, Web for social research methods*. Available at: <http://socialresearchmethods.net/kb/analysis.php> (Accessed: 20 March 2019).
- Tsenkova, S. (2008) 'Provision of affordable housing in Europe, North America and Central Asia: policies and practices', *Cities, Policy and Planning Lab Research*
- Turner, J. C. (1967) 'Barriers and Channels for Housing Development in Modernizing Countries', *Journal of the American Planning Association*, 33(3), pp. 167–181. doi: 10.1080/01944366708977912.
- Turner, J. F. (1976) *Housing by People: Towards autonomy in building environments*. Marion Boy. London.
- Ukoje, J. E. and Kanu, K. U. (2014) 'Implementation and the Challenges of the Mass Housing Scheme in Abuja, Nigeria', *American International Journal of Contemporary Research*, 4(4), pp. 209–218. Available at: www.aijcrnet.com.
- UN-Habitat (2003a) *Rental housing: An essential option for the urban poor in developing countries*. Nairobi: United Nations Human Settlements Programme (UN-Habitat). Available at: https://www.humanitarianlibrary.org/sites/default/files/2014/02/UN-HABITAT_RentalHousing.pdf (Accessed: 1 October 2020).
- UN-Habitat (2003b) *The Challenge of Slums: Global Report on Human Settlements 2003*. Nairobi. Available at: <https://unhabitat.org/the-challenge-of-slums-global-report-on-human-settlements-2003> (Accessed: 9 April 2018).
- UN-Habitat (2006) *Enabling shelter strategies: Review of experience from two decades of implementation*. Nairobi. Available at: <http://www.unhabitat.org/> (Accessed: 5 June 2020).
- UN-Habitat (2009a) *Global Report on Human Settlements 2009: Planning Sustainable Cities*, Earthscan. London. doi: 10.1017/CBO9781107415324.004.
- UN-Habitat (2009b) *Urban Indicators Guidelines: Monitoring the Habitat Agenda and the Millennium Development Goals-Slums Target*. Nairobi. Available at: <https://unhabitat.org/urban-indicators-guidelines-monitoring-the-habitat-agenda-and-the-millennium-development-goals> (Accessed: 24 March 2019).

