

Nairobi: City report

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Please note: The research for this report was conducted in 2022-2023, and although it has been updated to acknowledge recent events (such as protests and large-scale floods in Nairobi during 2024), it cannot fully analyse these developments.

Abstract

This report has analysed Nairobi's politics of development, key challenges, and opportunities for equitable change. We conducted four domain studies focused on housing; safety and security (S&S); health, wellbeing and nutrition (HWN); and structural transformation (ST) in Nairobi. To deepen understanding of these domains, we offer a political settlements analysis and "city of systems" examination of major infrastructure networks. We argue that Kenya has a "broad-dispersed" political settlement, characterised by shifting ethnic alliances, crony capitalism and competitive elections that still maintain a narrow elite in power. Given Nairobi's centrality to the

Kenyan economy, it acts as a key battleground and hub for business networks, which the elite regularly exploit to generate rents. Colonial legacies strongly shape Nairobi's contemporary development, even as the city radically stretches the spatial boundaries and capacities of many institutions it has inherited. Nairobi faces an increasingly complex set of socioeconomic, health and spatial inequalities that are manifested in rising burdens of poor nutrition and chronic diseases, as well as new forms of unsafe, low-quality housing (such as tenements). Our findings indicate that poorly integrated, low-quality systems have major negative knock-on effects for housing, HWN, ST and S&S, which especially burden Nairobi's low-income residents. More positively, we identify several opportunities for holistic, joined-up interventions that can foster inclusive urbanisation pathways in Nairobi. There are vibrant policy networks, start-ups and mobilised civil society actors, which together make Nairobi a particularly fertile ground for innovations and reform coalitions.

Keywords: Housing, safety and security, health, structural transformation, political settlements, African cities, infrastructure

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Executive summary

This report has synthesised findings in Nairobi from the African Cities Research Consortium's foundation phase. We conducted four domain studies, focusing on housing; safety and security (S&S); health, wellbeing and nutrition (HWN); and structural transformation (ST) in Nairobi. To provide interdisciplinary insights and deepen understanding of the domains, we also offer a political settlements analysis and "city of systems" examination of infrastructure networks. Our methods included desk reviews of existing data; key informant interviews; and focus group discussions with municipal officials, civil society groups, private-sector actors and ordinary residents.

We argue that Kenya has a "broad-dispersed" political settlement, characterised by shifting ethnic alliances, crony capitalism and competitive elections that still maintain a narrow elite in power. Despite the dominance of informal rules in Kenya's politics, powerful groups have reached a broad agreement regarding the rules of the game, including exchange of political power and rule of law. There is a general commitment to constitutional term limits: presidents can only hold office for two five-year terms, and general elections are held every five years. But across Kenyan national governments and Nairobi's local authorities, political leadership has often faced issues of corruption, limited accountability and widespread use of patronage. Nairobi also has a long history of politicised land deals, resulting in failure to deliver land for the public good and irregular land allocations that have repeatedly marginalised low-income residents. The city's reactive and often exclusionary planning, coupled with opaque land governance and shortfalls in affordable housing delivery, have led to most Nairobians being accommodated in low-quality rental shacks and tenements.

Given Nairobi's centrality to the Kenyan economy, it acts as a key battleground and hub for business networks as well as national and transnational trade, which the elite regularly exploit to generate rents. Political elites often demand bribes or kickbacks from private sector firms, who in turn rely heavily on their political connections to maintain operations. Nairobi is also a major merchant city, in which business elites seek to make money and cut deals, and it is a leading site for mega-projects offering lucrative opportunities to make deals. For many reasons, then, Nairobi is fundamental to Kenya's political and economic development trajectories. There is often an overlap between business and political elites, while the latter often seek to influence or meddle in Nairobi's local governance. Nairobi's local government has often struggled to maintain its autonomy in the face of presidential machinations, as illustrated recently by former President Uhuru Kenyatta's establishment of Nairobi Metropolitan Services (NMS). Furthermore, Nairobi has faced challenges with incomplete decentralisation and limited own-source revenue collection, all of which can undermine service delivery and equitable urbanisation pathways.

Colonial legacies strongly shape Nairobi's contemporary development, even as the city radically stretches the spatial boundaries and capacities of many institutions it has inherited. Housing provision and several underpinning systems remain biased in favour

of colonial-era European areas, while many residents of informal settlements in African areas still cannot access official services or quality shelter. We also explain how Kenya's police have reproduced the logics of a colonial state seeking to quell insurgencies and have regularly extracted bribes from low-income residents.

Moreover, Nairobi faces an increasingly complex set of socioeconomic, health and spatial inequalities that are manifested in rising burdens of poor nutrition and chronic diseases, as well as new forms of unsafe, low-quality housing (such as tenements). Private rental housing accommodates nearly all Nairobi residents, but national and local governments have consistently failed to regulate shelter or land markets. Across low- and high-income areas, shortfalls in Nairobi's systems may lead to starkly divergent outcomes and inequitable coping strategies. Many systems are largely privatised in both low- and high-income areas – for example, healthcare, education and solid waste management – but the quality and forms of private provision vary markedly along the income gradient.

Our findings indicate that poorly integrated, low-quality systems have major negative knock-on effects for housing, HWN, ST and S&S, which especially burden Nairobi's low-income residents. A lack of affordable, reliable infrastructure not only deters foreign direct investment, but it also curtails the productivity of micro, small and medium enterprises (MSMEs) that employ most Nairobi residents. Meagre water, sanitation and drainage provision; unclean cooking fuels; and inadequate roads to transport foods or access healthcare (especially during the rainy season) can together undermine food security and health outcomes in informal settlements. Peripheral areas, as well as Nairobi's informal settlements, typically lack decent shelter and complementary systems. Indeed, shortfalls in housing, schools and other key systems increasingly have led lower- and middle-class households to move into peri-urban areas or satellite towns, where they may access homeownership but still lack adequate systems. Nairobi's poorly joined-up systems have also created insidious opportunities for extraction, especially by informal "cartels" that provide water or electricity in informal settlements. At the same time, low-quality shelter and services can be extremely lucrative for private developers and politicians, who benefit from kickbacks.

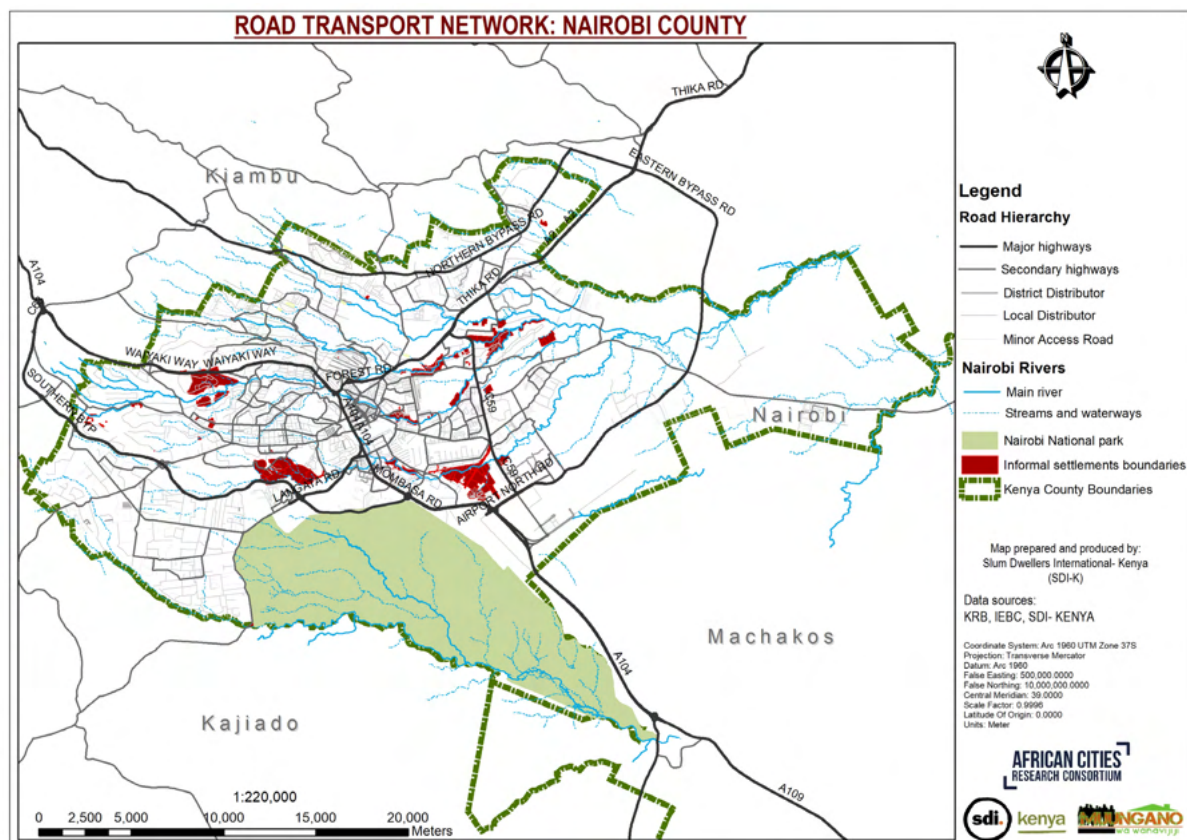
More positively, we identify several opportunities for holistic, joined-up interventions that can foster inclusive urbanisation pathways in Nairobi. There are vibrant policy networks, start-ups and mobilised civil society actors, which together make Nairobi a particularly fertile ground for innovations and reform coalitions. Moving forward, policymakers can work with informal enterprises to co-create mechanisms and strategies that can improve their growth potential. The high incidence of rental occupancy underscores the need to bring rental housing to the forefront of Kenya's housing and urban development agenda. To enhance safety, it will be crucial to bolster existing practices and organisations wherein non-punitive forms of S&S are being produced, while also building upon Nairobi's flourishing network of grassroots social justice centres. To foster health, wellbeing and nutrition, we recommend advocacy, capacity building and mainstreaming of sustainable, healthy diets in school feeding

programmes, school farming, and community-based informal day-care centres. We offer other recommendations for urban policy and practice, as well as identify further areas for action research, in order to build upon and strengthen promising entry-points for equitable transformations in Nairobi.

1. Introduction

Established as a railway depot in 1899, Nairobi became a settler colonial capital marked by profound racial segregation and other complex divides. Since Kenyan independence in 1963, Nairobi's colonial-era spatial injustices have often shifted from racial to social-economic divisions, alongside continued colonial logics of militarised policing and criminalisation of low-income residents (Kimari, 2024; Jones, 2020). Low-income groups still are concentrated in areas initially designated for African natives, especially in the east and southeast parts of the city (Mwau et al., 2020; Figure 1). European enclaves are now elite suburbs (for example, Muthaiga) or dominated by luxury apartments (for example, Kilimani), while traditionally Asian areas, such as Parklands, now have an increasingly diverse composition.

Figure 1: Map of Nairobi's transport networks and informal settlements



Source: SDI-Kenya/Muungano, prepared for ACRC.

Over time, the city's population and boundaries have expanded significantly: the total built-up area has reached 696km², about five times larger than the corresponding figure in 2005 (Nyamai and Schramm, 2023: 9). Its metropolitan area has over 7 million people (in a country of 54 million), and encompasses both satellite towns and the core city of over 4 million people (KNBS and Republic of Kenya, 2019). To date, efforts to develop holistic metropolitan plans for Nairobi have failed or been only partially taken

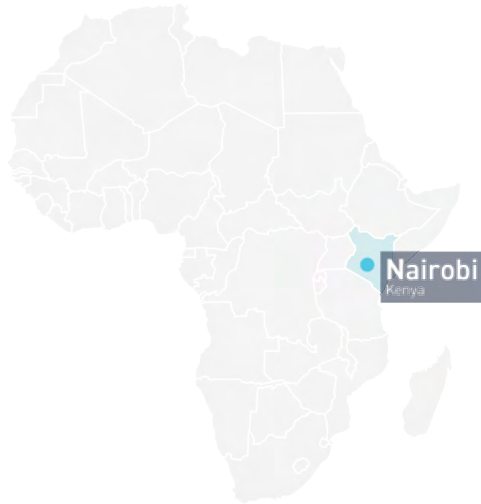
forward because of institutional fragmentation and tensions between central agencies, devolved governments and multiple competing actors (Maina and Cirolia, 2023, also below). Until the recent construction of bypass roads in Nairobi, most traffic would pass through the Central Business District (CBD), which is a spatial product of the 1948 colonial plans and remains the most congested area (Nyamai and Schramm, 2023). Largely to address such transport concerns, the Nairobi Integrated Urban Development Master Plan (NIUPLAN) was approved in 2014 (Nairobi City County, 2014) but implementation was hampered by poor institutional coordination and other challenges detailed below. There is a crucial need to plan holistically for Nairobi's shelter, transport and related systems, which can foster more sustainable and equitable development pathways across the metro area.

As the economic and political capital of Kenya, Nairobi has played a pivotal role in the country's political, social and economic development across several scales. From 2013 to 2020, Nairobi contributed **27.5%** of the Kenyan economy's total gross value added (GVA), and the adjoining Kiambu County contributed another **5.9%** to GVA (KNBS 2022a). In 2021, Nairobi's per capita gross county product (GCP) was Ksh 596,467, far above Mombasa's Ksh 394,281 per capita (ibid). Relatedly, the city serves as a hub for trade and business networks (across Kenya and East Africa), which the Kenyan elite has regularly utilised to generate rents (Section 2 below). Nairobi has also been entangled in contests between central/local government leaders, as exemplified by former President Uhuru Kenyatta's creation of Nairobi Metropolitan Services in 2020 (Ouma, 2023a; K'Akumu, 2022). Even with its longstanding socio-spatial and related exclusions, Nairobi is an undisputed powerhouse in the country's economic development and political trajectories at several scales.

Based on ACRC's research in Nairobi, this report will synthesise key findings and overarching challenges, including ethnic politics, entrenched corruption, and informal "cartels" in service delivery. Exclusionary interventions – such as political loyalists and well-connected businesses benefiting from infrastructure projects or other contracts – significantly influence the city's everyday politics and biased delivery of public goods. Another crosscutting concern is incomplete decentralisation, as the promise of democratic devolution (under the 2010 Constitution) has not yet been realised in practice (Cheeseman et al., 2020). Nevertheless, there are opportunities for progressive change, thanks to vibrant civil society organisations and inclusive, participatory initiatives co-produced with state actors such as the Mukuru Special Planning Area (Ouma, 2023b; Horn, 2021).

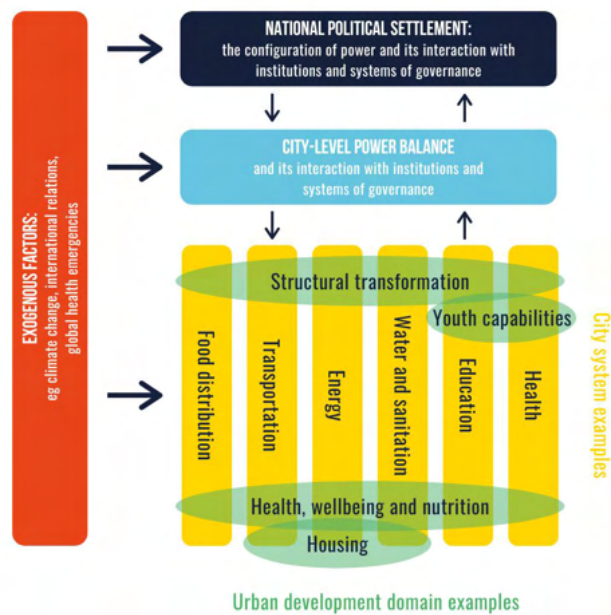
The ACRC’s holistic framework for analysing urban development in Africa has three integrated components – **politics, systems** and **development domains**. The politics component uses “political settlements” theory to model how power is configured at the national and city levels, and then analyses how these configurations of power shape (and are shaped by) urban development processes in the given city. The systems

Figure 2: Map showing the geographic location of Nairobi



component analyses the functioning of the key systems (composed of physical infrastructure and people organised in various ways) that sustain and/or improve life in the city. The domains component considers distinct fields of discourse, policy and practice that have formed around complex, intersystemic development challenges in the city, and analyses how relevant actors (political, bureaucratic, professional and popular) collaborate and/or compete for authority. Figure 3 below gives an indication of how these three components come together.

Figure 3: ACRC’s conceptual framework



1.1. Methods

The ACRC team drew upon their research and well-established local networks to analyse Nairobi's political settlements (PS), city of systems (CoS), and four domains of housing; safety and security (S&S); structural transformation (ST); and health, wellbeing and nutrition (HWN). These four domains were selected not only because of their local salience to policymakers and civil society organisations, but also for their opportunities to catalyse progressive, innovative interventions in Nairobi.

Our research methods included desk reviews of quantitative, qualitative and spatial data; key informant interviews (KIIs); and focus group discussions (FGDs) with municipal officials, civil society organisations, private-sector actors, ordinary residents and donor agencies. We received ethical clearance in both Kenya and the UK. In our synthesis below, we will incorporate ACRC's crosscutting themes of finance, gender and climate change as vital concerns that shape Nairobi's key systems and politics.

2. Locating Nairobi in the national political settlement and governance structure

To understand urban development and prospects for developmental reform in Nairobi, we need to understand who wields power and how it is used. City-level power dynamics do not exist in a vacuum, and they are typically influenced by the national "political settlement" (PS). A political settlement is a common understanding among a society's most powerful groups about the basic rules (or institutions) of the political and economic game. Those rules create opportunities or benefits for "insider" groups, often to the exclusion of "outsiders".

Political settlements can be analysed in several ways, but we will focus on two main dimensions: *power configuration* and *social foundation*. The power configuration describes the relative strength of groups loyal to the leader (known as "leader's bloc") vis-a-vis groups who are opposed to the leader or only contingently loyal. Crudely, where the leader's bloc is strong, we say that power is "concentrated". By contrast, when the leader's bloc is weak, we say that power is "dispersed". Power concentration, interacting with other variables, can shape the government's ability to make and implement decisive, consistent urban development policy. Meanwhile, the social foundation describes the breadth and depth of groups who are "insiders" to the settlement.¹ Where a relatively large proportion of the population are insiders, we describe the settlement as "broad". But when only a relatively small proportion of the population are "insiders", the settlement is called "narrow". The social foundation,

¹ To be an "insider", a group must satisfy two criteria: 1) it is potentially powerful enough, acting alone or with others, to make significant trouble for the leadership and/or significantly affect struggles between political blocs; and 2) the leadership chooses to manage this potential threat predominantly by "co-opting" (channelling benefits of some kind to this group) and thereby incorporate it into the settlement. Groups either lacking the power to affect struggles in this way or predominantly repressed by the leadership, by contrast, are known as "outsiders".

interacting with other variables, will shape the degree to which governing elites are committed to “inclusive” urban development policy (see also Kelsall et al., 2021).

Kenya’s current PS can be characterised as **broad-dispersed**. To date, political analysis has typically focused on the national level, rather than the sub-national scale. In this section, we analyse how this PS has historically influenced Nairobi’s development and continues to shape the city’s prospects for reform.

2.1. Understanding the broad-dispersed political settlement in Nairobi

Kenya’s PS is characterised by shifting ethnic alliances, crony capitalism and competitive elections. In this power configuration, elites are incentivised to deliver broad-based benefits (especially for social development) but still struggle to build effective institutions, thus leading to frequent use of clientelist and populist strategies (Kelsall et al., 2021). In Kenya, politics at the national and local levels (including in Nairobi) is strongly shaped by informal norms in state operations, and ethnic-based patronage is commonplace (Cheeseman et al., 2020). Furthermore, our analysis indicates that election results are substantially explained by Kenya’s ethnic structure and majoritarian electoral system (that is, first past the post or FPTP). Kenya’s five largest ethnic groups (Kikuyu, Luhya, Luo, Kamba and Kalenjin) together comprise about 65% of the population, but no single group is large enough to dominate politics. As a result, FPTP has led elites to mobilise their co-ethnics and to form coalitions with at least two tribes to garner sufficient votes; the ensuing alliances are maintained by patronage networks.² These alliances and networks play a major role in shaping Nairobi’s service delivery, economic development and political outcomes, as explained below.

Nairobi’s leadership concerns have often echoed the national government’s challenges, such as widespread use of patronage, inequitable service delivery and unaccountability to ordinary citizens (*wananchi*). Relatedly, there are stark inequalities in infrastructure and service delivery, particularly in Nairobi’s informal settlements (CoS below), and there is often a lack of democratic deepening across Nairobi and Kenya in general. More positively, Kenya’s devolution reforms have created new opportunities for citizen participation and, during the 2022 general elections, President Ruto and Nairobi Governor Sakaja both highlighted their development priorities. With Ruto and Sakaja in the same political coalition (that is, *Kenya Kwanza*), there may be newfound opportunities to work together to improve public goods delivery and enhance centre/local government relations. In this section, we discuss salient political patterns and contestations that help set the stage for our subsequent analysis.

Kenyan elections have been hotly and sometimes violently contested since 1992 (when Moi reluctantly allowed the return of multiparty politics) and Nairobi is often an opposition stronghold, including in the 2022 elections, when the opposition secured

² Following the 2022 elections, Ruto’s key appointments to the executive arm of government reflected the need to reward key ethnic bases that supported him during these elections: of 22 cabinet secretaries, there were seven people of Mount Kenya descent (31.8%).

control over the County Assembly (see Section 3 on city-level power balance). Moreover, past elections have sometimes resulted in rising insecurity instigated by politicians, militias, gangs and/or other fluid non-state groups (including in Nairobi's informal settlements), which can be mobilised by aspiring or incumbent officials, such as in the 2007/8 post-election violence (Kagwanja, 2009). Although levels of election-related intimidation and violence have declined in Nairobi and Kenya overall, including in 2022 (Cheeseman et al., 2024), insecurity is still a key challenge, especially in informal settlements around elections (see S&S below).

Since independence in 1963, Kenyan decisionmakers' ways of accessing political power have been influenced strongly by ethnicity and levels of elite cohesion/fragmentation.³ As in other African nations, Kenya's political parties are often poorly institutionalised, instead crystallising around key individuals (van de Walle, 2007; Cheeseman et al., 2024). When Kenyan elite pacts have disintegrated after disputed elections, this has unleashed "centrifugal forces", including in 2007-08 (Cheeseman et al., 2020; also below). But once Kenya's elite actors manage to reestablish working relations, there is at least a temporary restoration of political stability, such as after Raila and Uhuru's famous "handshake" (ibid). After Raila and Uhuru closed ranks in 2018, it became easy to mobilise members of Nairobi's County Assembly to impeach Governor Mike Sonko, leading to the formation of Nairobi Metropolitan Services (NMS) (Ouma, 2023a; also below). The making and unmaking of elite pacts in Kenya are continuous processes, with such agreements regularly shifting, based on emerging opportunities and players' ongoing repositioning for advantage. However, underlying this dynamic is a considerable degree of elite cohesion. Elite cohesion in Kenya is explained by elites' desire to protect the highly unequal political and economic system on which their privileged positions depend (Cheeseman et al., 2020). It is only when elite pacts rupture, such as during Kenya's 2007 general elections, that violence and unrest come to the fore (ibid; Branch and Cheeseman, 2009).

Ascent to Nairobi's leadership is partly contingent upon ethnic affiliation and alliances, but such patterns have also changed over time. In the post-independence era, Nairobi's politics was initially dominated by Kikuyu business and political elites (Kahura, 2017), with Kikuyu also comprising the majority of Nairobi residents at the time. In the 1980s, President Moi sought to counteract the Kikuyu-dominated city council by weakening the authority of Nairobi's Kikuyu-dominated council (ultimately dissolving the city council and replacing it with appointed commissioners) (Ouma, 2023a; also below). But, more recently, as the city's population has become more diverse and ethnically mixed, Nairobi governors have required support from at least two of Nairobi's main ethnic groups (that is, Kikuyu, Luo, Akamba and Luhya). From 2013 to 2017, the

³ Bedasso (2015) shows how the internal fragmentation of ethnic groups intensifies the structural uncertainties that are commonly associated with intra-elite pacts in weakly institutionalised politics.

Nairobi governor was Luo; in 2018, the governor was Kamba; and since 2022 the governor has been Luhya, confirming the city's shift away from Kikuyu leadership.

However, Nairobi's leaders can be vulnerable to challenges from national government, and presidents have sometimes dislodged or deliberately undercut the city's officials. Following poor performance in Nairobi's service delivery, President Daniel Moi dissolved Nairobi City Council in 1983 and appointed the Nairobi City Commission, which governed until the first multiparty mayor was elected in 1992 (Kanyinga and Michuki, 2023; Ouma, 2023a; Jones, 2020). Subsequently, President Kibaki formed the Ministry of Nairobi Metropolitan Development to improve planning and services (2008-2012); similarly, concerns over faltering service delivery and corruption under Governor Mike Sonko led to the creation of NMS (Box 1). In establishing NMS, President Uhuru Kenyatta declared that the agency should strive to end corruption and dismantle cartels that offer low-quality services (K'Akumu, 2022). Such interference underscores Nairobi's pivotal position in national politics and the importance of understanding how multilevel power dynamics and inadequate service delivery have shaped the city's PS.

Box 1: Centralising pressures for rents and improving service delivery under NMS

During the 2017 elections, prominent businesspeople in Nairobi were actively involved in selecting a deputy governor for the highly popular Governor Mike Mbuvi Sonko.⁴ Sonko was a populist leader, whose reign was marked by instability and worsening provision of critical services (Kanyinga and Michuki, 2023; Ouma, 2023a). In response to such failures, the government of Kenya in February 2020 signed a "deed of transfer of functions" from the county to the new Nairobi Metropolitan Services (NMS).⁵ In particular, Nairobi County relinquished its health services; transport; planning and development services; and public works, utilities and ancillary services. As one of our civil society key informant interviews (KIIs) noted, these areas can have significant potential for rents:

"If you look at the deed of transfer[,], not everything was transferred. The transferred functions are **choice sectors for the national government**. Take for instance, infrastructure: a lot of money goes there. The question is why they transferred certain functions. It's a question of where there are **opportunities for huge projects and opportunities for rents**."⁶

With Mike Sonko impeached shortly after the transfer,⁷ Anne Kananu became governor, but real power lay with NMS, which had military rather than civilian leadership. Improvements in service delivery (such as new hospitals, clinics and boreholes) were largely attributed to the efficient leadership style of NMS' director

4 For instance, people close to then powerful businessman from Mount Kenya region was one of the forces behind the selection of a person with corporate management experience to deputise Governor Mike Sonko. (See Oruko, 2021).

5 Kenya Gazette Notice No. 1609, [available online](#) (accessed 14 October 2024).

6 Key informant interview with civil society leader, June 2022, emphasis added.

7 See Oruko (2020).

general, Major Mohamed Badi, although WASH facilities were rarely maintained over time (Schramm et al., 2023). The director general benefited from the national government's political and monetary support, as well as Uhuru Kenyatta's vision of creating a clean, liveable city and a conducive space for investments (K'Akumu, 2022).

However, NMS was widely viewed as a conduit for Jubilee elites' accumulation; its accounts were never audited; and there were substantial concerns about the erosion of democratic institutions, including a lack of accountability and heavy-handed evictions in informal settlements (Ouma, 2023a). As our respondents noted, NMS raised a set of profound questions regarding the trade-off between "development without representation" (that is, NMS) and "representation without development":

"Nairobi's "most powerful group [is] the NMS [because] it's being controlled and funded by the national government... We elected the governor, but he was not able to deliver. NMS is not in the Constitution [but] its service delivery is better."⁸

"As a voter, I was not given a chance to decide whether to be led by NMS or elect another Governor... NMS was imposed on people."⁹

After Sakaja Johnson's victory (who was affiliated with Ruto's *Kenya Kwanza*) in August 2022, NMS was dissolved on 30 September 2022 and functions reverted to Governor Johnson.

2.2. Multi-level governance and incomplete decentralisation

Under Kenya's partially implemented decentralisation reforms, Nairobi County has limited autonomy and sometimes overlapping mandates with national agencies, while City Hall still exerts control over sub-county decisions. The 2010 Constitution devolved 14 functions to county governments, such as public works; trade development and regulation; and planning and development, which includes housing (Republic of Kenya, 2010). But many of Nairobi's systems are still plagued by competing agencies that often work at cross-purposes (for example, water, transport); relatedly, many networks are poorly coordinated amongst local, national and international actors (see CoS below). Governor Sakaja Johnson's manifesto promised to further decentralise public services by establishing five administrative boroughs that would be managed by a city manager (Johnson and Muchiri, 2022). While this proposal could potentially improve local service delivery, it is more likely to encounter resistance from influential actors who benefited from City Hall's centralised management (see Kanyinga and Michuki, 2023). More generally, the 2010 Constitution sought to grant Kenya's county governments a measure of autonomy, but the national government still wields considerable power over the counties. For instance, the National Treasury continues to control key resource flows (for example, shareable revenue) to the counties. Since 2013, there have often been delays in disbursing national funds to Kenyan counties,

⁸ Key informant interview with political leader in Nairobi, June 2022.

⁹ Focus group discussion, Mathare informal settlement, June 2022.

who cannot afford to “hold out” in case of a conflict with the national government (see Section 3 below on revenue collection).

2.3. Nairobi’s pivotal position in political and economic development strategies

Kenya’s national and local policy frameworks for urban development offer some promising entry-points, which in practice have been largely ignored. Kenya’s National Urban Development Policy (Republic of Kenya, 2016) was developed through a consultative process (including with international agencies, Council of Governors and CSOs), which aimed to strengthen urban governance, development planning and the delivery of social and physical infrastructure in urban areas.¹⁰ Meanwhile, Nairobi Metro 2030 envisions a “world-class” metropolis generating sustainable wealth and high quality of life for its residents as well as investors (Republic of Kenya, 2008; Myers, 2015). All Kenyan counties must prepare county integrated development plans (CIDPs) to guide development over a five-year period, and the Public Finance Management Act stipulates that no public funds shall be appropriated outside a county’s planning framework (Republic of Kenya, 2012). But such formal plans have been poorly, or (at best) selectively, implemented in Nairobi. The city’s masterplan called NIUPLAN (Nairobi City County, 2014) centres upon improving transport provision using a largely top-down approach (Section 3 and CoS).

Given Nairobi’s centrality to the Kenyan economy, it acts as a key battleground and hub simultaneously for business networks as well as national and transnational trade, which the elite regularly exploit to generate rents. For politicians across Kenya, Nairobi is seen as a leading “ornament”.¹¹ Nairobi is also a major merchant city, in which business elites seek to make money and cut deals. It is a leading site for mega-projects offering lucrative opportunities to make deals: recently, there have been significant road developments with inflated costs (for example, Nairobi Expressway), while Nairobi’s open spaces are regularly the targets of speculation (Manji, 2020). Meanwhile, many of Kenya’s economic scandals were domiciled in Nairobi (for example, Goldenberg and Anglo Leasing), underscoring the city’s central role in Kenya’s crony capitalism and corruption (Githongo, 2017). For many reasons, then, Nairobi is fundamental to Kenya’s political and economic development trajectories, thus explaining the national government’s strong desire to control its politics.

Whilst rampant corruption, unresponsive city-level systems, and poor local resource mobilisation have combined to undermine Nairobi’s public goods delivery, county leaders rarely face threats to their political survival from Nairobians. Low-income residents may mobilise periodically against their leaders, such as protests over the cost-of-living crisis and unresolved grievances after the 2022 elections (organised at Raila Odinga’s behest) (Abuso, 2023). But marginalised Nairobians often struggle to meaningfully influence key decisionmakers, while Kenya’s middle- and upper-class residents are less likely to advocate for political change. Nairobi’s wealthy households

¹⁰ Key informant interview, 25 February 2022.

¹¹ Key informant interview, 22 February 2022.

typically find individual solutions, like buying large water storage tanks (Kasper and Schramm, 2023) or privatised methods to foster security, improve roads, and access other club goods in their neighbourhoods (see CoS; S&S).¹²

3. City-level power balance and governance

The capital is often a barometer of national politics and, since 1992, has typically been a bedrock of opposition politics. Its governance is strongly influenced by national politics, and leading presidential contenders often invest heavily in shaping the election of Nairobi's governor. In the 2013 elections, Nairobi's governorship went to Evans Kidero, a Luo candidate from the opposition Orange Democratic Movement (ODM), representing an upset to the Kikuyu-dominated Mount Kenya region (which previously dominated Nairobi's politics, as noted above).¹³ Kidero benefited substantially from non-Kikuyu voters in Nairobi (for example, Luhya and Kamba), as these communities also supported the presidential ambitions of longtime leader, Raila Odinga. This section will explain how Nairobi is currently facing divided government, as well as longstanding difficulties with politicised land deals and stubbornly low levels of own-source revenue collection. We begin by explaining the current distribution of power, go on to consider trends in revenue and city-level finance, and close by discussing the political economy of land, as this plays an outsized role in shaping Nairobi's shelter and systems.

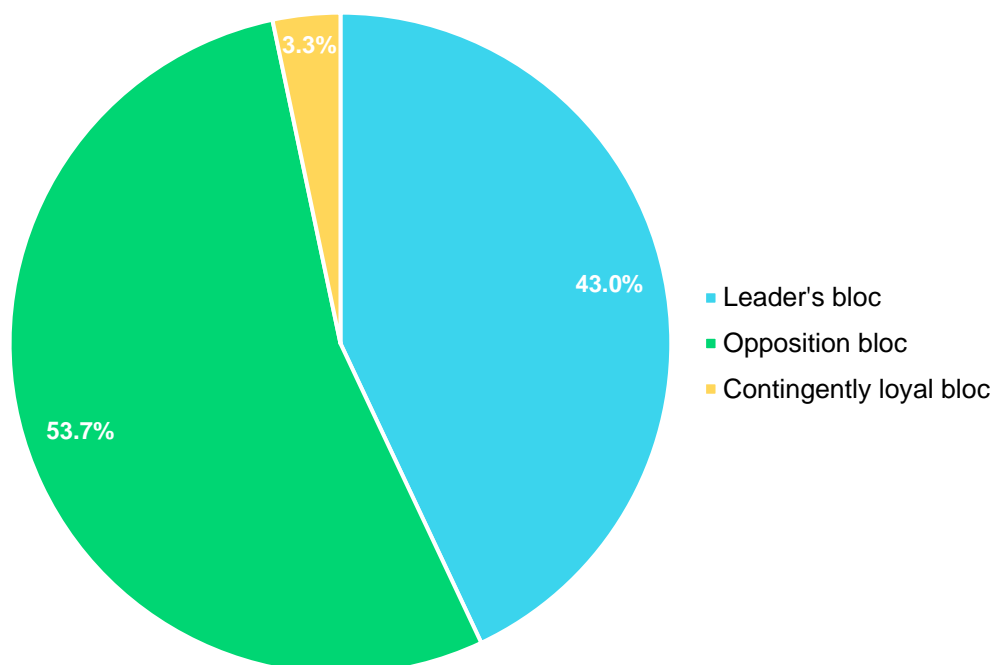
To understand the power configuration, we divide Nairobi's population into three political blocs. Firstly, **the leader's bloc (LB)** has expressed political loyalty to the president (leader) that is reasonably assured in the short term. Secondly, the **contingently loyal bloc (CLB)** has some representation in the ruling coalition, but the president cannot be assured of its support; and, thirdly, the **opposition bloc (OB)** does not feel represented by the ruling coalition. As seen in Figure 4 below, the CLB is relatively small in Nairobi, while the OB and LB are currently the major players in the city's governance. Following the August 2022 general elections, most of Nairobi's Members of County Assembly (MCAs) are affiliated with the **opposition Azimio One Kenya Coalition (54%)**, while Governor Sakaja's coalition accounts for only **43%** of MCAs. Although *Kenya Kwanza* won the governorship, the coalition is still the minority in Nairobi's County Assembly. To advance *Kenya Kwanza's* agenda in the County Assembly, Governor Sakaja has required support from MCAs in the OB. In Figure 4, we treat MCAs who were either elected or nominated under President Ruto's United Democratic Alliance (UDA) party as the LB. However, there is disquiet among the MCAs affiliated to the UDA party about Governor Sakaja's gravitation towards the OB. Decisions by *Azimio's* leader, Raila Odinga, have helped determine the OB's direction in dealing with the governor. Finally, the CLB is comprised of one MCA elected under

¹² Key informant interview, February 2022.

¹³ During the 2013 presidential elections, ODM was part of Raila Odinga's Coalition for Reforms and Democracy (CORD), so Kidero was aligned with and benefited from Nairobi residents' support for Raila.

the *Chama Cha Kazi* party and the few MCAs who have been elected as independent candidates. Taken together, the CLB accounts for only 3.3%.

Figure 4: Power configuration in Nairobi County



Note: Configuration of power at Nairobi City County after 9 August 2022 general elections. (Proxy is number of elected members of county assembly.)

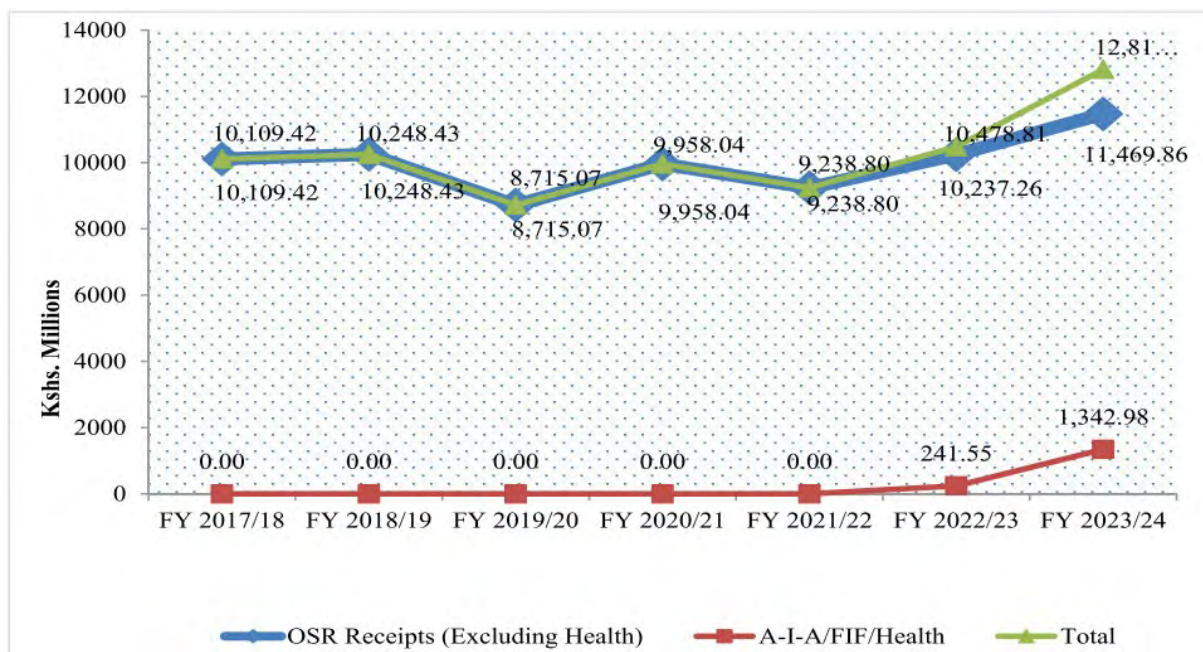
Source: Authors.