- UN-Habitat (2011a) *Low-income Housing: Approaches to helping the urban poor finding adequate housing*. Nairobi. Available at: www.unhabitat.org (Accessed: 2 August 2019).
- UN-Habitat (2011b) *Public-private partnerships in housing and urban development*. Nairobi: United Nations Human Settlements Programme. Available at: <https://unhabitat.org/sites/default/files/download-manager-files/Public-Private Partnership in Housing and Urban Development.pdf> (Accessed: 5 June 2020).
- UN-Habitat (2014) *The State of African Cities 2014: Re-Imagining Sustainable Urban Transitions*, *Journal of Asian and African Studies*. Nairobi. doi: 10.1177/0021909614547604.
- UN-Habitat (2016a) *Tracking Improvement in the Lives of Slum Dwellers*. Nairobi. Available at: https://unhabitat.org/sites/default/files/download-manager-files/Slum Almanac 2015-2016_PSUP.pdf (Accessed: 14 June 2020).
- UN-Habitat (2016b) *Urbanization and Development: Emerging Futures, World Cities Report 2016, UN Habitat World Cities Report 2016*. Nairobi. doi: 10.1016/S0264-2751(03)00010-6.
- UN-Habitat (2017) *Right to the city and cities for all: Habitat III Policy papers*. Nairobi. Available at: www.habitat3.org (Accessed: 13 September 2019).
- UN-Habitat (2020) *World Cities Report 2020: The Value of Sustainable Urbanization*. Nairobi. Available at: [https://unhabitat.org/World Cities Report 2020](https://unhabitat.org/World-Cities-Report-2020) (Accessed: 1 February 2021).
- UNCHS (1992) *The Global Strategy for Shelter to the Year 2000*. Nairobi.
- UNCHS (1996) *An urbanizing world: Global report on human settlements 1996*. Oxford: Oxford University Press. Available at: <https://mirror.unhabitat.org/downloads/docs/GRHS.1996.0.pdf> (Accessed: 18 June 2020).
- United Nations (2015) *Universal Declaration of Human Rights*. New York.
- United Nations (2020) *The Sustainable Development Goals Report 2020: Finding transformative pathways in turbulent times*, United Nations (UN), Department of Economic and Social Affairs. Available at: <https://unstats.un.org/sdgs/report/2020/finding-transformative-pathways-in-turbulent-times/> (Accessed: 19 September 2020).
- Uwayezu, E. and De Vries, W. (2019) 'Expropriation of Real Property in Kigali City: Scoping the Patterns of Spatial Justice', *Land*, 8(23), pp. 1–29. doi: 10.3390/land8020023.
- Uwayezu, E. and Vries, W. T. de (2020) 'Access to Affordable Houses for the Low-Income Urban Dwellers in Kigali: Analysis Based on Sale Prices', *Land*, 9(3), p. 85. doi: 10.3390/land9030085.
- Uwimana, L. (2019) 'Introduction to Affordable Housing Program', in *National Urban Forum*. Kigali: Rwanda Housing Authority.
- Verhage, R. (2002) 'Induced cooperation in housing development: Comparing housing schemes in four European countries', *European Planning Studies*, 10(3), pp. 305–320. doi: 10.1080/09654310220121059.
- Wakely, P. (2016) 'Reflections on urban public housing paradigms, policies, programmes and projects in developing countries', *International Journal of Urban Sustainable Development*, 8(1), pp. 10–24. doi: 10.1080/19463138.2015.1055077.
- Waldron, J. (1991) 'Homelessness and the Issue of Freedom', *UCLA Law Review*, 39(1), pp. 295–324.
- Ward, P. M. (2012) 'Housing Policies in Developing Countries', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00232-0.
- Wardrip, K., Williams, L. and Hague, S. (2011) *The Role of Affordable Housing in Creating Jobs and Stimulating Local Economic Development: A Review of the Literature*. Washington, DC.
- Warnock, V. C. and Warnock, F. E. (2008) 'Markets and housing finance', *Journal of Housing Economics*, 17(3), pp. 239–251. doi: 10.1016/j.jhe.2008.03.001.
- Warren, C. R. (2009) *Designed by Zoning: Evaluating the Spatial Effects of Land Use Regulation*. UC Berkeley.
- Watson, D. P. et al. (2017) 'Housing First and harm reduction: A rapid review and document analysis of the US and Canadian open-access literature', *Harm Reduction Journal*. BioMed Central Ltd. doi: 10.1186/s12954-017-0158-x.
- Watt, P. and Smets, P. (2017) *Social Housing and Urban Renewal: A Cross-National Perspective*. Edited by P. Watt and P. Smets. Wagon Lane: Emerald Publishing Limited. Available at: <https://www.researchgate.net/publication/319099134>.
- Wheeler, S. (1996) *Sustainable Urban Development: A Literature Review and Analysis*. 51.