Despite the dominance of informal rules in Kenya's politics, powerful groups have reached a broad agreement regarding the rules of the game, including property rights, exchange of political power, and rule of law. There is a general commitment to constitutional term limits: that is, presidents can only hold office for two five-year terms, and general elections are held every five years. The Constitution (2010) also encompasses the exercise of political power and how revenues are shared (see below). It prescribes fundamental principles and rights (for example, rights to housing and sanitation), but Kenyan elites often manipulate those rules to favour their interests. While the Constitution and various laws have affirmed tenets like equity and social justice, realising these progressive norms inevitably has been difficult.

Nairobi's capacity to collect own-source revenue (OSR) is weak; as seen in Figure 5 below, it declined overall from Ksh 4.2bn to Ksh 2.73bn from the first half of fiscal year 2016/7 to 2022/3. As of June 2021, Nairobi County's key revenue streams included land rates, single business permits, parking fees, building permits and billboards (KIPPRA, 2023: 72). Growth in OSR can provide the county with additional much-needed resources, but Nairobi continues to underperform against the County's own targets on internally generated revenue. For instance, for the financial year 2020/2021, the County managed to achieve 62.2% of the OSR target, collecting Ksh 10.24 billion

against an annual projection of Ksh 16.46 billion.¹⁴ Such underperformance reflects several underlying challenges, including tax evasion, corruption and inefficient systems for OSR collection.

Figure 5: Trends in Nairobi County’s own-source revenue collection (2017/8 to 2023/4)



Source: Nairobi City County Treasury

Key: Own-source revenue (OSR); Appropriations-in-aid (A-I-A), Facility Improvement Fund (FIF).

Source: OCOB (2024: 387).

The county relies heavily on transfers from the National Treasury and much of its spending is on recurrent expenditure, rather than spending on development projects. Although counties are required to allocate at least 30% of their revenue to implementing development interventions (such as road construction and water provision), Nairobi has repeatedly failed to do so.¹⁵ The low absorption rates of Nairobi’s development budget (see Figure 6 below) are partly linked to bottlenecks in the country’s procurement processes that are often open to litigation. Since 2013, the city has consistently allocated the least amount of its resources to development, with most resources instead funding recurrent expenditure.¹⁶ Meanwhile, the Constitution has provisions for sharing not less than 15% of the last audited revenue nationally with Kenya’s county governments. Nairobi receives most of its funding through the National Treasury’s equitable share (Table 1). In financial years 2021/22 and 2022/23, the city

14 Office of the Controller of Budget (2021). *County Governments Budget Implementation Review Report for the FY 2020/2021*, page 291. Available online: cob.go.ke/reports/consolidated-county-budget-implementation-review-reports

15 Public Finance Management Act.

16 Reports of the Controller of Budget (Annual County Budget Implementation Reviews).

county received around Ksh 19.3 billion as its equitable share, up from Ksh 15.9 billion in 2020/21.¹⁷ Through these allocations, the city can pay personnel and provide services. Nairobi also receives donor funds as project or technical support, which account for only 1% of Nairobi's total county revenue.¹⁸ More generally, Nairobi's reliance upon short-term projects (rather than long-term development and programmatic priorities) combined with a lack of farsighted city planning has led to disjointed interventions and inequalities in shelter and key systems (CoS and housing below).

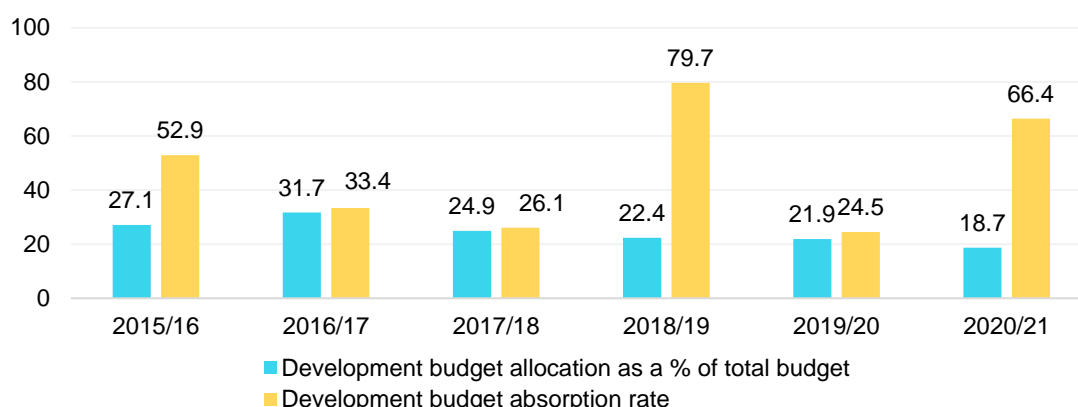
Table 1: Trends in allocation of equitable share, Nairobi County (2017-2022), Kenyan Shillings (Ksh)

Financial year	Total equitable share (Nairobi)	Total equitable share (47 total counties)
2017/2018	15,402,000,000	302,000,000,000
2018/2019	15,794,200,000	314,000,000,000
2019/2020	15,919,950,000	316,500,000,000
2020/2021	15,951,600,000	316,500,000,000
2021/2022	19,249,677,414	370,000,000,000
2022/2023	19,249,677,414	370,000,000,000

Source: County Allocation of Revenue Act (various issues).

Local service delivery is also a function of a county's ability to utilise the allocated resources for development purposes within the allocated time. As Figure 6 shows, Nairobi County's capacity to absorb its development budget is generally low, although with higher rates in 2018/19 and 2020/21. Notably, Nairobi's development budget absorption was lowest during the election year of 2017/18.

Figure 6: Nairobi County, development budget allocation and absorption rate (%)



Source: Kanyinga and Michuki (2023).

¹⁷ County Allocation Revenue Bill (various financial years 2017/2018-2021/2022).

¹⁸ County Allocation Revenue Bill (various financial years 2017 / 2018-2021/2022).

3.1. Everyday politics: Land-grabbing, deficient city planning, and privatised urban development

Nairobi has a long history of politicised land deals, failure to deliver land for the public good (including for affordable housing and new public cemeteries), and irregular land allocations that have repeatedly marginalised low-income residents (Klopp and Lumumba, 2017). Land problems are at the heart of Kenyan politics and land-grabbing has been pervasive in Nairobi for decades (Manji, 2020). Since the colonial era, the city has had extensive land speculation; in the early 1960s, Nairobi's city council quickly became infamous for land-grabbing and sought to contain political rivals, rather than engaging in long-term planning (Jones, 2020). The first post-colonial plan was never implemented (City Council of Nairobi, 1973) and, by the 1990s, Nairobi's open spaces had largely been privatised (Jones, 2020). Such privatisation has led to massive profits for well-connected individuals, as epitomised by several instances of land-grabbing in Nairobi for shopping centres or other private uses, rather than for schools, clinics or other public goods (Manji, 2020). Kenya's national land reforms have merely prioritised "restructuring the bureaucratic architecture of land administration and land management...[while] land-grabbing has increased" (ibid: 408; also Bassett, 2020). At the city level, a county official acknowledged that Nairobi's land markets are often infiltrated by influential private interests and corrupt politicians: "Land investment [is left to] the private sector, and the private sector is so poorly regulated such that they push for more profits every year[...] Land was used as a tool to control the city politics" (quoted in Mwau and Sverdlik, 2020). Box 2 summarises the sectors that have attracted Nairobi-level and national elites, including land, housing and various infrastructure sectors (also CoS below).

Box 2: Leading city sectors for national and Nairobi-level elites

- Land, for example, land rates and acquisition of public land (land-grabbing)
- Housing and planning, for example, approval of plans, opportunity to launder the proceeds from illicit deals
- Roads and general infrastructure, with huge budget outlays and opportunity for rents
- Waste management due to weak accountability for county budget allocations rubbish collection
- Water and sewerage, for example, illegal connections, private boreholes, water revenue
- Rates collection/county revenue because of loopholes for misappropriation
- Transport sector, for example, business opportunities in public transport, regulating transport sector
- Informal livelihoods, for example, opportunities for political mobilisation
- Private health investments, for example, opportunities for business (hence limited effort in making public healthcare more efficient), rents from Kenya's public health insurance scheme

Such privatised development is enabled by Nairobi's city planning, which is overwhelmingly reactive and limited to development control, road construction and post hoc interventions (for example, infrastructure delivery following developer-led housing provision) (Mwau et al., 2020). In the wealthy neighbourhood of Kilimani, frenzied construction of high-income apartments has recently strained local infrastructure networks, which municipal planners have been unwilling to tackle using farsighted strategies (Schramm and Bize, 2023). According to a Nairobi County engineer in 2016, planners' decision to allow the densification of Kilimani was made without engaging any water or electricity providers (ibid). More fundamentally, the city's planning authority is subservient to speculative developer-led real estate: "[Nairobi's] planning department primarily works by staying out of the way of private development ... Planning largely concerns the production of a city-wide road network, [which] paves the way for the investor-led development of real estate" (Schramm and Bize, 2023: 8).

Additionally, the city's corrupt land deals and wanton disregard of planning have enabled an ongoing proliferation of hazardous high-rise tenements. Official zoning plans are ignored in these areas, which also have low-quality construction and rampant irregular land allocations; together, these issues have led to multiple building collapses (Smith, 2023). Tenements are usually five to ten walk-up storeys with a single-room unit measuring 100 square feet, and typically tenants must share sinks, taps and toilets (Mwau and Sverdlik, 2020). Nearly 70% of Nairobi's residents are tenants renting single-room units, about half of them in shacks in informal settlements and the other half in tenements (ibid). There is often an uncomfortably close nexus between Kenyan politicians and real estate actors, including those who develop tenements, and many land investors collaborate with an array of authorities and private actors to sow chaos and stymie any efforts at official regulation (Smith, 2023: 15). Such biases in land administration are linked not only to Kenya's patronage politics, meagre state capacity and powerful private interests, but also to the practices of corrupt professionals like physical planners (Bassett, 2020; Mwau and Sverdlik, 2020). Thus, the city's laissez-faire, highly exclusionary planning, coupled with opaque land governance and shortfalls in affordable housing delivery, have led to most Nairobians being accommodated in low-quality rental shacks and tenements (see housing summary below).

4. Key findings from city of systems

In the previous section, we examined how Kenya's distribution of power has influenced development and the prospects for developmental reform in Nairobi; in this section, we consider the material dimensions, analysing the systems by which various actors and agencies seek to sustain and/or improve urban life. All of these "urban systems" depend on both physical infrastructure and human actors, but in more "social" systems (such as healthcare and education), humans play a more pivotal role in system functioning.

The partial dependence of all urban systems on physical infrastructure creates powerful constraints and path dependencies, and it has often produced unintended

(negative) externalities. We analyse how the externalities of systems (compounded by intersystem interaction¹⁹) and the scale of system failures/fragmentations can add to the challenges that Nairobi residents and enterprises face.

Since systems are also governed and resourced by numerous human actors (formal or informal, public or private – but usually a combination of these), their functioning is affected by the political settlement described above, as well as by ideas deriving from developmental paradigms like modernism and neoliberalism. This means that systems tend to unevenly allocate goods and services, and these systems may be used to extract benefits and secure political advantage.

Below we consider the following systems in Nairobi:

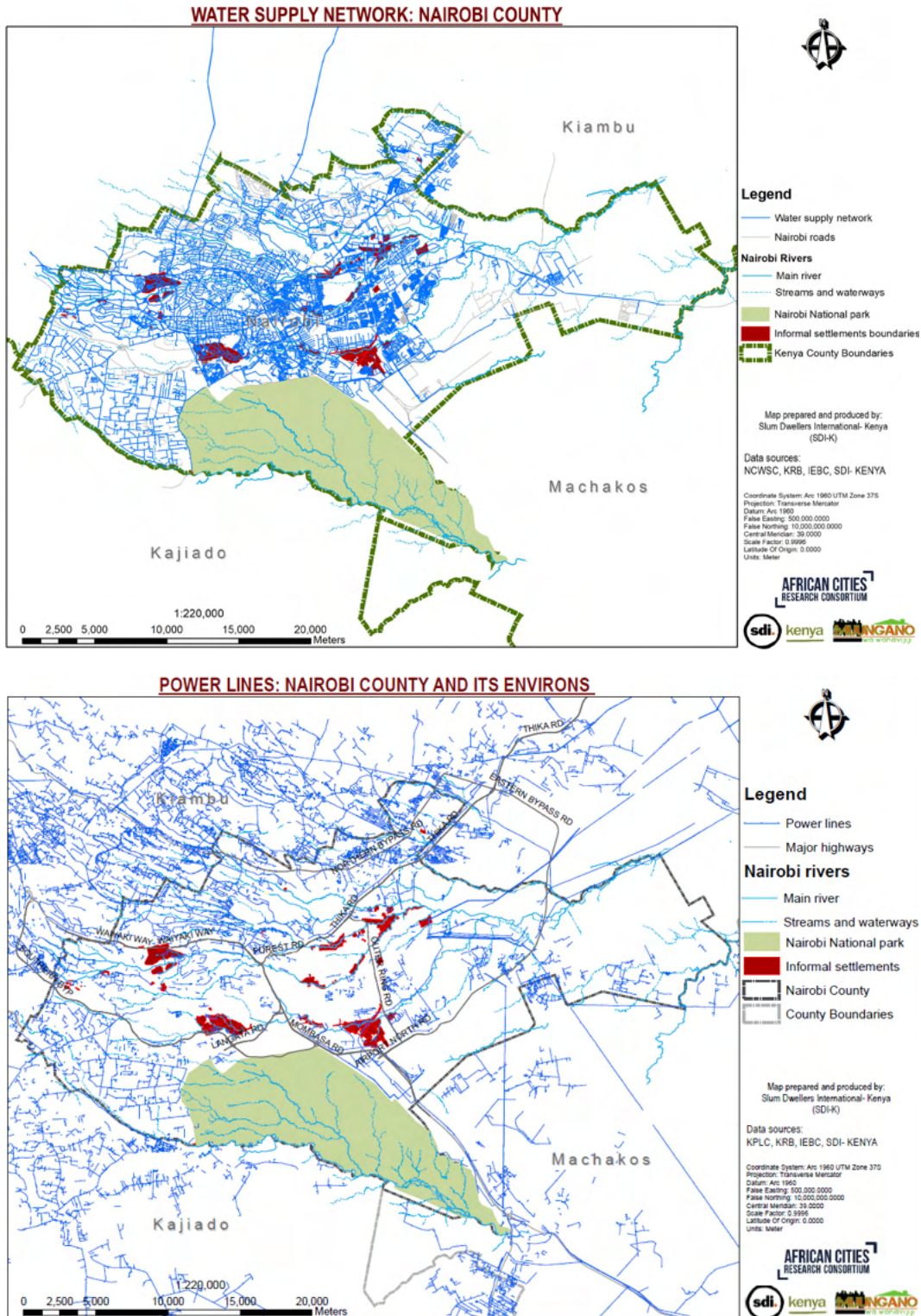
- water
- energy
- waste management
- sanitation
- education
- healthcare
- transportation

This section examines how such systems function in Nairobi; how they support or hinder urban development; and how they may be improved. Although Nairobi residents can seemingly access a range of key systems (see Figure 7 for water and electricity), there are significant concerns around cost, quality and reliability of provision that negatively affect wellbeing and inclusive urban development pathways. Government statistics may obscure the challenges facing Nairobi's residents with unreliable or mixed forms of infrastructure provision, including intermittent water and "fuel stacking" (that is, the combination of clean and unclean energy sources, such as solid fuels, kerosene, and so on) (cf Singh et al., 2015; Kumpel et al., 2017). Last-mile connectivity is a key challenge in Nairobi's underserved peripheral areas and informal settlements, where the formal systems can rarely reach. Additionally, a lack of joined-up planning for land use, shelter and infrastructure markedly limits the city's potential for climate resilience and economic development. For instance, problems arising from shortfalls in sewerage system connections (especially in informal settlements) are exacerbated by the city's inadequate provision for stormwater and solid waste management (SWM), rising levels of impervious surfaces, and increased intensity of floods linked to climate change (Sverdlik et al., 2019). Below we explain how transport, water, energy and other systems typically face severe institutional fragmentation stemming from a range of international agencies and private actors being involved in their operation, including "cartels" (the latter are unregulated, non-state actors that will be key to our domain

¹⁹ Complex problems in African cities often involve multiple city systems that interact with each other; we will capture intersystem interaction in our third concept of "urban development domains".

analyses). More fundamentally, Nairobi's inequitable and disjointed systems have deep political roots, and influence the city's broader socioeconomic trends, environmental (in)justice and gendered inequalities.

Figure 7: Maps of water supply network and power lines in Nairobi



Source: SDI-Kenya/Muongano, prepared for ACRC.

4.1. History

During the colonial era, Nairobi's stark divides were created by racist city plans (from 1905 onwards) and related restrictive policies and regulations targeting native Africans. Following Kenya's independence in 1963, Nairobi underwent rapid growth and proliferation of informal settlements, with concomitant declines in formal planning and infrastructure delivery (Obudho, 1997; Owuor and Mbatia, 2012). By the 1990s, many informal settlements in Nairobi had densified without corresponding increases in WASH or other key systems (Alder, 1995). Subsequently, the World Bank's research confirmed that Nairobi's informal settlements had extremely inadequate shelter, with levels of housing and infrastructure in Nairobi's informal settlements remaining less consolidated and poorer in quality than in other global South cities (Gulyani and Talukdar, 2008). Moreover, Nairobi is increasingly experiencing sprawl, rapid peri-urban expansion, and growth of satellite towns where hybrid forms of infrastructure delivery are common (Mwau et al., 2020, Gillespie and Mwau, 2024). Residential densities differ markedly across the city, with the areas initially built for European residents enjoying far lower densities as well as better services and infrastructure provision (see housing summary).