- California. Available at: <https://escholarship.org/uc/item/6mx0n01x>.
- Whitehead, C. (2003) 'Restructuring social housing systems', in Forrest, R. and James, L. (eds) *Housing and Social Change: East-West Perspectives*. New York: Routledge, pp. 46–68. doi: 10.4324/9780203402634.
- Whitehead, C. (2017) 'Social Housing Models: Past and Future', *Critical Housing Analysis*, 4(1), pp. 11–20. doi: 10.13060/23362839.2017.4.1.320.
- Whitehead, C. M. . (2012) 'The Neo-Liberal Legacy to Housing Research', in Clapham, D. F., Clark, W. A. V., and Gibb, K. (eds) *The Sage Handbook of Housing Studies*. London: Sage publications, pp. 113–130.
- Whitehead, C. M. E. (2007) 'Planning policies and affordable housing: England as a successful case study?', *Housing Studies*, 22(1), pp. 25–44. doi: 10.1080/02673030601024580.
- Whittal, J. (2008) *Fiscal Cadastral Systems Reform A Case Study of the General Valuation Project 2000 in the City of Cape Town*. University of Calgary . Available at: <http://www.geomatics.ucalgary.ca/research/publications/GradTheses.html>.
- Wild, P. J. *et al.* (2009) 'A diary study of information needs and document usage in the engineering domain', *Design Studies*, 31(1), pp. 46–73. doi: 10.1016/j.destud.2009.06.002.
- Williamson, O. (1975) *Markets and Hierarchies, Analysis and Anti-Trust Implications: Study in the Economics of Internal Organisation*. New York: Free Press.
- Williamson, O. (2000) 'The New Institutional Economics: Taking Stock, Moving Forward', *Journal of Economic Literature* , XXXVIII, p. 595–613.
- Williamson, O. E. (1990) 'A Comparison of Alternative Approaches to Economic Organization', *Journal of Institutional and Theoretical Economic*, 146(1), pp. 61–71.
- Woetzel, J. *et al.* (2014) *A blueprint for addressing the global affordable housing challenge*, McKinsey Global Institute.
- World Bank (1983) *Learning by doing: World Bank lending for urban development 1972-82*. 30985. Washington, DC. Available at: <http://documents1.worldbank.org/curated/en/220591468140401312/pdf/30985.pdf> (Accessed: 21 October 2019).
- World Bank (1993) *Housing: Enabling markets to work*. Washington DC: The International Bank for Reconstruction and Development/The World Bank. Available at: <https://elibrary.worldbank.org/doi/abs/10.1596/0-8213-2434-9> (Accessed: 25 July 2020).
- World Bank (2009) *World Development Report 2009: Reshaping Economic Geography*. Washington DC. Available at: <http://documents1.worldbank.org/curated/en/730971468139804495/pdf/437380REVISED01BLIC1097808213760720.pdf> (Accessed: 12 December 2019).
- World Bank (2015a) *Rwanda Employment and Jobs Study*. Kigali. Available at: <http://documents1.worldbank.org/curated/en/153581467991044283/pdf/96504-WP-P124629-PUBLIC-Box393238B-Rwanda-Employment-and-Jobs-Study.pdf> (Accessed: 15 March 2020).
- World Bank (2015b) *Rwanda Poverty Assessment*. Washington DC. Available at: <http://documents1.worldbank.org/curated/en/255161467998828941/pdf/100631-WP-P124629-PUBLIC-Box393238B-Rwanda-Poverty-Assessment-Final.pdf> (Accessed: 5 April 2020).
- World Bank (2017a) *Doing Business 2017: Equal Opportunity for All*. Washington DC. doi: 10.1596/978-1-4648-0948-4.
- World Bank (2017b) *Reshaping Urbanization in Rwanda: Economic and Spatial Trends and Proposals. Note 1: Urbanization and the Evolution of Rwanda's Urban Landscape*. Washington DC. Available at: <http://documents1.worldbank.org/curated/en/875101513836698339/pdf/122174-WP-P157637-PUBLIC-Note-1-Rwanda-Urbanization-12-07-17-rev2.pdf> (Accessed: 6 March 2020).
- World Bank (2018) *Affordable Housing Finance Project (P165649): Combined Project Information Documents (PID/ISDS)*. Washington, D.C. Available at: <http://documents1.worldbank.org/curated/en/338511537467763132/pdf/Project-Information-Documents-Integrated-Safeguards-Data-Sheet-Rwanda-Housing-Finance-Project-P165649.pdf> (Accessed: 29 July 2020).
- World Bank (2019) *Creating Markets in Rwanda: Transforming for the Jobs of Tomorrow, Country Private Sector Diagnostic*. Washington, DC. Available at: <https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=15403> (Accessed: 10 August 2020).

- 2020).
- World Bank (2020a) *Affordable Housing Public-Private Partnerships for Investment and Delivery of in Emerging Market Economies*. Washington, DC. Available at: www.worldbank.org (Accessed: 13 March 2020).
- World Bank (2020b) *Housing Solutions for Low-Income Urban Communities in Rwanda: Annexes*. Washington, D.C. Available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/341071582864212932/annexes> (Accessed: 2 July 2020).
- Worthington, A. and Higgs, H. (2013) 'Macro drivers of Australian housing affordability, 1985-2010: An autoregressive distributed lag approach', *Studies in Economics and Finance*, 30(4), pp. 347–369. doi: 10.1108/SEF-07-2012-0078.
- Yates, J. and Milligan, V. (2012) 'Policies to Support Access and Affordability of Housing', *International Encyclopedia of Housing and Home*. Edited by J. S. Smith et al. Amsterdam: Elsevier. doi: 10.1016/B978-0-08-047163-1.00255-1.
- Yeo, M. and Heshmati, A. (2014) 'Healthy Residential Environments for the Elderly', *Journal of Housing for the Elderly*, 28(1), pp. 1–20. doi: 10.1080/02763893.2013.837421.
- Yin, R. K. (1994) *Case study research: Design and methods*. 2nd edn. Edited by R. K. Yin. Thousand Oaks: Sage publications. doi: 10.1016/j.jada.2010.09.005.
- Yin, R. K. (2003) *Case study research: Design and methods*. 3rd edn. Edited by R. K. Yin. Thousand Oaks: Sage publications Ltd.
- Yin, R. K. (2009) *Case study research: Design and methods*. 4th edn. Edited by R. K. Yin. Thousand Oaks: Sage Publications Ltd.
- Yung, B. and Lee, F. P. (2012) "Right to Housing" in Hong Kong: Perspectives from the Hong Kong Community', *Housing, Theory and Society*, 29(4), pp. 401–419. doi: 10.1080/14036096.2012.655382.