4.2. Ownership and governance

4.2.1. Fragmentation and formal/informal actors in Nairobi's systems

In the face of Nairobi's ongoing spatial and population growth, formal infrastructure networks are often inaccessible and unable to meet residents' growing demand, as state provision has been eclipsed by non-state alternatives that are typically tenuous, hazardous and/or unaffordable. In transport, national officials as well as international actors and donors have exerted a disproportionate influence (for example, World Bank, JICA), including by launching an array of mega-projects that continue to favour road networks over public and non-motorised transport (NMT) (Klopp, 2012; Gillespie and Mwau, 2024). Nairobi residents rely overwhelmingly on hazardous NMT infrastructure and semi-legal buses (*matatu*), suggesting a major disconnect between top-down infrastructure projects and the daily realities of low-income citizens (KIPPRA, 2023). Meanwhile, in solid waste management, key non-state providers are typically youth groups and community-based organisations, who may compete and clash amongst themselves. For instance, research in Nairobi's leading Dandora dumpsite has found violence, extortion and bribery amongst informal providers seeking to control waste, as well as elevated levels of pollution and health risks (Muindi et al., 2022).

Although government agencies own Nairobi's energy networks, there is considerable influence by both international donors and informal providers. Kenya Power (KP) has retained its monopoly,²⁰ and the national state controls all the energy agencies that

20 KP is a public monopoly that was partially privatised during Kenya's structural adjustment programme; as a result, 49.9% of KP's shares were listed on the Nairobi stock exchange, with the remaining 50.1% held by government of Kenya. See: www.kplc.co.ke/about-us (accessed 22 October 2024).

supply Nairobi. There have been efforts to promote electricity access in Nairobi's informal settlements, but these initiatives have often been ineffective, as this would entail significant losses for the informal providers ("cartels") (de Bercegol and Monstadt, 2018; also below). Many electricity cartels in Mukuru regularly pay bribes to KP and to police officers; they may clash amongst themselves to control territory in informal settlements (Sverdlik, 2017). Regarding finance for electricity projects in Nairobi, World Bank and African Development Bank (AfDB) are quite substantial players. For instance, AfDB spent **USD 87.1m** to construct key electricity substations as part of the "Nairobi Ring project" and **EUR 78.5m** to support further substations in Nairobi (AfDB, 2021). The World Bank has initiated large-scale electricity projects, such as Kenya's Electricity Modernization Project (**USD 562m**), which includes peri-urban electrification and automatic load break switches installation in Nairobi's distribution network.²¹ Finally, since 2006, China has provided a total of 16 loans to Kenya's power sector, worth **USD 1.7bn**, including two projects to improve Nairobi's Underground Electric Power Distribution Network (**USD 278.8m** in 2017) and upgrading Nairobi City Centre's Transmission Network (**USD 118.5m** in 2017).²²

In the water sector, Nairobi City Water and Sewerage Company (NCWSC) is a wholly owned subsidiary of Nairobi's County government,²³ but water provision is again heavily influenced by national and international agencies. NCWSC's water in informal settlements is subsidised (see below on access), and NCWSC is a corporate body tasked with revenue generation for its operations. However, it relies on the national agency, Athi Water Works Development Agency (AWWDA), for asset management, and the city's water infrastructure is thus largely developed and owned by AWWDA.²⁴ Although it receives some funds from national government, AWWDA often relies on debt financing from international lenders such as the World Bank and AfDB. From 2014/5 to 2018/9, NCWSC raised **Ksh 7.6bn** in external funds including from Kenya's national government, World Bank and AfDB (NCWSC, 2023: 63).

Meanwhile, for transport plans, funding and implementation of major road projects, Chinese and Japanese actors have played a substantial role (especially as contractors). Kenya's transport ministry is one of the main recipients of Chinese finance (Sanghi and Johnson, 2016). From 2000 to 2020, China's government has loaned a total of USD 6 billion for 11 transport initiatives in Kenya, including **USD 180m** in 2018 for Nairobi's Western bypass road construction.²⁵ For its part, JICA is involved in Nairobi's transport via 1) strategic plans and 2) operational engagement. The most significant strategic intervention has been JICA's transport studies and formulation of NIUPLAN in 2014 (Nairobi City County, 2014). Additionally, JICA is involved in road

21 See: <https://projects.worldbank.org/en/projects-operations/project-detail/P120014> (accessed 14 October 2024).

22 See: www.bu.edu/gdp/chinese-loans-to-africa-database/ (accessed 14 October 2024).

23 See: www.nairobewater.co.ke/key-sector-players/ (accessed 14 October 2024).

24 See: www.awwda.go.ke/about-athi-water-works/ (accessed 14 October 2024).

25 See: www.bu.edu/gdp/chinese-loans-to-africa-database/ (accessed 14 October 2024).

construction for Nairobi, including parts of Ngong Road and Western Ring Road.²⁶ Significantly, government agencies from both China and Japan have a pattern of contracting Chinese and Japanese private companies, respectively, to undertake road construction in Nairobi. More generally, while there is mixed financing for bulk infrastructure (including water, sewerage, transportation and energy), the contracting in Nairobi has recently favoured Chinese engineering firms (see Table 2 below on recent roads that often use Chinese construction firms).

Table 2: Highways and bypass roads in Nairobi

Highway	Lead agency	Finance	Construction
Thika Road (2012)	KeNHA	AFDB (ADF) Exim Bank GOK	China Wu Yi Sinohydro Shengli Engineering
Eastern Bypass (2014)	KeNHA	GOK	China Road and Bridge Corporation
Northern Bypass (2014)	KeNHA	Exim Bank (85%) GOK (15%)	China Road and Bridge Corporation
Southern Bypass (2016)	KeNHA	Exim Bank (85%) GOK (15%)	China Road and Bridge Corporation
Western Bypass (2022)	KeNHA	Exim Bank (85%) GOK (15%)	China Road and Bridge Corporation
Eastern Bypass Dualling (2022)	KURA	Exim Bank GOK	China Communication Construction Company
Nairobi Expressway (2022)	KeNHA	China Road and Bridge Corporation (CRBC)	China Road and Bridge Corporation

Source: Maina and Cirolia (2023: 7).

Across Nairobi's heterogeneous neighbourhoods, there are diverse modalities of non-state service provision, especially in low-income areas. **Small-scale service providers** (SSSPs), which can be both formal and informal, play a crucial stopgap role or may even surpass other modes of delivery. Regarding water provision, satellite towns and the city's peripheries are dominated by informal and formal SSSPs that often interact and may cooperate. Formal SSSPs – such as water truckers, licensed borehole operators and licensed water bottling businesses – may sell water to unlicensed (informal) vendors or truckers for resale (Joshi et al., 2023). Such sub-systems are best understood as **hybrids that incorporate both formal and informal** elements. These

²⁶ See: www.worldhighways.com/wh8/wh10/feature/japanese-funding-will-help-kenyan-infrastructure-projects (accessed 14 October 2024).

hybrid systems are particularly prevalent in informal settlements and low-income housing areas (such as Eastlands). In Mathare, ethnographic research has highlighted the importance of understanding change over time and complex formal/informal linkages in key systems. For instance, some informal wastepickers in Mathare have successfully transitioned into other systems (such as water points); they can serve nearby high-rise tenements and may engage with the county's waste collectors via both formal contracts and informal clientelistic networks (Thieme, 2021).

More generally, Nairobi's non-state service providers can vary in their relations with government actors and fellow informal providers, in terms of their levels of collusion, extraction or conflict. For instance, *manual latrine-emptiers* (active in many informal settlements that lack access to sewers) typically have only limited, intermittent interactions with state actors like Nairobi Water or local police (Sverdlik, 2017). Given the government's preference for sewers, policymakers and Nairobi Water have largely ignored the pressing need for alternative, non-sewered solutions and improved faecal sludge management. As a result, manual latrine-emptiers and other improvised sanitation solutions remain largely invisible to official providers (ibid; Mallory et al., 2021). By contrast, *electricity cartels* in Mukuru and Mathare engage in extensive, regular interactions with police, KP officials and some politicians (Sverdlik, 2017; de Bercegol and Monstadt, 2018). Although Mukuru's *water cartels* typically can avoid harassment by Nairobi Water or the police, these water providers may clash amongst themselves, such as cutting water-pipes or other efforts to undermine their local competition (Sverdlik, 2017). As discussed in the next sub-section, it is essential to understand the complex formal/informal interactions and the politics of informal service provision across Nairobi's array of systems.

4.2.2. *Understanding the key roles of cartels*

A key crosscutting finding is the **pivotal role of informal or unregulated providers ("cartels")**, which offer extractive, low-quality but accessible modes of provision, and may benefit from political protection or collude with official service providers. Cartels are common in water and electricity (amongst other sectors), and these groups may be active in informal settlements as well as in higher-income neighbourhoods. In Kibera, electricity cartels have used various stratagems to undermine KP's electrification strategies, such as tampering with formal meters, vandalising transformers, or obtaining a legal connection that they resell illegally to fellow residents (de Bercegol and Monstadt, 2018). Meanwhile, in many informal settlements, water cartels create artificial scarcity and also can depend heavily upon collusion and corruption by county officials, as noted below:

"Cartels disconnect water supplies to create an opportunity for them to provide the same commodity to the residents at a costly price... There are also illegal water connections by cartels. **There is laxity by city county government to crack on these**

cartels and criminal gangs. Most of these criminals receive protection from the politicians in the city... This is extortion of city residents."²⁷

At the same time, it is important to acknowledge that informal providers may offer benefits to low-income residents, who are frequently neglected by official service providers and cannot readily comply with utilities' requirements (for example, tenure security and high upfront costs to connect). Cartels can be comprised of fellow residents of informal settlements, who are often well-known to their clients; Mukuru's water and electricity cartel members are mostly young men living in this informal settlement (AMT et al., 2014). They may offer accessible services with flexible repayment options, which markedly contrast with the formal utilities' approach (Sverdlik, 2017; de Bercegol and Monstadt, 2018). We next synthesise key findings on the coverage of Nairobi's transport, WASH, education and healthcare systems, with attention to multiple inequalities and interrelated risks as a result of exclusionary interventions or poorly integrated systems.

4.3. Coverage

Transport

Nairobi faces a major backlog in its transport infrastructure (especially in the greater Eastlands area), rising congestion and lack of a functional mass transit system. The railway network has not been expanded for decades, and public transport has similarly been neglected. Nairobi residents overwhelmingly rely on *matatu* (58.7%), as well as walking (17.1%), private cars (9.7%), and motorbikes (3.9%) (KIPPRA, 2023). Other studies have suggested that nearly half (47%) of the city's daily trips are made on foot and 11% via cycling (Odhiambo, 2021). The main NMT corridors are in Eastlands, with longer trips usually starting at dense residential neighbourhoods and ending at employment hubs (for example, CBD and the industrial area). In Eastlands as well as satellite towns, most streets are unpaved, and pedestrians face further challenges, due to poor design and competing uses. Excessively narrow streets often force NMT users to share the same space with motorists; many paths are also contested among informal businesses or other users. Even if adequate NMT infrastructure is available, motorcycles and cars often use walkways and cycle lanes, threatening NMT users' safety. Such concerns reflect poor city planning and design, minimal NMT infrastructure (such as lack of paved lanes), and related biases in favour of roads. More generally, last-mile transport in Nairobi is typically via *boda-boda* or walking, both of which are highly unsafe, yet crucial for low-income residents. In the latest CIDP (Nairobi City County, 2023a), the county's key transport priorities include road paving and construction of NMT in Nairobi's CBD (with donor support), but there is limited attention to NMT beyond the city centre (see also below on transport access).

²⁷ Key informant interview, February 2022, emphasis added.

Water

Water provision in Nairobi is highly heterogeneous, with formal provision often inadequate or unreliable, and coverage is very inequitable across the city. According to the regulator, in 2023, Nairobi Water had an estimated coverage of **83%** of the city's population (WASREB, 2024). However, this coverage level represents a decline from 86% in the prior year (ibid), and this figure also masks the city's highly unreliable formal provision. Under Nairobi Water's rationing programme, water is available for **eight hours per day**, on average, but with variations depending on the rationing schedule and location.²⁸ Although a protracted water crisis has affected the entire city, certain areas are especially disadvantaged, such as informal settlements and Eastlands (with dense, low-income rental housing). From 2014/5 to 2018/9, the utility's length of water lines laid in informal settlements was just 80.4km or only 27% of the target of 300km, which NCWSC attributed to prolonged drought (NCWSC, 2023: 63). Under NCWSC's social connection policy, informal settlements and areas designated as "low-income and urban poor" receive services on a subsidised tariff and lower connection costs.²⁹ In informal settlements, the utility has also installed digitally controlled water vending machines ("**Water ATMs**") and shared taps, but the interventions have often provoked resistance from water cartels and youth groups (Guma and Wiig, 2022). As noted above, water cartels can sabotage interventions or create artificial scarcity, while also proving difficult to dislodge as providers.

Sanitation

Nairobi's sanitation is highly fragmented, with an array of hybrid solutions, which are often linked to ill-health as well as to lack of dignity, safety or effective multi-level governance. According to official data, the public **sewer network covers 51%** of Nairobi's population, far below NCWSC's reported coverage of water services of 83% (WASREB, 2024). Regarding the spatial coverage of sewerage, Nairobi's peripheries are again the most underserved areas, as the utility cannot keep up with urban expansion. A study recently estimated that 48% of Nairobi households use sewers, with another 41% using pit latrines, 8% private septic tank and 3% communal septic tank (Beard et al., 2022: 6). Although the sewer network exists in some informal settlements, connectivity levels are very low. Kenya's policy emphasis on sewerage has left a major gap in unsewered areas, and on-site sanitation as well as faecal sludge management (FSM) have often been overlooked (Republic of Kenya Ministry of Health, 2016; Van Welie et al., 2019). Moreover, excreta are often disposed of in ways that significantly damage both human health and the environment. Estimates by the World Bank's Water and Sanitation Programme (WSP) found that **Nairobi County**

28 See: www.nairobiwater.co.ke/wp-content/uploads/2024/04/EQUITABLE-WATER-DISTRIBUTION-PROGRAMME-April-2024.pdf (accessed 15 October 2024).

29 In particular, as part of the social connection policy, low-income residents receive a "water loan [of] Ksh 3,670 (US\$ 37) and the sanitation loan is Ksh 27,000 (US\$ 270). The commitment fee is Ksh 1,648 in both cases. The water loan bears interest (at a nominal rate of 16% per annum); the sanitation loan does not" (World Bank, 2019: 12).

annually loses Ksh 1.7 billion, due to poor sanitation because of premature death, healthcare costs, productivity losses and access time, especially for women (WSP, 2014). However, this does not include other significant costs like water pollution, so that this substantial figure still underestimates the true costs of Nairobi's poor sanitation.

Healthcare

Of Nairobi County's 803 health facilities, just 119 or **15%** are publicly owned; the remainder are owned by private providers, NGOs and faith-based organisations (Nairobi City County, 2023b). Many public health centres are chronically understaffed and have dilapidated, poorly maintained facilities (ibid). From 2020 to 2022, NMS built or expanded a range of hospitals and clinics in Nairobi, with 32 projects completed, but a total of 19 have stalled and others have been completed but not equipped (ibid: 47). Furthermore, the taskforce found chronic stockouts of key medicines: there are extremely low **order fill rates of just 12%** (ibid: 59). Nairobi's health services are funded by a range of sources, including county revenue, national government grants, donors and National Health Insurance Fund (NHIF). But, alarmingly, households in Nairobi *"are the major financiers of healthcare, contributing **more than half** of the total health expenditure"* (ibid: 95, emphasis added). Below we examine access in key systems, while the HWN summary will discuss health concerns in greater detail below.

4.4. Access

Transport

Lower-income, younger and/or less educated residents are more likely to walk in Nairobi, which has negative implications for spatial justice and socioeconomic development. Most NMT users are usually low-income (that is, with monthly incomes of Ksh 15,000 at most), and pedestrian volumes decline with rising levels of education (Odhiambo, 2021). Travel patterns are also closely linked to employment patterns, and poorer households who largely rely on walking typically have more limited job accessibility (Nakamura and Avner, 2018). There are also important gendered aspects to commuting patterns: according to World Bank surveys, low-income women in Nairobi's informal settlements are more likely than men to walk to work, and low-income women are more likely than men to work within informal settlements⁶³ (Salon and Gulyani, 2010). In further sociospatial inequalities, Nairobi's dense tenements and informal settlements have the most limited access to adequate streets and paths. By contrast, middle- and upper-class areas already enjoy better quality streets, as well as greater levels of investment in roads (NCC and JIJCA, 2014: 4-33). Recent efforts to improve access to public transit have focused on developing Bus Rapid Transport (BRT) and improving Nairobi's trains. It is too early to judge the success of these

63 Gulyani and Salon's survey with over 4,300 Nairobi residents found that 48% of poor women work outside informal settlements vs. 74% of poor men. Regarding transport, poor women working outside the settlement are more likely to walk than poor men working outside the settlement (67% vs. 53%).

ongoing interventions, but it remains vital to foster equitable access to public transport. Currently, Nairobi's interrelated inequalities in transport, shelter and sociospatial injustices may stymie low-income households' access to jobs and thwart Nairobi's ambitions for ST, while also curtailing access to healthcare, education and various amenities.

Education

Nairobi has a small number of public primary schools, alongside many private-sector and faith-based educational providers. Currently, Nairobi's county government owns and runs a total of 223 public early childhood development and education (ECDE) centres with 35,000 enrolled students and 1,036 teachers, plus there are 206 primary schools in Nairobi run by Kenya's national government (Nairobi City County 2023a). The latter public primary schools in Nairobi have a total enrolment of 246,087 pupils (ibid: 611). However, Nairobi's distribution of these government-owned schools is highly uneven and inequitable. For instance, Pipeline is a densely populated area with mainly tenement housing that does not have a single government-managed school; in a large informal settlement nearby, called Mukuru Kwa Njenga, the government manages only one primary school.³¹ More generally, Nairobi's education system is dominated by privately managed schools and those termed "public" but actually managed by faith-based organisations and NGOs.³² Since government schools cannot keep pace with Nairobi's burgeoning population, the private sector has increasingly taken over. In our discussion of school feeding programmes (see HWN domain), we return to the importance of engaging with private as well as public schools to enhance nutrition in Nairobi.

4.5. Quality and multiple risks

Quality of Nairobi's solid waste management (**SWM**) needs to be understood in relation to collection as well as transportation, disposal and treatment. While collection can be efficient in some middle- and upper-income areas (as noted above), inadequate disposal at Dandora dumpsite has become a key issue of environmental injustice (Global Atlas of Environmental Justice, 2021). For residents of informal settlements and other low-income areas, SWM services may not meet safety requirements and final disposal can be in Dandora or, in many instances, informal and/or illegal dumpsites. This is linked to multiple environmental health hazards in informal settlements and in Nairobi's satellite towns.

There are substantial **gender inequalities** linked to low-quality, poorly integrated networks, as illustrated by paltry **WASH and household energy provision**. Inadequate sanitation in the context of high levels of insecurity, poor lighting and roads, and high costs of access has imposed gender-inequitable burdens in Nairobi's informal settlements. Many women and girls in these areas are especially affected by

31 See: <https://primaryschool.co.ke/nairobi/embakasi/mukuru-kwa-njenga/> (accessed 15 October 2024).

32 See: <https://primaryschool.co.ke/nairobi/> (accessed 15 October 2024).

inadequate public toilets, forcing them to rely on improvised and degrading solutions, especially at night in insecure informal settlements (Winter et al., 2019). Regarding household energy, polluting fuels (such as charcoal and kerosene) affect women's health more than men's, due to gender-inequitable norms and reproductive roles within households. Much as in other regions, food preparation is predominantly a female task in Nairobi, often undertaken whilst children play nearby, resulting in heightened exposure of women and children to indoor air pollution (WHO, 2016). In Nairobi, disability-adjusted life years (DALYs) linked to household air pollution from solid fuels are twice as high for women as men.³³

Quality and affordability of **healthcare provision** again represent major concerns, with roots in multi-level political, socioeconomic and spatial factors. Public health centres often experience lengthy waiting times and overcrowded beds; admission rates at these facilities can exceed 150% (Nairobi City County, 2023b: 54). Research on barriers to healthcare in the informal settlements of Korogocho and Viwandani uncovered the interplay between challenges such as 1) households' widespread **poverty** and lack of health insurance, 2) community-level factors like poor **roads and insecurity**, and 3) **health system factors**, including limited operating hours, scanty human resources, and shortfalls in finance for public facilities. Although private facilities remain open for 24 hours (including at the weekend), public hospitals close by 5pm and are only open Monday-Friday (Bakibinga et al., 2022). Relatedly, there are important quality concerns linked to inadequate infrastructure and services at public health facilities, including a lack of **WASH and electricity**. For instance, about 20% of the facilities that the taskforce assessed in Nairobi currently lack power connections and 80% lacked back-up power sources (Nairobi City County, 2023). Inadequate, **poorly maintained roads** may also curtail access by ambulances or fire trucks, with impacts on maternal and child survival (amongst other health outcomes). As explained by Korogocho residents, access to their settlement is **especially problematic during the rainy season** (Bakibinga et al., 2022: 5). Heavy rains that exacerbate Nairobi's inadequate infrastructure also underscore the pivotal role of climate change/disaster risks in shaping health outcomes and access to Nairobi's key systems. Finally, health facilities (including those in informal settlements) may grapple with **high levels of insecurity**, while also lacking adequate lighting and perimeter fences (Nairobi City County, 2023b).

5. Domain overview

We have examined the political settlement and city systems; now, we analyse how these jointly shape four development domains in Nairobi. A development domain is a distinct field of discourse, policy and practice that has formed around a complex,

33 See Global Burden of Disease (GBD) data for Nairobi from the University of Washington available at <https://vizhub.healthdata.org/gbd-compare/#> (accessed 15 October 2024). In 2019, 0.5% of Nairobi men's total DALYs were due to household air pollution from solid fuels, while for women in Nairobi, 1.04% of total DALYs were due to household air pollution from solid fuels.

intersystemic development challenge in a city, in which various actors (political, bureaucratic, professional and popular) collaborate and/or compete for authority.

These development challenges usually fall under the remit of specific central and/or local government departments. In most cases, affected residents and civil society groups become involved in addressing them; experts (often constituting an “epistemic community”) also get involved. Meanwhile, ruling elites may or may not get involved, depending on the opportunities that these domains offer for asset accumulation, rent extraction and electoral success (through the representation of ideologies, demonstration of state capability, or manipulation of voters).

In each development domain, particular ideas, practices and systems interoperate in ways that either sustain or reshape the power configuration in the city and country. If we wish to change the way a domain’s problems are framed and addressed, we need to understand its key actors and interoperating ideas, practices and systems. In this section, we generate such an understanding for the domains of safety and security (S&S); health, wellbeing and nutrition (HWN); housing; and structural transformation (ST) in Nairobi. These four domains were selected because of their salience in Nairobi and the associated stakeholders who are creating (embryonic or potential) reform coalitions across civil society, academic, private-sector and government stakeholders.

5.1. Safety and security domain summary

5.1.1. *Introduction*

Below we draw upon ACRC-funded research, as well as over a decade of scholarly and political engagement regarding security, policing and social justice in Nairobi. We emphasise the political, economic, social, historical and geographical contexts within which Nairobi’s security and safety should be analysed. We argue that safety and security (S&S) are best conceived as multiscale phenomena, whose local articulations – for example, in a neighbourhood where police killings render poor youths vulnerable to premature death – are always connected to broader political-economic processes, political settlements and related structural drivers across spatial scales (including via international funding for anti-terrorism policing).

Alongside this multiscale spatial analysis, we highlight the historical dimensions of contemporary security formations and the vital importance of Nairobians’ everyday experiences of (in)security. Many security institutions have long histories that indelibly connect them (and their modus operandi) to colonial and/or postcolonial structures of violence (Kimari, 2024). We argue that Kenya’s formal organs of security have, at best, often neglected their role of providing security for most Nairobi residents and, at worst, frequently compound the city’s insecurity. This has led many people to find their own forms of security via practices including reciprocity, solidarity and friendship that are predominantly not institutionalised. In this context, it will be crucial to bolster existing practices and organisations wherein non-punitive forms of S&S are being produced by ordinary Nairobi residents.

5.1.2. Key actors, domain governance and political significance

Several categories of actors are involved in S&S provision, including 1) formal security forces (that is, state organs such as police and military), 2) private security actors and 3) the plethora of often invisible and informal groups, networks, individuals and institutions in this domain. There is ample attention to gangs and other violent formations who run, for example, protection or extortion rackets and sometimes service delivery, including electricity and *matatu* (Rasmussen, 2012; de Bercegol and Monstadt, 2018). But it is equally important to analyse the countless groups, individuals and social relations that Nairobians draw upon for their everyday S&S, which are the real basis of producing “safety” in ongoing processes of social reproduction (see below). Additionally, 4) international actors significantly influence this field – whether foreign governments (for example, US Department of State), or international NGOs and security consultants. We also briefly consider 5) the counterhegemonic actors actively working to build alternatives to punitive security through social movements, community-based organising and neighbourhood-based social justice centres.

Security has not been devolved as part of Kenya’s 2010 constitution, which reflects its significance for national-scale politics, and it remains highly salient at the city level as well. Security is a crucial, highly contested domain for managing the deficit of legitimacy that Kenya’s political and economic elites have chronically faced. There have been several instances of violence being utilised to shore up the illegitimate ruling class, such as in 2007/08 with the Kenyan government’s military-like response to disputed election processes (Kagwanja, 2009). On a more mundane level, there is the everyday criminalisation of poverty in a context of both elevated inequalities and elite fear over what this can portend. Certainly, security forces are the permanent threat of violence looming over the social order, serving as enforcement mechanisms that are deployed to coerce unruly subjects into docility (or at least into what Foucault (2009) called the “bandwidth of the acceptable”). In Nairobi, security has functioned as a great arbiter of class and urban space, frequently sorting where different kinds of people can be located, and the forms of exclusion or violence they may face if they seek to upend this order. Privatised and securitised spaces of middle- and upper-class consumption (such as malls) are prime examples of this sorting mechanism, as are Nairobi’s ubiquitous gated residential compounds.

Furthermore, the police have chronically and unrelentingly extracted rents from Nairobi residents, especially from low-income households. Police officers’ use of “petty offences” as an excuse to stop, detain and arrest people almost invariably leads to the need to “bribe” to secure their release. The normalisation and scale of this phenomenon has been detailed by several scholars (for instance, Onyango, 2022). However, comprehensive estimates of the significant financial amounts generated from such practices are, to our knowledge, unavailable. Officers thereby generate income, or rents, from primarily low-income residents but even the middle class in Nairobi regularly faces arbitrary traffic stops, which require paying small bribes (or “*kitu kidogo*”). This rental income, while petty, by its sheer scale and ubiquity, must be

thought of as an unending, systemic draining of low-income Nairobi's already limited wealth. It is everyday banalised accumulation by dispossession, which comprises part of the inevitable "tax" for being poor in Nairobi. Wide-scale rents are also a key factor in reproducing the institution of policing, as these flows have calcified into a regular funding source that supplements police officers' salaries. Our analysis may also be extended to wide-ranging businesses (from hawkers to restaurants and nightclubs) that must constantly bribe Nairobi's police and local officials to continue their operations (Schramm and Bize, 2023; also ST below).

5.1.3. *Failures of police reform and persistent unaccountability*

Since 2010, there has been an unsuccessful police reform process in Kenya, which was initiated and carried out at a national scale. The immediate cause for the police reform process was Kenya's post-election violence in 2007-2008. In 2010, the Kenyan Constitution provided a legal and constitutional basis for reforming the institutions of the police. However, the realpolitik of power and interests helped catalyse only those reforms advantageous to the maintenance of state power. Bluntly, all reforms whose aims were to strengthen the police's power and organisational capacity succeeded. Meanwhile, those reforms which sought to hold police accountable have largely stalled or been stunted. This failure is due to lack of political will at the highest levels of government, paired with an all-encompassing refusal and resistance to reforms across every level of the Kenya Police Service. The failure of police reform to enact any meaningful material changes in Kenyans' everyday experience of violence or harassment at the hands of police, in turn, has led to our current conjuncture.

5.1.4. *Key findings*

We argue that formal organs of security have often (at best) neglected their role of protecting and providing security to most of Nairobi's population, and (at worst) frequently exacerbated the problem of insecurity. In turn, this leads many people to find their own forms of "security", through counter-hegemonic formations, including reciprocity, solidarity and friendship that seek to build "alternatives to punitive security". The following points will summarise our report's major ideas and arguments:

1. Space and multiscale security. Our approach is attuned to questions of space and scale, following Glück and Low (2017). While we focus on Nairobi as the locus of our analysis, we recognise that the "city scale" is always embedded within international, geopolitical, regional, national and county-level processes, not to mention dynamics that unsettle or undo established scalar definitions, such as historical conflicts like the so-called "Shifita War" (Whittaker, 2015; Weitzberg, 2017, as discussed below). Nairobi is thus disaggregated into smaller scalar units and conflicts, rather than taken as a geographical given. Of particular importance is how security articulates differently across classed, ethno-racialised and gendered geographies *within* the city, and how such security processes simultaneously *remake* the city. For example, some neighbourhoods have been designated as areas to be protected through heightened security measures; others are informally designated as sacrifice zones, where

exceptional violence is permitted and enabled (Glück, 2017). Taking seriously the interrelationality of such geographies (for example, how Nairobi's highly securitised affluent suburbs produce their imagined "other" in the danger and threat posed by low-income residents), we argue that a spatial and relational approach to understanding security is key to the formulation of "priority complex problems", and the ways in which they might be addressed.

2. Historical dynamics and enduring legacies of violence. In its classic register, "security" is defined and determined by states, who both exercise a monopoly over the legitimate violence and maintain the capacity to "securitise" particular threats through acts of governance and policing (Buzan et al., 1998). Security here is thought of as a central function of the state. In Kenya, there is a long history of the state using its security organs centrally as major means of governance, population control and, indeed, of territorialisation (Berman, 1990). From the British East Africa Company (in the 1880s-1890s) through the late colonial practices in "British Kenya" (in the 1950s-1960s), security, co-optation and the use of force have been paramount (Lonsdale and Berman, 1992). Arguably, the form of governance inherited by Kenya's early independent state (as well as the state institutions themselves) were already deeply saturated with "logics of security" that would strongly influence the state's form in post-independence Kenya (Glück, 2019).

Concretely, we can see this in the way the "Shifita War" (1963-67) was waged. In the very year Kenya achieved its independence (1963), ethnic-Somali residents of the Northern Frontier District waged an armed campaign to secede (after having received tacit support for secession by the outgoing British colonists). In response, Jomo Kenyatta waged a brutal counterinsurgency campaign to keep the Northern Frontier District within Kenya's territory. In doing so, Kenyatta maintained the British colonial regime's infrastructure of counterinsurgency to suppress the liberation movement (known as the "Mau Mau Rebellion" in the 1950s), and, indeed, drew materially upon British military support (Branch, 2014). The newly independent Kenyan state's dependence on military and police repression shaped not only its formal security organs, but also the ensuing style and form of governance. This continued under President Daniel arap Moi (1978-2002), who brutally suppressed opposition and leaned heavily on his security forces to maintain "order", in lieu of legitimacy.

We argue that such histories remain powerful elements shaping the current conjuncture. Indeed, security forces continue to perform their role of shoring up the state's deficit of legitimacy, and "securing" hegemony through high levels of force and highly selective, limited consent (Smith, 2011). These are the structural factors that have generated the situation in which formal security organs are some of the major causes of vulnerability for many Nairobians, as we discuss next.

3. Formal security organs as purveyors of insecurity. Throughout our research with Nairobi residents, there was a constant refrain of the police being major threats to

safety and security.³⁴ From detaining people for “petty offences” to the alarmingly common practice of extrajudicial killings, the police are a constant and frequently brutal presence in Nairobians’ narratives of their own insecurity. As a graffiti by the Social Justice Centre Working Group recently declared, police in Nairobi are everywhere, but justice nowhere (Kimari, 2024). There are lasting impacts upon Nairobi residents of this constant harassment, extortion, dispossession and violence – for example, the depletion of community resources via bribes, and the reproduction of endemic poverty and marginalisation through loss of jobs, wealth and health – as well as upon policing institutions themselves. Regarding the latter, we argue that the scale of this graft and petty extortion plays a major and underappreciated role in reproducing the institutions of policing and security *themselves* (and by extension helping reproduce the state in its current repressive form) – for instance, by supplementing police salaries and enabling systemic, if petty, accumulation within the security organs. As such, formal security organs not only produce individual-scale forms of vulnerability through violence and brutality, but also help produce the structural conditions of continued marginalisation, poverty and insecurity at the neighbourhood and, indeed, urban scales.

4. Intersectional analysis of security and safety. Security and safety may also be defined as deeply personal and embodied elements of one’s subjective existence. Vulnerability, trauma, fear, tension, pain, stress, comfort, safety, security: these are as much phenomenological, affective and psychological categories as they are structural and sociological ones. Indeed, for many of our interlocutors, when talking about safety and security, it is in this register that they respond. It is the life history, the affective, and the embodied forms of safety and insecurity that we hear of. We have taken on an intersectional approach, attuned to the ways that gender, age, class, ethno-racialisation, religion, ability, sexual orientation and geography affect people’s embodied experiences of safety and vulnerabilities to insecurity. In our interviews and “security diaries” (kept by participants in various neighbourhoods across Nairobi), it is clear that local experiences of security and insecurity are highly differentiated, based on positionality.

Gendered insecurity was a major theme. For example, for gender non-conforming and queer Kenyans, insecurity can take on charged and particular forms: ranging from gendered (and sexual) harassment by police and transport actors, to everyday harassment and threats of violence from random passers-by and neighbours, to harrowing outbursts of violence (see Box 3).

Box 3: Daily experiences of insecurity and security (based on ACRC security diaries)

“At Kware stage [a bus stop], a queer woman was almost beaten by conductors and motorcycle drivers for arguing with the conductor over her change that the conductor was claiming he had already given back. With the help of very few community

³⁴ Even a recent Afrobarometer report had similar findings (Kamau et al., 2022).

members, she managed to get herself out of the mess, but she didn't get her change back." (Female from Mukuru.)

"Women who work at the dumpsite expressed their fear of the recent cost of living, and the incitements by politicians and the fight between Hon Raila Odinga and Hon William Ruto. Most of them insisted that the negative exchanges caused tension amongst the supporters and would eventually cause war in the country. Their main concern was, however, the cost of living then and after the election period." (Female from Kayole.)

"Security means the ability to live in an area inhabited with different people without fear of ill-treatment or interference of any rights and freedoms. As an activist, this is achieved by people's understanding of my work, alongside support from various [local] organisations." (Male resident and activist in Mathare.)

Another overarching finding was the huge impact of class on security. Upper- and middle-class residents have an entirely different relationship to security from that of low-income urban residents. They often see police as (ineffectual but nonetheless actual) agents of potential safety and protection, where threats of "insecurity" were more often associated with low-income individuals. Meanwhile, poverty is a major factor in producing the interlocking crises of insecurity and generates numerous cascading effects. This includes food insecurity, lack of funds for children to go to school, inequitable access to water and electricity, environmental insecurity in areas prone to flooding, fire outbreaks in poor communities due to informal electricity or unclean cooking fuel, and so on. One of our take-aways was how prevalent, widespread and staggering are the everyday accounts of personal tragedy.

5.1.5. Conclusions

Kenya's political settlement is based on the historical threat, and reality, of (often violent) suppression of the opposition and dissident voices by state forces, notwithstanding the legal gains achieved over the last two decades (including the formation of institutions to spearhead reforms). Against this background, and in the absence of equal, substantive state-provided safety for low-income residents, communities have sought to provide this individually and collectively, but with limited success.

The above histories and experiences repeatedly underscore that the police are fundamentally one of the greatest sources of insecurity in Nairobi and Kenya, despite their formal protection mandate. On the whole, the police produce much more *insecurity* than they do *security*. Moreover, they have already been functionally replaced in both low-income and wealthy neighbourhoods.

We contend that what is needed today is, above all, enhanced material and political support for "alternatives to punitive security". These comprise a plethora of community-based efforts, from social justice centres and community groups to social movements – which are building and already practising alternative forms of security through the quotidian, unsung praxis of simply "keeping each other safe". Supporting and engaging

with these existing efforts will create steps towards both the systemic and political reforms that, we argue, are desperately required to engender much-needed change in this domain.

5.2. Health, wellbeing and nutrition domain summary

5.2.1. Introduction and background

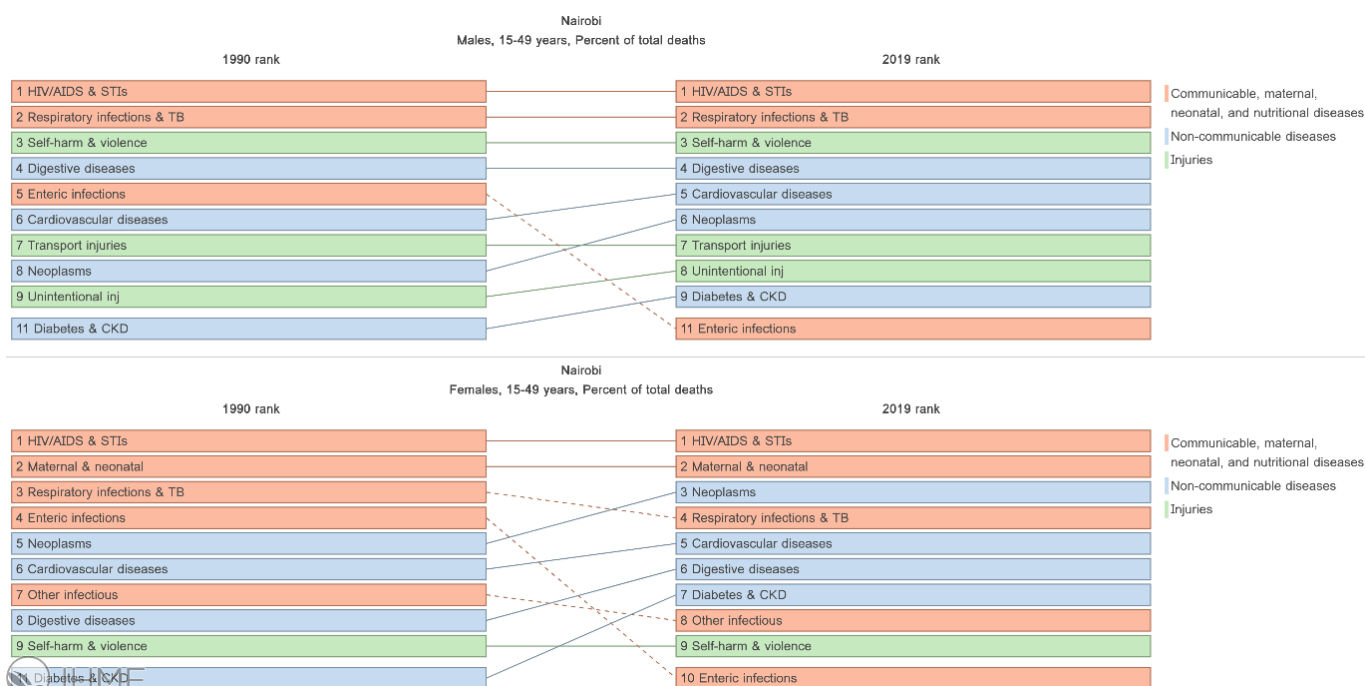
Ill-health, food insecurity and poor nutrition have remained major challenges in Kenya since independence (1963), when President Jomo Kenyatta declared “hunger, disease and illiteracy” as the country’s major problems. “Food security” is defined as when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. According to a recent report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, the “concept of food security has evolved to recognize the centrality of agency and sustainability along with the four other dimensions of availability, access, utilization and stability” (HLPE, 2020). Although food security is generally better in Kenya’s cities than in rural areas, residents of Nairobi’s informal settlements often face a range of nutritional concerns and health inequities that are hidden in aggregated urban data. For instance, there is widespread prevalence of communicable illnesses, alongside low-quality diets and rising levels of non-communicable diseases (NCDs), such as diabetes and heart disease (Figures 8 and 9 below). An estimated 85% of households in Nairobi’s informal settlements are food insecure using the Household Food Insecurity Access (HFIAS) scale,³⁵ and they usually lack access to affordable, high-quality primary healthcare (Kimani-Murage et al., 2014). Furthermore, households in informal settlements often spend much of their earnings on food purchases, ranging from 40% to 70% of their monthly incomes (Corburn et al., 2018; Garenne et al., 2009).