Referenced laws and policies

Law governing companies (Law No.007/2021 of 05/02/2021)

Rwanda Building Standards (2019)

National Strategy for Transformation phase I for period 2018-2024 (2018)

Law establishing taxes on income (Law No. 016/2018 of 13/04/2018)

Law determining income tax on real properties 2018 (Law No.75/2018)

National policy on cooperatives (2018)

Prime Minister's instructions on state support, 2017 (Instructions No.001/03)

Informal urban settlement upgrading strategy (2016)

Expropriation law, 2015 (Law No. 32/2015)

Law relating to investment promotion and facilitation (Law No. 06/2015 of 28/03/2015)

Made in Rwanda policy (2015)

Vision 2050 (published in 2015)

Investment facilitation law, 2015 (Law No. 06/2015)

National Housing policy 2015 (as reviewed)

Land law, 2013 (Law No. 43/2013)

Law governing urban planning and building in Rwanda (Law No.10/2012 of 02/05/2012)

Law defining organization of cooperative entities 2007 (Law No.50/2007)

Kigali city development plan for the period 2013-2018 (enacted in 2013)

Kigali city Master Plan (published in 2013)

Urban planning and building law, 2012 (Law No. 10/2012)

Condominiums law, 2010 (Law No. 15/2010)

National Human settlement policy (2009)

Vision 2020 (published in 2000)

APPENDICES

Appendix A: Guide for interviews

A-1 General guidelines to the questions used during the semi structured interviews with **tenants living in low-income areas**. The order presented below was not necessarily followed during interviews. However, the majority of issues were covered during interview sessions.

- 1 Name of interviewee
- 2 What is your main occupation?
- 3 Where is your place of residence (neighbourhood)?
- 4 How much time spent at the same house
- 5 How much do you pay for monthly rent at current house?
- 6 How often did rent increase since you have moved in current house?
- 7 How much does your household earn monthly?
- 8 How many bedrooms does your current house have?
- 9 How many members are you in your household?
- 10 What is your perception on affordability of current house?
- 11 How is it easy/difficult to find affordable housing to rent?
- 12 What was your overall experience when searching for current house?
- 13 What are difficulties to access housing within affordable housing programme in Kigali?
- 14 Do urban policies affect low-income people in procuring housing (If yes, why and how?)
- 15 What are the constraints to access housing that is decent and affordable?

A-2 General guidelines to the questions used during the semi structured interviews with **real estate agents who assist low-income tenants in search for housing in Kigali city**. The order presented below was not necessarily followed during interviews. However, most of the issues were covered during interview sessions.

- 1 Name of interview
- 2 Experience in real estate agency
- 3 Types of housing (rent range) the interviewee mainly provides service for
- 4 Type of tenants (income level) the interviewee work with
- 5 How is it easy to get a house at affordable rent in your areas of operation?
- 6 What price range of housing your customers are often interested in?
- 7 How is it easy for you to get housing within that price range in Kigali?
- 8 How is it easy for your customers to access houses within new housing projects developed around Kigali? (Why is it easy/difficult?)
- 9 What are the profiles of people can access houses in upcoming housing developments?
- 10 What are major constraints low-income residents face to access rental affordable housing?
- 11 What are coping mechanisms of low-income residents with regards to the affordable housing challenge?
- 12 How do upcoming housing projects respond to housing needs of low-income residents?
- 13 Do you think stakeholders in housing sector are interested in affordable housing?
- 14 What should be done to facilitate access to affordable housing for low-income residents?
- 15 What would you recommend be done differently to enable people like you to access affordable housing?
- 16 How do you see the residential housing sector in the next 5 years?

A-3 General guidelines to the questions used during the semi structured interviews with **officials at the Kigali city and Districts (Local authority)**. The order presented below was not necessarily followed during interviews. However, the majority of issues were covered during interview sessions.

- 1 Name of interview
- 2 Position at current institution
- 3 Time spent at current position
- 4 Main responsibilities with regards to housing and planning
- 5 What are the main opportunities and drawbacks do urban redevelopment projects present on low-income residents?
- 6 How are urban redevelopment processes account for loss of rental housing stock affordable to low-income tenants?
- 7 Which mechanisms are in place to address such effects? Do private real estate developers have responsibility to provide affordable rental housing?
- 9 How will the new Kigali master plan facilitate delivery of affordable housing?
- 10 Are there mechanisms to compensate low-income rental housing stock lost to urban redevelopment projects involving relocation?
- 11 How is it important for city to have a balance between rental and ownership tenures in affordable housing delivery?
- 12 How is the necessity to have such balance emphasized in planning and implementation of affordable housing projects?
- 13 Which roles do the city and other stakeholders play respectively in the affordable housing planning and implementation?
- 14 In reference to past affordable housing projects, to what extent have they been shaped by the city and to what extent they have been shaped by objectives of other stakeholders?
- 15 Is there any collaboration between the city authority and other stakeholders in planning and implementation of affordable schemes?
- 16 How is this collaboration undertaken? And what are the outcomes of this collaboration?
- 17 Who are the main stakeholders in this sector?
- 18 What criteria can the long-term success of affordable housing delivery be assessed on?

A-4 General guidelines to the questions used during the semi structured interviews with **officials in institutions at ministerial level**. The order presented below was not necessarily followed during interviews. However, the majority of issues were covered during interview sessions.

- 1 Name of interview
- 2 Position held at current institution
- 3 Main responsibilities with regards to housing and planning
- 4 What are the key aspects of the affordable housing challenge facing Kigali city currently?
- 5 What are the main opportunities and drawbacks do policies for affordable housing present?
- 6 How is the affordable housing need identified on the ground?
- 7 How is the affordable housing challenge addressed in both policy and interventions (in terms of quantity, quality and diversity)?
- 8 How do institutions (formal and informal) affect affordable housing provision?
- 9 How is it important to strike a balance between rental and ownership tenures in affordable housing delivery?
- 10 How is the necessity to have such balance emphasized in planning and implementation of affordable housing projects?
- 12 Which roles does your institution play in the affordable housing delivery process?
- 13 In reference to past affordable housing projects, to what extent have they been shaped by your institution and to what extent they have been shaped by objectives of other stakeholders?
- 14 Is there any collaboration between your institution and other stakeholders in planning and implementation of affordable schemes?
- 15 How is this collaboration undertaken? And what are the outcomes of this collaboration?
- 16 Who are the main stakeholders in this sector?
- 17 What criteria can the long-term success of affordable housing delivery be assessed on?

A-5 General guidelines to the questions used during the semi structured interviews with **local experts in housing and urban planning**. The order presented below was not necessarily followed during interviews. However, the majority of issues were covered during interview sessions.

- 1 Name of interview
- 2 Position held at current institution
- 3 Experience on matters of housing and planning
- 4 Key aspects of the affordable housing challenge facing Kigali face currently?
- 5 How is the affordable housing challenge addressed in both policy and interventions?
- 6 How does the master plan affect implementation of affordable housing delivery?
- 7 How do institutions (formal and informal) affect affordable housing provision?
- 8 Are there mechanisms to compensate low-income rental housing stock lost to urban redevelopment projects involving relocation?
- 9 How is it important for city to have a balance between rental and ownership tenures in affordable housing delivery?
- 10 How is such balance emphasized in planning and implementation of affordable housing projects?
- 11 Is there sufficient knowledge backing current affordable housing strategies?
- 12 Are there sufficient incentives for stakeholders to engage in such type of housing?
- 13 What are the main constraints that undermine efforts to deliver affordable housing?
- 14 How do you perceive the role of different actors in the affordable housing delivery process?
- 15 In reference to past affordable housing projects, to what extent have they been shaped by the state objectives, market or by interests of other actors?
- 16 What criteria can the long-term success of affordable housing delivery be assessed on?