Based on findings from the Global Burden of Disease (GBD) project at the University of Washington, Figure 8 examines Nairobi’s leading causes of mortality for men and women in 1990 and 2019. For men, the top causes were the same in 1990 and 2019, namely: 1) HIV/AIDS/STIs; 2) respiratory infections and TB; and 3) self-harm and violence. Meanwhile, women’s two leading causes of death were HIV/AIDS/STIs, and maternal/neonatal causes in both 1990 and 2019. Yet amongst both women and men from 1990 to 2019, there was a substantial shift to NCDs, including cardiovascular disease, cancer (“neoplasms”) and diabetes. More positively, Figure 8 shows that levels of mortality due to enteric disease declined amongst adults of both sexes, likely reflecting some improvements in WASH and food hygiene. It is also notable that compared to women, men (both in 1990 and 2019) are at greater risk of death from transport injuries. This may reflect the fact that men are more likely to commute via *matatu* than women in Nairobi (cf Salon and Gulyani, 2010). Finally, GBD data for

³⁵ The HFIAS score measures the degree of food insecurity (access) in the household. The minimum score is 0 and the maximum is 27. The higher the score, the more food insecurity the household has experienced (see Owuor et al., 2024: 14 for further discussion).

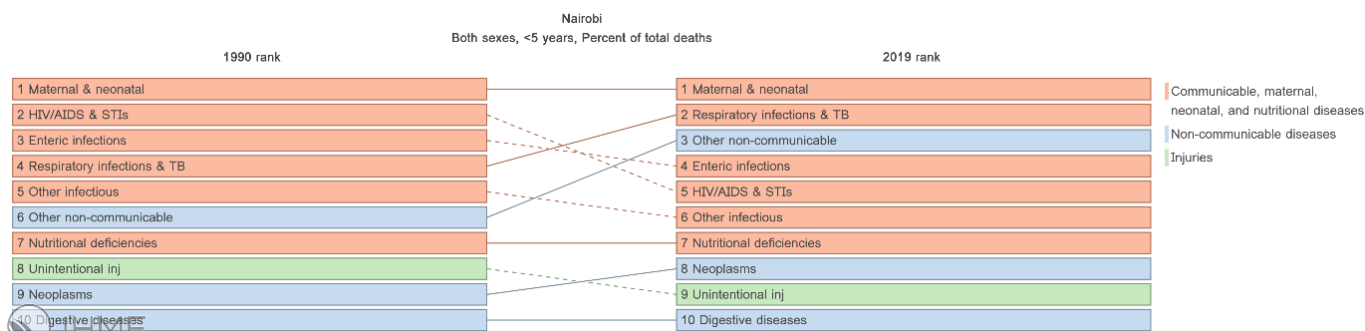
children under age five starkly reveal the complex, overlapping burdens of communicable diseases alongside NCDs and nutritional deficiencies in Nairobi. For children in 1990 and 2019, leading causes of death include maternal/neonatal, respiratory and other communicable diseases. More encouraging was the decline in the role of HIV/AIDS/STIs for children in Nairobi over this time. Figure 9 also indicates the continued importance of nutritional deficiencies and digestive diseases in 1990 and 2019, while (most relevant for our purposes) NCDs rose from sixth to third place amongst the leading causes of child mortality.

Figure 8: Rank and percentage of total deaths for men and women in 1990 and 2019



Source: GBD data for Nairobi available at vizhub.healthdata.org/gbd-compare/

Figure 9: Rank and percent of total deaths amongst children (under five years old) in 1990 and 2019



Source: GBD data for Nairobi available at vizhub.healthdata.org/gbd-compare/

There are marked differences in health outcomes between Nairobi's informal settlements and non-slum areas, which have been documented extensively by the African Population and Health Research Centre (APHRC).³⁶ For instance, Nairobi's child mortality gaps narrowed between slum and non-slum areas from 2000 to 2012, but differences in child mortality still remained profound, sometimes reaching four times greater risk of death in informal settlements vs better-off areas in 2012 (APHRC, 2014: 98). As in other African cities, residents of Nairobi's informal settlements face "everyday" risks (often due to inadequate shelter and WASH); elevated vulnerabilities to small- and large-scale disasters; and elevated levels of road traffic accidents, interpersonal violence and multiple forms of exclusion (Mberu et al., 2015; Satterthwaite et al., 2019). The Covid-19 pandemic also curtailed access to healthcare while highlighting the vital need to expand access to social protection, especially for residents of Nairobi's informal settlements (Kimani et al., 2021). Finally, according to APHRC's longitudinal data from 2008 to 2017 in the informal settlements of Viwandani and Korogocho, almost 25% of adult deaths were due to NCDs (Asiki et al., 2021).

Inequitable health and nutrition outcomes in Nairobi are associated not only with dietary risk factors but also with deficient systems, inadequate services and socioeconomic inequalities. This includes poor housing; inadequate WASH; shortfalls in SWM; and use of unclean energy for cooking and lighting (Tacoli, 2017). Together these precarious, often low-quality living and working conditions can lead to elevated exposures to several health hazards.

5.2.2. Study questions and methods

Since health, wellbeing and nutrition are closely linked, the research utilised the lenses of health and food systems to understand the multidimensional nature of wellbeing, with a focus on Nairobi's informal settlements. This study examined the following questions:

1. What is the state of ill-health and poor nutrition in Nairobi (in particular its informal settlements)?
2. What policies and political settlements influence the state and patterns of ill-health and poor nutrition in Nairobi?
3. What factors enable and limit the uptake of healthy diets among poor communities in Nairobi?
4. What integrated measures and interventions can inform policy and practice to enhance health and nutrition services in Nairobi's informal settlements?

Our mixed-method approach combined a desktop literature review with eight focus group discussions (FGDs) and key informant interviews (KIIs). In the desktop review, we identified key actors; relevant policies, programmes and strategies; and enablers and barriers to uptake of healthy diets. We also analysed links to other systems that

36 See APHRC's webpage on "Nairobi Urban Health and Demographic Surveillance System (NUHDSS)" available at <https://aphrc.org/project/nairobi-urban-health-and-demographic-surveillance-system-nuhdss/> (accessed 15 October 2024).

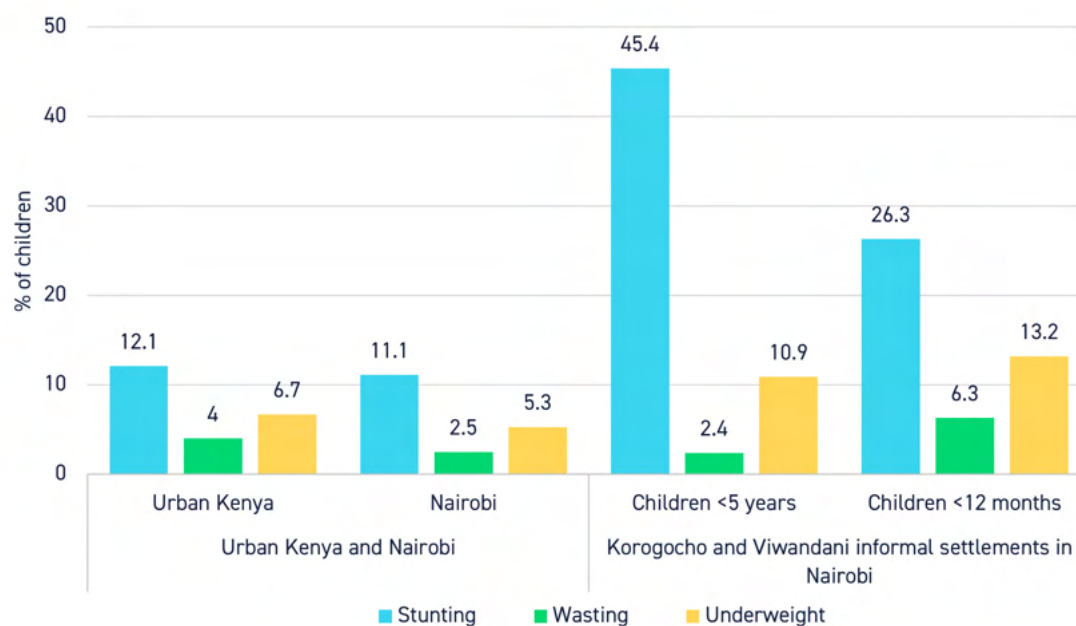
strongly affect health and nutrition (for example, WASH, SWM, energy). KIs focused on understanding Nairobi's political settlements and relevant interventions, while FGDs explored the salient health and nutrition-related concerns in the informal settlements of Mathare and Viwandani (conducted during July to August 2022). All findings were categorised into thematic areas and analysed via content analysis.

5.2.3. Key findings on food security in informal settlements

Household food insecurity is pervasive in Nairobi's informal settlements, especially among children. Children in these areas typically have elevated rates of stunting, wasting, underweight and micronutrient deficiencies, which are stark manifestations of poor health and nutrition (Figure 10). NCDs, some of which are diet-related, are also increasingly common in informal settlements. As such, most residents in Nairobi's informal settlements usually consume low-quality diets and inadequate quantities of healthy food. For many residents, food prices are the leading factor in dietary decisions, which may lead to nutritional shortfalls: according to a woman in Mathare, *"We don't take a healthy diet because our income is low, and therefore we cannot afford three meals a day. As long as I get half a kilogram of maize flour and some vegetables, I am good to go"* (FGD in Mathare). Additionally, children are more likely to consume unhealthy diets because of interrelated factors such as unhygienic food environments and the rising availability of cheap street foods, fast foods, and highly processed foods. In turn, children are more likely to suffer from malnutrition-related outcomes that may affect their physical, mental and psychological development and wellbeing. On the other hand, schools can offer important possibilities of enhancing access to and uptake of healthy diets.

Vulnerable groups in informal settlements

FGD participants identified several groups who are at greater risk of food insecurity, including children and orphans, the elderly, single mothers and residents facing drug or alcohol addiction. Children and elderly residents are dependent on others for food, but typically lack sufficient incomes to access healthy options. Ill residents taking medication are often required to be on nutritious diets (for example, people living with HIV/AIDS), but usually cannot afford such healthy diets. Additionally, low-income mothers are forced to wean infants early when they have insufficient breastmilk (due to poor diets). Single mothers are especially likely to have low or erratic incomes, again placing them at greater risk of food insecurity. Children at schools with feeding programmes, meanwhile, are considered slightly better off in their access to food – underlining the importance of such programmes (see below).

Figure 10: Malnutrition outcomes among children in urban areas by residence

Sources: Kimani-Murage et al. (2015); de Vita et al. (2019); KNBS, (2022c).

Pivotal role of informal food vendors in informal settlements

Local food vendors provide a range of accessible, affordable meals and snacks, especially given the recent spikes in food and fuel prices. Vendors can readily reach residents of informal settlements and help enhance access to low-cost fruit, vegetables and meat: *“If it was not for those cheap foods [sold] at the roadside, for example chicken heads and fruits, many people would not afford any uptake of proteins and vitamins in their diets... With five shillings, you can eat a banana”* (man in Mathare). Due to the ongoing rise in fuel prices, cooked food vendors are increasingly popular: *“We don’t use gas nowadays because its price has really gone up, same as kerosene... It’s better to buy the ready-made food, for example rice and beans”* (woman in Mathare). Nevertheless, vendors may have unsafe food handling practices because of inadequate access to networks like WASH, rubbish collection and reliable electricity (including refrigeration), as well as the underlying lack of supportive interventions to improve health and nutrition in informal settlements (Githiri et al., 2016).

Barriers in accessing healthcare facilities

Low-income neighbourhoods typically lack adequate access to public health facilities; several private healthcare facilities are available but typically have low-quality or unaffordable services. Key barriers to accessing quality healthcare in Nairobi’s informal settlements include 1) lack of medicines and slow services in public health facilities; 2) limited funds, especially as some private hospitals do not accept NHIF and Linda

Mama cards;³⁷ 3) lack of privacy and confidentiality in congested health facilities; and 4) shortfalls in human resources amongst medical personnel (Bakibinga et al., 2022).

Barriers and enablers to uptake of healthy diets

We distinguished between two broad categories of factors that enable (or constrain) uptake of healthy diets in Nairobi's informal settlements, as follows:

1. Factors related to **systems and official interventions**, such as WASH provision; marketing of fast foods; safety/hygiene measures associated with food sources and food environments; and access to state and non-state interventions, including school feeding programmes.
2. **Household-level and behavioural factors**, such as income and affordability of healthy diets; type and cost of cooking fuels; convenience of eating unhealthy food; levels of awareness and knowledge of healthy diets; household size; maternal and childcare practices (linked to underlying gender norms and division of labour); household member responsible for purchasing and preparation of food (gendered roles are again crucial here); and use of illicit drugs or alcohol. Finally, there are a few examples of households engaging in own-food production in informal settlements. Urban farming can help promote healthy diets, and some youth groups have cultivated green vegetables in Nairobi's informal settlements. However, lack of space or time and theft of food may deter urban households from farming.

5.2.4. Domain governance and links to Kenya's political settlement

For this domain, wide-ranging state and non-state actors in Nairobi (such as NGOs and CBOs, faith-based organisations, private sector, and community health volunteers or CHVs) seek to improve health and nutrition, but they also have competing interests and complex power relations. State actors include the relevant national ministries and departments, in addition to the county government. Food has always been at the centre of the political settlement in Nairobi and Kenya more generally, but there has been limited attention to nutrition and healthy diets. Specifically, the political focus has been on the provision or subsidising of staple food crops to combat rising costs of living for low-income urban households, with particular focus on the price of *unga* (maize flour). The narrative of "*unga* crisis" was used during the 2012, 2017 and 2022 general elections, especially in urban areas, where high food prices remain a major challenge to low-income residents. In July 2022, President Uhuru Kenyatta announced an *unga* subsidy that reduced the price of a 2kg packet of maize flour from Ksh 230 to Ksh 100 (at a cost of Ksh 8 billion), which aimed to help his preferred candidate Raila Odinga in the elections. As such, diets are connected to Kenya's PS from a broader perspective of food access and costs; this may not directly have a substantial impact on rents, but may still contribute to the legitimacy of national leaders.

³⁷ Linda Mama ("Protect mothers") provides a package of maternal and child healthcare for low-income residents in Kenya. See: www.nhif.or.ke/linda-mama-hospitals/ (accessed 15 October 2024).

Although national interventions in health and nutrition have repeatedly overlooked urban areas, there is rising attention from Nairobi's county government, including to school feeding programmes and health promotion strategies. Leading national government initiatives include the National School Meals and Nutrition Strategy (2017-2022) (MOE, MOH and MOALF, 2017), National Strategic Plan for the Prevention and Control of Non-Communicable Diseases (2020/21-2025/26) (MOH, 2021), and the Kenya Nutrition Action Plan (2018-2022) (MOH, 2018), but they typically pay limited attention to cities. Meanwhile, Nairobi's county government is implementing a Food Systems Strategy (Nairobi City County, 2022), and since August 2023, Governor Sakaja has spearheaded a school lunch programme ("Dishi na County") and related health-promotion strategies.³⁸ The governor promised during his campaign that he would provide free healthy lunches to all public primary schoolchildren and build 20 new markets for food distribution (Johnson and Muchiri, 2022). In August 2023, Sakaja's ambitious school feeding programme was launched, seeking to offer 400,000 lunches for children every day at ECDs and primary schools (Owuor et al., 2024). This programme is founded upon a partnership between a Kenyan NGO (called Food4Education) and the county government; parents contribute just Ksh 10 per meal. However, pupils who do not attend public schools will not benefit from the programme, excluding a large number of residents (including those in informal settlements) who typically attend private schools (ibid: 34). The county has also pledged to conduct a biannual health and nutritional assessment for pupils in primary schools and ECDs (Nairobi City County, 2023a: 128). As noted below, it will be crucial to develop further initiatives to reach low-income children in private schools.

5.2.5. Conclusions

Kenya's challenges of food insecurity, poor health and malnutrition are rapidly becoming an urban concern, with residents of informal settlements disproportionately affected. NCDs are increasingly common amongst low-income urban Kenyans, and children in Nairobi's informal settlements are especially vulnerable to food insecurity. Shortfalls in healthy diets reflect several failures in key systems (for example, healthcare, WASH and energy networks), and significant investments will be needed in both individual systems and enhanced integration of systems. Although there is recent evidence of rising political will, such efforts are currently insufficient and continued efforts are needed to translate policymakers' stated commitment to nutrition into effective interventions that can foster urban food security, especially amongst residents of informal settlements.

At the same time, there are key opportunities to advance health and nutrition, especially as schools are important avenues for promoting healthy diets in informal settlements. Currently, Nairobi's school feeding programmes only reach public primary schools, but most schools in informal settlements are private (as noted above). ECD centres also provide an opportunity to address malnutrition from a young age.

³⁸ See <https://nairobi.go.ke/frequently-asked-questions-and-answers-on-the-dishi-na-county-school-feeding-program/> (accessed 22 October 2024).

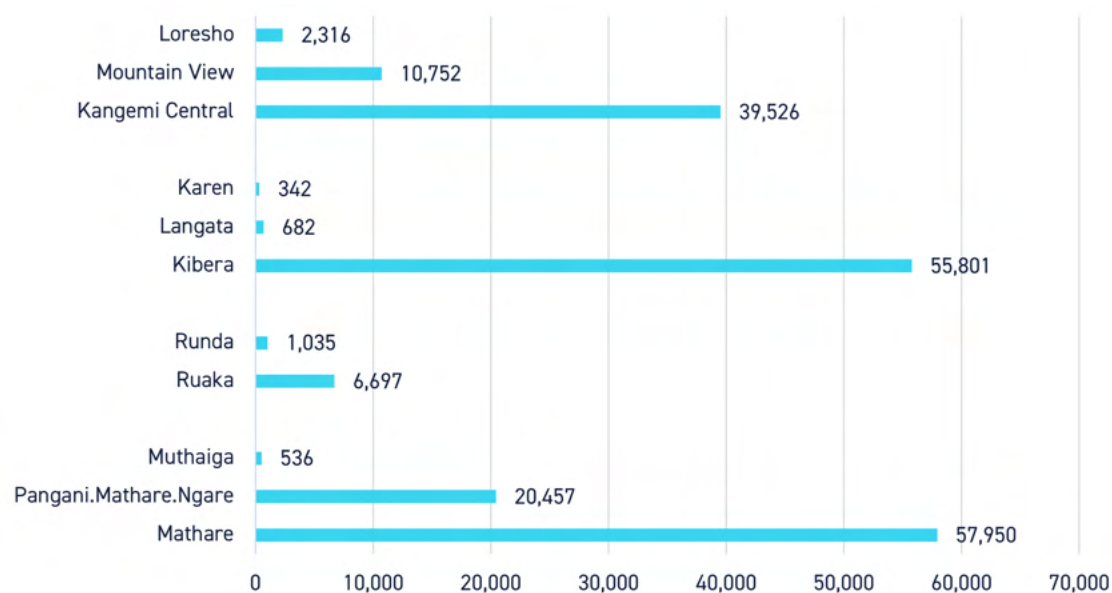
Academic researchers as well as practitioners and residents of informal settlements have all recognised the urgent need for increased access to, and uptake of, healthy diets among children in informal settlements. There is a need to utilise city-level interventions and multifaceted reforms to address this priority complex problem (PCP). Such initiatives can build upon recent policy entry-points, such as the Nairobi governor's prioritisation of school feeding and the salience of ongoing food and fuel crises.

The PCP's objective is to shift from merely "provision of food" to "provision of sustainable and affordable healthy diets", to achieve lasting gains in children's health and nutrition in informal settlements. This can be realised via advocacy, training, capacity building and mainstreaming of sustainable and affordable healthy diets in school feeding programmes, school farming and community-based informal daycare centres. Nairobi City County's programme of providing free lunch to all primary schoolgoing children is an important step in the right direction. We propose to strengthen this by the following interventions:

1. Ensuring the response is multisectoral, with stakeholders from various government departments – such as health and nutrition, agriculture, water and local administration.
2. Being guided by community needs, especially in informal settlements – communities have the solutions to make this programme equitable and sustainable.
3. Collaborating with other relevant stakeholders – including civil society groups, academia, donors, development partners and private sector actors.

5.3. Housing domain summary

In our domain research, we uncovered stark differences in the quality of shelter, access to infrastructure, and densities of Nairobi's urban settlements. For instance, Kibera is 163 times more densely populated than Karen and 81 times more densely populated than Langata (Figure 11 below, based on KNBS and Republic of Kenya, 2019). Another key finding is that over 90% of Nairobi residents are tenants (*ibid*), but rental housing has consistently been neglected in Nairobi's housing policy and practice. Even in Nairobi's high-income areas, fewer than one in three households are owner-occupiers (ranging from 11% to 31% of households). In low- and middle-income areas, just 2% to 9% of residents are structure-owners. There is a vital need to bring rental housing to the forefront of Nairobi's housing and urban development agendas.

Figure 11: Density of selected Nairobi neighbourhoods (persons per sq km)

Source: KNBS and Republic of Kenya (2019).

Housing is a high-profile area for intervention by Kenya's national and local governments, but rental housing is often overlooked, despite being the mainstay of most Nairobians. To address the challenge of inaccessible, low-quality urban housing, President Uhuru Kenyatta's administration promised to build 500,000 affordable homes from 2017 to 2022 (Mwau and Sverdlik, 2020: 485). Meanwhile, President William Ruto's administration has promised to increase the supply of new housing to 250,000 units per year (Kenya Kwanza, 2022: 19). However, like Uhuru's previous initiative, this is unlikely to benefit residents of informal settlements, given their low incomes;³⁹ the proposed mortgage capitation targeting low-income earners is still far beyond the reach of most informal settlement residents. Uhuru Kenyatta's government ignored the need for rental housing (Mwau and Sverdlik, 2020: 485) and under William Ruto's administration, there has again been limited attention to rental housing. Meanwhile, Governor Sakaja pledged to redevelop nine county housing estates in Eastlands, which is meant to create 40,000 affordable rental housing units, but it is too soon to say whether this will truly benefit low-income tenants (Cheruiyot, 2023).

According to an analysis of housing development applications submitted for approval in Nairobi, more than 48% of the proposed supply is for upper-middle income, 35% for high income, and only 2% for low-income residents (Johnson and Muchiri, 2022). This shortfall in low-income housing delivery, in turn, has played a major role in the spread of Nairobi's informal settlements. Furthermore, Nairobi is replete with cases of

³⁹ As defined by Kenya's economic survey in 2022 (KNBS 2022b), Nairobi's lower-income households spend Ksh 46,355 or less per month; middle-income households in the city spend between Ksh 46,356 and Ksh 184,394 per month; and Nairobi's upper-income households spend at least Ksh 184,395 monthly.

displacements as a result of demolitions of poor neighbourhoods, such as Muoroto (1990s) (Klopp, 2008) and recently in Mukuru Kwa Njenga (Ouma, 2023a). Below we continue to explain Nairobi's housing challenges and analyse the diverse actors in this domain.

5.3.1. Key challenges in Nairobi's housing domain

Nairobi's housing landscape is highly heterogenous, with a wide range of neighbourhood and shelter typologies that overlap in their formal and informal aspects. Building on past academic and grey literature, we identified key gaps that affect equitable access to safe, decent, affordable housing in Nairobi.

Gap 1: There is a lack of clarity on the roles and responsibilities of the many different actors involved in Nairobi's housing domain. Housing and human settlement is, inevitably, a multistakeholder space. A rarely explored aspect is how these multiple actors determine priorities and make decisions. Table 3 below identifies some leading actors in this domain, but it will be critical to understand how these actors' multiple roles are coordinated – including across regulatory agencies, key state decisionmakers, housing suppliers, and housing consumers.

Table 3: Key decisionmakers and actors in the housing and settlement space

	Decision space	Key decisionmakers/actors
Regulatory space	National government	<ol style="list-style-type: none"> 1. State Department of Housing and Urban Development (SDHUD) and all its directorates: 2. National Construction Authority (NCA) 3. National Housing Corporation (NHC) 4. Housing Finance Company of Kenya (HFCK) 5. Kenya Mortgage Refinance Corporation (KMRC) 6. National Union for Housing Cooperatives in Kenya (NACHU) 7. Council of governors' representation from the Urban Development, Planning and Lands Committee
	County government	<ol style="list-style-type: none"> 1. County executive committee members (CECM), including Lands, Urban Planning, Urban Renewal, Housing and Project Management 2. Social services 3. Urban renewal directorates
Knowledge management and crosscutting actor space	Development partners (selected)	<ol style="list-style-type: none"> 1. Foreign, Commonwealth and Development Office (FCDO) 2. World Bank 3. European Union 4. UN-Habitat 5. Japan International Cooperation Agency (JICA)
	NGOs	<ol style="list-style-type: none"> 1. Financial Sector Deepening Kenya (FSD Kenya) 2. Centre for Affordable Housing Finance Africa (CAHF) 3. Shining Hope for Communities (SHOFCO) 4. Kounkuey Design Initiative (KDI)
	Civil society organisations / NGOs	<ol style="list-style-type: none"> 1. SDI-Kenya and Muungano wa Wanavijiji 2. Habitat for Humanity 3. Kenya Red Cross
	Community-based organisations	<ol style="list-style-type: none"> 1. Network of Community-Based Organisations and Self-Help Groups in Kenya (NCSK)
	Professional organisations	<ol style="list-style-type: none"> 1. Architectural Association of Kenya 2. Kenya Alliance of Residents' Associations (KARA) 3. Kenya Property Developers' Association 4. Kenya Institute of Planners

	Decision space	Key decisionmakers/actors
Supply-side space	Academic and research organisations	1. University of Nairobi –School of the Built Environment 2. Kenya Institute for Public Policy Research and Analysis (KIPPRA)
	Building developers	1. AMS Properties Limited 2. Kings Developers 3. Kwangu Kwako Limited ⁴⁰
	Built environment specialists	1. Architects 2. Town planners 3. Quantity surveyors 4. Engineers 5. Real estate agents 6. Project and construction managers
	Market innovators	1. Build X Studios and BuildHer ⁴¹ 2. National Housing Corporation's Expanded Polystyrene (EPS) Panels ⁴²
Demand-side space	Real estate firms	1. Cytonn 2. Hass Consult 3. Knight Frank
	Informal settlement custodians	1. Residents 2. Settlement executive committee chairs 3. Nyumba Kumi heads 4. Chiefs
	Formal settlement custodians	1. Residents' associations 2. Nyumba Kumi heads 3. Chiefs

Gap 2: There is a misalignment in approaches, interventions and policies addressing demand-side and supply-side issues.

Those active in the housing domain have little agreement on how to reconcile the demand-side issues with the supply-side issues in a way that:

1. Aligns the complex decisionmaking processes of supply-side stakeholders and demand-side stakeholders;
2. Aligns the economic and non-economic aspects of housing; and
3. Accommodates the heterogeneity in Nairobi's housing typologies; occupants' diverse life events and needs; and the differentiated housing production systems and supply chains.

There is a need to establish a holistic urban governance structure that can simultaneously coordinate the multiple components of Nairobi's housing markets.

Gap 3: Information and market intelligence on housing and housing ecosystems is still dis-integrated and not synergised for easy access to all relevant decisionmaking spaces.

40 See <https://kwangukwako.com> (accessed 15 October 2024).

41 See www.buildxstudio.com and www.buildher.org (accessed 15 October 2024).

42 See www.nhckenya.go.ke/eps (accessed 15 October 2024).

There is a need for a more nuanced understanding of the dynamics of Nairobi's housing ecosystem, which can inform more appropriate interventions, such as the following:

1. Integrated planning and investment, where access to services, utilities, public space, natural assets and socioeconomic issues are jointly considered for effective neighbourhood development.
2. Designing shelter strategies with end-users and bringing together interdisciplinary expertise including from engineering, the built environment and social sciences.

5.3.2. *Power dynamics in Nairobi's housing and settlement domain*

Nairobi's housing landscape is complex and determined by horizontal and vertical contestations amongst actors in multiple decision spaces (Table 3 above). It is, therefore, quite challenging to ascertain the power structures and power relations across the entire housing ecosystem, as the interests and values will vary depending on the sub-sector (such as construction and rental markets), or scale of governance. For these heterogeneous housing markets, there is not a single group or faction that has more “holding power” than another where it can prevail during conflicts with the other group (Gichuiya et al., 2023).

Despite the lack of a hierarchy of power in the entire Nairobi housing ecosystem, some level of administrative and political hierarchy can be observed at the housing programme level, such as the national government's Affordable Housing Programme, the Kenya Informal Settlement Improvement Project (KISIP) by national government and World Bank, and Urban Renewal Programme by Nairobi's county government. Regulatory hierarchy also exists at a masterplan development control level for larger housing projects by the national/county government (for example, the Railway City design) and by private sector investors such as Tatu City.⁴³

Generally, each stakeholder listed in Table 3 is part of either active or passive reform coalitions in Nairobi's housing sector. Because of the transboundary nature of Nairobi's housing issues, none of the above actors works alone, and coalitions can exist in three forms:

1. **Regulated formal structures** of national and county government with coordination structures regulated through acts of parliament, executive orders and planning documents (amongst others).
2. **Collaborative initiatives** that bring together formal and informal coordination structures from various stakeholders and crosscutting forums (see Table 3). These coalitions generally coalesce around deliverables with relatively short project timelines. A key example is the Mukuru SPA between Muungano, SDI-Kenya, academia, county officials, civil society and other multisectoral stakeholders (Horn, 2021). This initiative includes vibrant community organisations in informal settlements and opportunities for collaborative initiatives with governmental and other partners (see also Section 6 below).

⁴³ See: www.tatucity.com (accessed 28 October 2024).

3. **Emergent neighbourhood associations** within neighbourhoods that are not regulated. These include households' informal "get-togethers" that seek to resolve collective concerns such as infrastructure and services, safety and security and "merry-go-round" fundraising drives.

5.3.3. *Conclusions and looking forward*

The study identified key gaps and priorities for intervention, as follows:

1. The high incidence of rental occupancy underscores the need to bring **rental housing** to the forefront of Kenya's **housing agenda** in urban areas;
2. Given housing sub-markets' significant impacts upon the larger economy in Nairobi, there is also a need to foreground rental housing in the **urban transformation development agenda**; and
3. There is a need to **clarify and synergise the roles** of multiple players in Kenya's housing space, which can support a **better coordinated, equitable and inclusive housing ecosystem**.

To date, Nairobi's formal and informal housing sectors have failed to centre inclusive strategies and human value-related processes. Consider here that "Housing problems arise when housing processes, i.e., goods and services and ways and means by which they are provided, cease to be vehicles for the fulfilment of the users' lives and hopes" (Turner, 1976: 68). There is a need for developing more people-centred, equitable actions to benefit marginalised Nairobi residents. It will be crucial to prioritise social justice in Nairobi's housing decisionmaking space, including to promote low-income citizens' participation in housing interventions and embed these roles within higher-level decisionmaking spaces. This can help to co-create appropriate housing solutions, which may include strategies that cut across the formal–informal settlement divide. There is also a need to identify long-range interventions (rather than short-term quick fixes), with greater attention to the diverse housing needs amongst both low-income and more upwardly mobile urban residents across the metropolitan region.

Finally, there is a need for a reform coalition to help build the collective capacities of housing actors and institutions (Table 3), with Nairobi's county government serving as a convening power and helping to enhance coordination in this domain. The multistakeholder nature of housing and settlement calls for an integrated system of decision support that provides access to data, resources and networking opportunities to foster inclusive results across Nairobi's heterogeneous housing landscape.

5.4. Structural transformation domain summary

5.4.1. *Background and motivation*

Structural transformation (ST) conventionally refers to the process of significant, fundamental changes in the economic structure of a country or region. It involves a shift in the composition of the economy from one sector to another, typically from a predominantly agrarian or rural-based economy to a more industrialised or service-oriented economy (Atolia et al., 2020; Sen, 2019). Essentially, it refers to shifts in who, how and where wealth is produced and attributed. In the long run, an economy

undergoing structural transformation would transition from low-income to middle- and high-income status. Unlike many regions where ST has often been associated with urbanisation, cities in sub-Saharan Africa have experienced marked urbanisation without ST (Jedwab, 2013; Sen, 2019).

In Nairobi, the initial drivers of structural transformation were exogenous and extractive. For example, the colonial railway system was designed to extract and ship out commodities, and laws were enacted to informalise indigenous economic activities. Even in the “formalised” economic activities like coffee production, laws sought to criminalise African activities in cultivation and value addition (Wanzala et al., 2022). Over time, several reforms have followed in Kenya’s post-independence era, but growth has not been consistently associated with shifts of value from low productive sectors to more productive ones in Nairobi.

Hence, in the context of Nairobi, we define ST processes as inclusive socioeconomic growth that can be experienced by ordinary urban residents. A common proxy of this is availability of quality jobs. Currently, Nairobi is 100% urban, but there has not been an expansion of quality jobs for everyone. The search for ST in Nairobi therefore does not focus on a “modernised” society, but rather on the growth in formal, decent work opportunities. We hold that the conventional ST embedded in extractive industrialisation, as witnessed in other regions, may not be applicable for Nairobi. We need to consider ST that incorporates the wider macroeconomic context of a country and its people. This form of ST should be inclusive, leaving no one and no place behind

This section analyses the patterns of ST, and its relationship with urbanisation for Nairobi. We investigate the form of ST that has taken place in Nairobi (that is, reallocation between which sectors) and the patterns, drivers and impediments to this form of ST. Given the high number of urban workers trapped in low productivity work, disentangling the connections between cities and structural transformation will be essential for growth and poverty reduction.

5.4.2. Methodology

This investigation employed both quantitative and qualitative methods. The qualitative approach included analysis of policy documents as well as thematic analysis of key informant interviews (KIIs) and focus group discussions (FGDs). Informants were drawn from the private sector, state and non-state agencies and local political actors, and civil society organisations working on urban development (including in informal settlements), journalists, academics, retired bureaucrats and other policy actors. Regarding quantitative analysis, we analysed firm-level data collected by the Kenya National Bureau of Statistics (KNBS) census of establishments (KNBS, 2017); and the Micro-Small and Medium Enterprises survey (KNBS, 2016). The analysis generated a) city maps of economic activity, using firm-level data, b) estimation of enterprises’ productivity (including the self-employed) at the city level, c) analysis of the correlates

of firm productivity at city level, and d) the political and economic factors that explain the spatial distribution of economic activity.

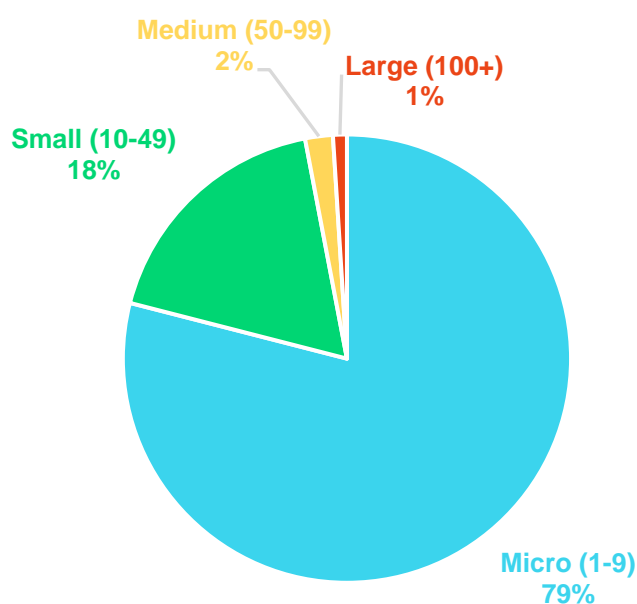
5.4.3. Key findings

Current situation of ST in Nairobi

Distribution of establishments by size

Figure 12 indicates that the majority of Nairobi's firms (83%) are micro (that is, with one to nine employees), whilst small enterprises (ten to 49 employees) account for 15%. Just 2% of firms are classified as "medium" enterprises (50-99 employees). Micro enterprises are pervasive because most are engaged in small-scale retail commercial activities requiring little capital, but with high turnover. Conversely, large-scale enterprises have the lowest number of establishments because their operations are capital intensive, with long-term returns.

Figure 12: Distribution of enterprises by size (number of employees)



Source: Authors' calculation from MSME (KNBS, 2016).