A-6 General guidelines to the questions used during the semi structured interviews with **developers**. The order presented below was not necessarily followed during interviews. However, the majority of issues were covered during interview sessions.

- 1 Name of interview
- 2 Position held at current institution
- 3 When was your company established?
- 4 What is your main area of interest in housing development? Why?
- 5 What are incentives that drove your decision to invest in housing?
- 6 What are income brackets of the target end-users (buyers, tenants)?
- 7 To what extent your investment choices in a particular housing scheme is influenced by urban policy?
- 8 Your opinions on urban policies and legislations (e.g., master plan) in terms of how they undermine or support your project implementation
- 9 Is there any policy/legislation requiring you to include a share of affordable housing in your project?
- 10 What challenges do developers face in the construction of housing under current institutional environment?
- 11 What constraints your customers face when acquiring housing units from your projects?
- 12 Do these challenges contribute to the current shortage of housing affordable to low-income sections?
- 13 Is there any collaboration between this firm, Kigali city authority, central government or with stakeholders in your project?
- 14 How do you see the residential housing market in terms of quantity, quality and diversity in the next 5 years and 10 years?

A-6 General guidelines to the questions used during the semi structured interviews with **different organizations involved in affordable housing delivery**. The order presented below was not necessarily followed during interviews. However, the majority of issues were covered during interview sessions.

- 1 Name of interview
- 2 Position held at current institution
- 3 When did your institution start intervening in housing sector?
- 4 What is the role of your institution in affordable housing delivery process?
- 5 How many projects with regards to affordable housing have you contributed to? In what ways? What were the objectives of those projects?
- 6 Which aspects of the affordable housing challenge that require strong emphasis in terms of responses?
- 8 What motivates your institution to participate in the affordable housing sector?
- 9 How do your actions/involvement contribute to affordable housing provision?
- 10 Who are your major partners in delivery of affordable housing? How do you collaborate with your partners?
- 11 How does your institution acquire and process knowledge/information about the affordable housing need and how is it impactful to your decision-making process?
- 12 What do you see as major constraints in the affordable housing interventions?
- 13 What are factors to the success of strategies for affordable housing provision?

Appendix B: Participants and institutions involved in the study

List of interviewed participants during the field study done between June and August 2019

	<i>Participants' coded name</i>	<i>Position/occupation</i>	<i>Affiliated organisation</i>
1	PI01	Permanent secretary	Ministry
2	PI02	Senior officer in charge of affordable housing	Ministry
3	PI03	Urban economist	Ministry
4	PI04	Head of affordable housing department	Government housing agency
5	PI05	Urbanization specialist	Local Development Agency
6	KC01	Senior Architect/planning department	Kigali city
7	KC02	Neighbourhood and housing officer	Kigali city
8	KC03	Inspector for housing and construction standards	District
9	EX01	Lecturer	University
10	EX02	Lecturer	University
11	EX03	Lecturer	University
12	EX04	Independent consultant	N/A
13	PS01	Managing partner	Foreign housing construction company
14	PS02	Developer	Local housing construction company
15	PS03	Architect	Construction materials factory
16	PS04	Developer	Foreign housing construction company
17	PS05	Director/Housing finance department	Government owned bank
18	PS06	Owner and Managing Director	Local housing construction company
19	NP01	Founder & Director	Local social enterprise with interests in urban sustainability
20	NP02	Design director	Foreign NGO dealing in architectural services
21	NP03	Housing projects engineer	Housing cooperative
22	NP04	Member of management committee	Housing cooperative
23	NP05	Member of management committee	Housing cooperative
24	IO01	Senior Associate	International agency
25	IO02	Consultant/former director at Kigali City	International agency
26	IO03	Projector manager	Contractor to an international development agency
27	AG01	Managing Director	Real estate agency
28	AG02	Real estate agent	Real estate agency
29	AG03	Real estate agent	Freelancer
30	AG04	Real estate agent	Freelancer
31	RE01	Resident	N/A
32	RE02	Resident	N/A
33	RE03	Resident	N/A
34	RE04	Resident	N/A
35	RE05	Resident	N/A
36	RE06	Resident	N/A

Appendix C: Consent to participate in the study

Introduction

This is an informed consent form for interviewees invited to participate in a study titled “Low-income tenants’ housing accessibility and affordable housing provision barriers. The case of Kigali, Rwanda”.

Purpose of the study

Hello. My name is Fred Nkubito I am a PhD student at Dresden Leibniz Graduate School (DLGS) in Germany. I am currently conducting a fieldwork to collect data for my research which aims to understand the role of stakeholders in affordable housing provision in Kigali. Precisely, the study aims to explore 3 themes, including (i) low-income tenants’ housing affordability situation, (ii) the contribution of stakeholders in the affordable housing provision and finally (iii) the obstacles that key housing providers face in their interventions.

What will interview be like?

This interview consists of a conversation guided by a few questions that will last for approximately 45-60 minutes.

Voluntary Participation

Your participation is entirely voluntary. It is your choice whether to participate or not. You do not have to share any information that you are not comfortable sharing.

Risks

There are no risks to you as a participant in this interview. During the interview, you do not have to answer any question that makes you feel uncomfortable, and you can stop the interview at any time.

Benefits

Although you may not receive an immediate benefit from your participation, it will help us to better understand the obstacles to affordable housing delivery process and how stakeholders work to overcome these obstacles. The findings would inform the government, city of Kigali and various stakeholders on processes and institutional setting needed for better affordable housing provision outcomes.

Confidentiality

We will not share information about you or your views to any third party¹. The information that we collect will be kept confidentially. Your name will not appear on any document written about this study.

Participant’s authorisation

I have read and understood all the information provided on the consent form, and therefore I agree to participate in interview. The researcher provided me with a thorough description of the research and answered all my questions.

Name:

Signature
.....

Date:

¹ This excludes the evaluators of this dissertation.

Appendix D: Household Surveys

<i>Introduction</i>	<p>Integrated Household Living Conditions Survey are also largely known as EICVs, a French acronym standing for <i>Enquête Intégrale sur les Conditions de Vie des Ménages</i>. These are biennial countrywide surveys undertaken by the National Institute of Statistics of Rwanda (NISR) (http://www.statistics.gov.rw/). The main objective of these periodic surveys is to monitor poverty and living conditions in Rwanda and to support evidence-backed government decision-making. EICVs have been carried out consistently since 2000/2001. This dissertation has used two of the most recent series: 2010/11 (EICV3) and 2016/17 (EICV5).</p>
<i>Scope</i>	<p>Coverage: entire country Unit of analysis: communities, households and individuals Aspects of housing captured: status of housing occupancy, services and installations, physical characteristics of dwelling, access & satisfaction towards basic services</p>
<i>Sampling procedures & sample size</i>	<p>EICV3:</p> <p>The EICV3 sampled a total of 14,310 households in 1,230 sample villages. The sample selection methodology for EICV3 was based on a stratified two-stage sample design. At the first sampling stage, sample villages for EICV3 were selected within each stratum (district) systematically with probability proportional to size (PPS) from the ordered list of villages in the sampling frame (village is the lowest entity in Rwanda's administrative hierarchy). The measure of size for each village was based on the total number of households identified in the sampling frame of villages. The villages within each district were ordered first by urban, mixed and rural areas, and then geographically by sector, cell and village codes. This provided implicit geographic stratification of the sampling frame for each district and ensured a proportional allocation of the sample to the urban and rural areas of each district.</p> <p>EICV5:</p> <p>The sampling frame for the EICV5 cross-sectional survey is based on the NISR master Sample data. More recently the NISR has used the 2012 population census frame to select a large master sample of villages 3,960 that can be used for the different national household surveys in Rwanda. The primary sampling units (PSUs) for the master sample are individual villages, or a combination of small villages, with the number of households tabulated from the 2012 census data. A new listing of households was conducted in order to update the frame for the EICV5 cross-sectional survey. The sample households in the EICV5 sample villages were selected from the new listing. At the national level there are 1,260 sample villages and 14,580 sample households.</p>

Source: Adapted from NISR (2016b, pp. 2–9, 2018a, pp. 5–9).
Further information can be accessed at: <http://www.statistics.gov.rw/>