Distribution of establishments by formality status

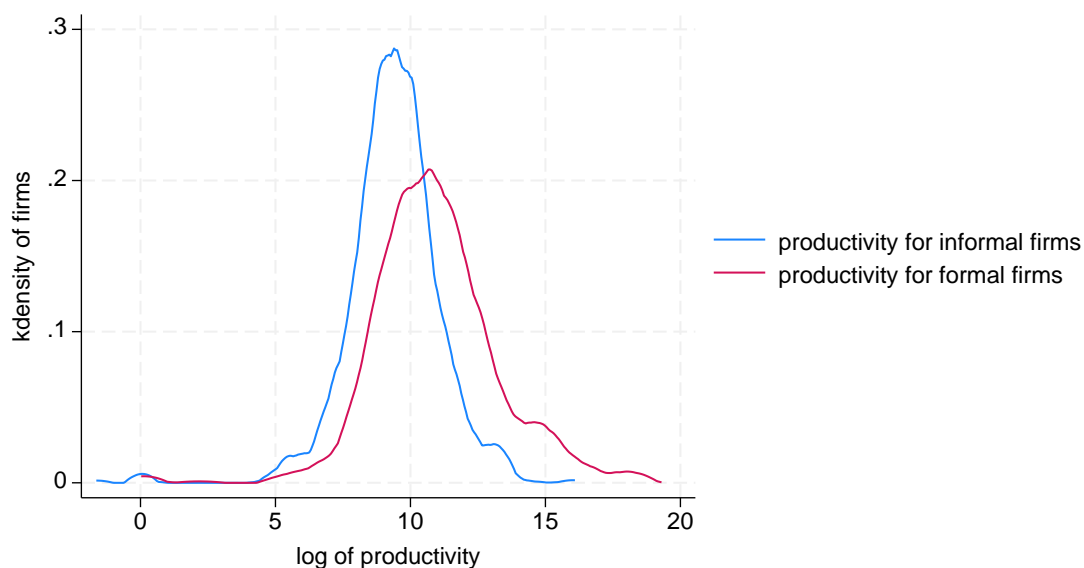
Kenyan law requires all establishments to obtain documentation from the county government and the national government to run an enterprise in the country. As seen in Figure 13, however, as many as 55% of the establishments are informal (unlicensed).

Figure 13: Distribution of establishments by registration status/formality status

Source: Author's calculation from MSME (KNBS, 2016).

In turn, many workers become trapped in low-paying jobs, especially in the informal sector, and this substantially impedes the growth of enterprises. Below, Figure 14 shows the difference in productivity levels between Nairobi's formal and informal firms: the productivity curve of formal enterprises dominates that of informal ones. The average log of productivity for formal establishments is 9.3, whereas the average log of productivity of informal establishments is 8.6.

Comparing the productivity levels by formality status, evidence shows that formal enterprises are more productive than informal ones. This is depicted in Figure 14 below, where the kernel density curve of the productivity levels for formal enterprises overlapping to the right of informal ones at all points.

Figure 14: Difference in productivity levels between formal and informal enterprises

Source: Authors' estimate, from MSME (KNBS, 2016).

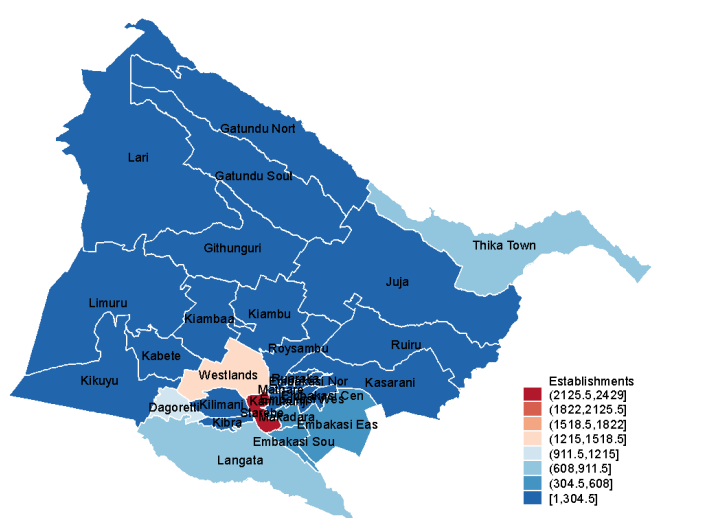
Spatial distribution of economic activity by constituency

Our quantitative findings show there has been a **marginal increase in the performance of business**, in terms of turnover and productivity between 2016 and 2017. However, this increase has not been equally shared across constituencies within the Nairobi metropolitan area. There are disparities in the businesses' performance (productivity) over time. The patterns of productivity across Nairobi's constituencies have remained starkly different: the spatial distribution of economic activities within Nairobi's metro area is substantially skewed towards particular constituencies, with Starehe, Makadara and Kamukunji (near the CBD) having the greatest concentration of establishments (see Figure 15).

Possible explanations for the high labour productivity in these constituencies are as follows:

- Starehe is comprised of City Square, Nairobi Central, Ziwani, River Road, Kariokor/Starehe and Pangani sub-locations of Ngara location and Huruma and Mathare locations. The CBD is Nairobi's main economic hub, with numerous government agencies, NGOs and private businesses, as well as learning institutions, hospitals and other enterprises (such as hawkers). The concentration of economic activity in a small area contributes to high productivity.
- Starehe and Kamukunji constituencies both have a young population structure and high population density, providing a large labour pool to draw from.
- Starehe constituency also has the highest monthly mean household income in Kenya, suggesting higher wages and skills that boost productivity.
- Ruaraka, Roysambu and Embakasi North constituencies are hubs for industrial production: most industries are located within these constituencies, which signifies high demand for labour. These constituencies are known for hosting industries in sectors such as manufacturing, wholesale and retail trade, and community, social and personal services. Thus, these areas have a diverse range of industries that contribute to the economic vibrancy of Nairobi and provide employment opportunities for the local population.

Figure 15: Spatial distribution of establishments by constituency



Note: The darker the red shading, the higher the number of establishments, and the darker the blue shading, the lower the concentration of establishments.

Source: Authors' calculations from KNBS (2017), Census of Establishments, 2017/18.

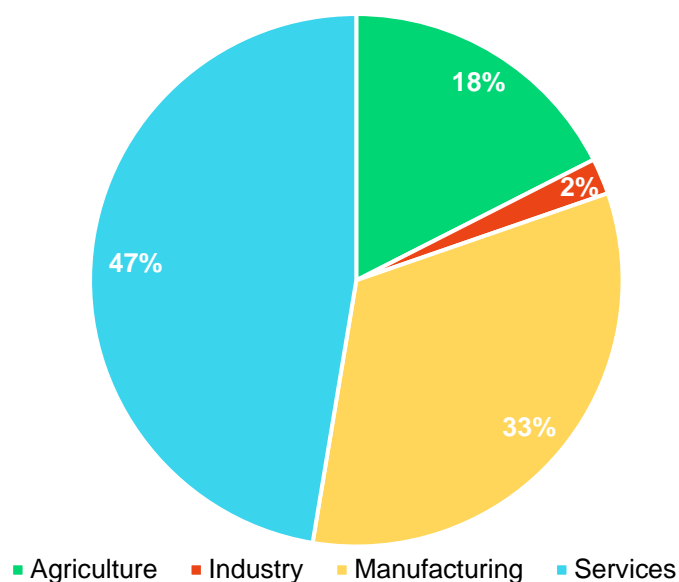
Based upon our qualitative research, we found mixed evidence regarding the impact of Kenyan devolution upon Nairobi's economic productivity. Some stakeholders believe that there has been ST, and to substantiate this position they reference key political shifts. For example, Kenya's devolution reforms have created an enabling environment to do business, which is an enabler of structural transformation:

"Devolution has enabled a lot of benefits. We've witnessed growth in terms of our global competitiveness index, increased FDI,⁴⁴ more attractiveness of investment as a capital and financial hub... The devolved structure of government means more alignment and transparency, and this means more citizen participation in public projects."⁴⁵

However, the majority of informants believed that Nairobi's economic activities have stagnated over the years; and growth of businesses has been another challenge.

To understand Nairobi's patterns of ST, we observe the shares of employment and productivity levels by sector. Disaggregation by industry shows that share of employment is highest in the services sector, followed by manufacturing, and is lowest in industry (mining and construction) (see Figure 16). Focusing on the share of employment by sector, most employees are in the services sector, followed by the manufacturing sector, and least in the industry (mining and construction).

Figure 16: Shares of employment by sectors



Source: Author's calculation from MSME (KNBS, 2016).

44 However, our findings did not indicate there has been an increase in FDI following devolution.

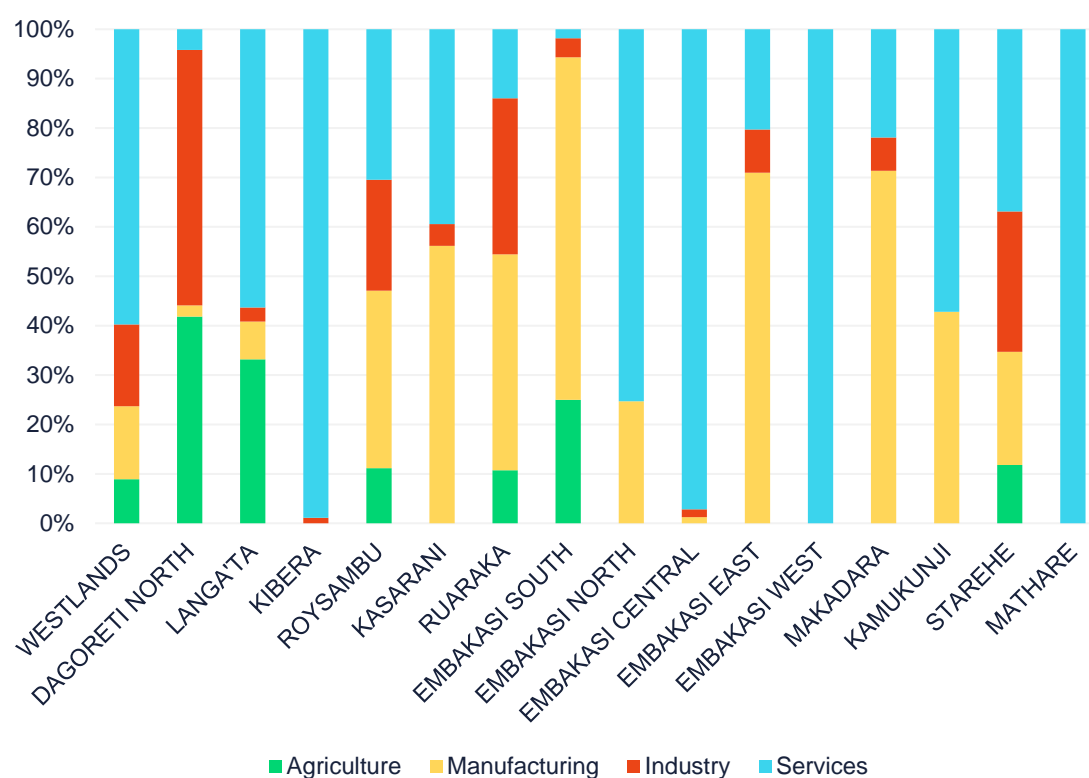
45 FGD with private sector actors, August 2022.

Hence, Nairobi has witnessed some ST, especially in the service industry. The Kenyan government has recognised the need to promote ST in Nairobi and has implemented various policies and initiatives to support this goal, such as the Nairobi Integrated Urban Development Master Plan (NIUPLAN) to guide the city's development.

However, there are stark disparities between Nairobi's constituencies and uneven progress in productivity.

One of the key drivers of Nairobi's ST is the growth of the service sector, particularly the ICT sector, which has been growing rapidly. Nairobi has emerged as a hub for tech start-ups and innovation, with several technology hubs and incubators established in the city. As seen below, our quantitative results show that in most Nairobi constituencies, the service sector has had the greatest share of employment; manufacturing was common in some areas as well (for example, Kasarani and Embakasi, as seen in Figure 17 below). Note that the industry category includes mining and construction.

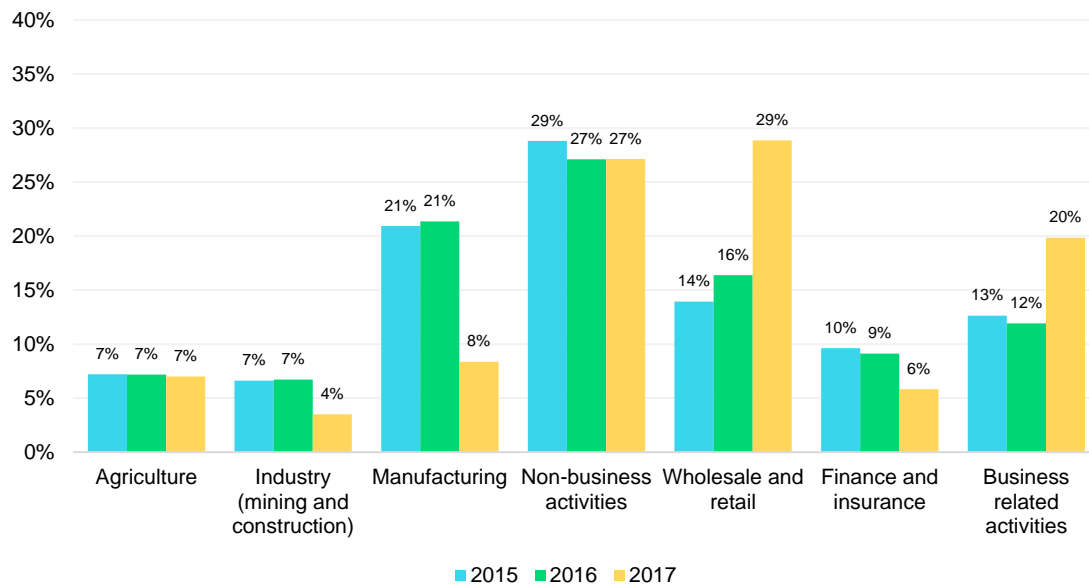
Figure 17: Share of employment by sector across Nairobi's constituencies



Source: Authors' calculation from KNBS (2017), 2018 Census of Establishments.

In Figure 18, we show that the share of employment for manufacturing and services has increased significantly, whereas the share of employment for agriculture has fallen within the Nairobi Metropolitan Area, due to reallocation of labour from agriculture to manufacturing and services. Figure 18 thus shows there is at least some observed ST within the Nairobi metropolitan area.

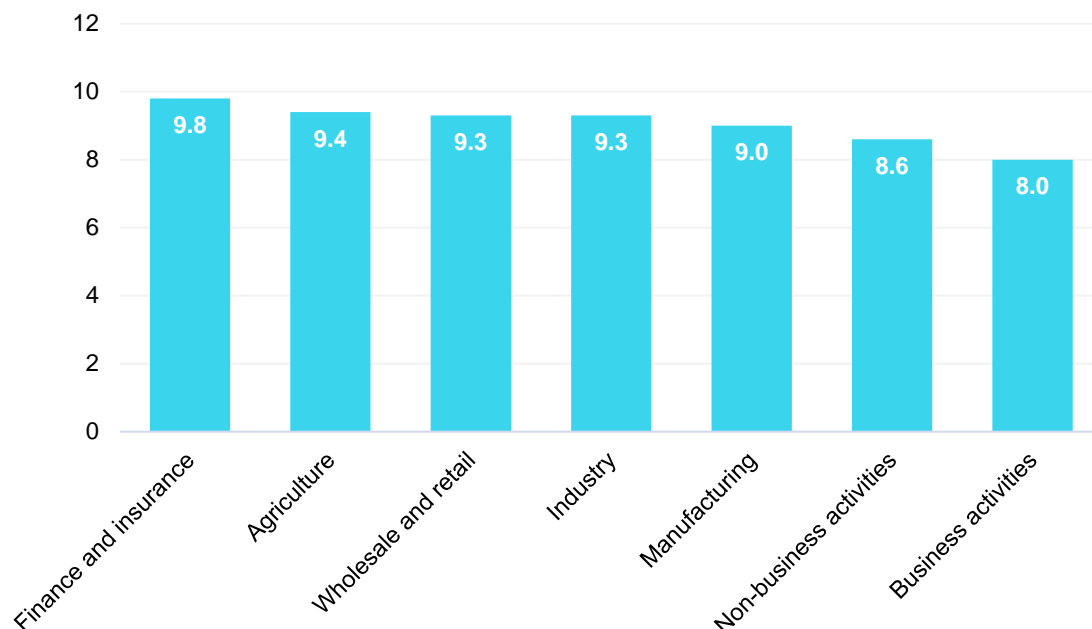
Figure 18: Share of employment by sector over time



Source: Authors' calculation from MSME (KNBS, 2016).

Figure 19 plots productivity levels by sector, revealing that finance and insurance activities are the most productive, followed by agriculture, wholesale and retail, and industry, with the least productive sector being business-related activities.

Figure 19: Average productivity levels by sector of operation



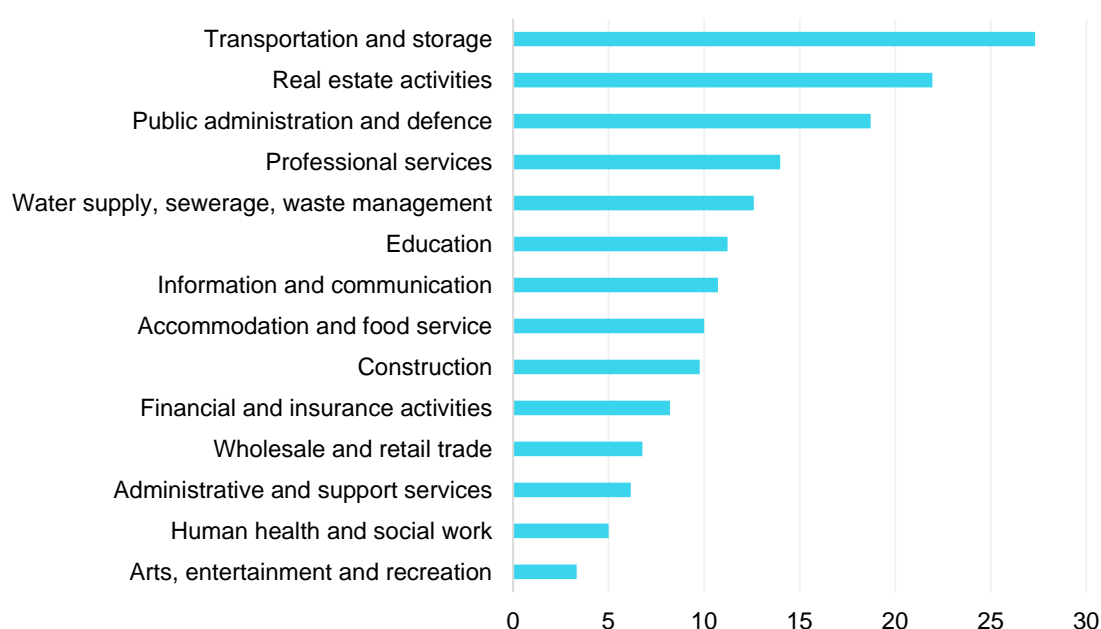
Source: Authors' calculation from MSME (KNBS, 2016).

These results show that the type of ST exhibited in Nairobi is the shift from agriculture to the services sector instead of a shift to manufacturing (as witnessed in most cities in the East and West).

Quantitative findings reveal significant disparities in the number of establishments by sub-county. We also find big differences in size of establishments, labour productivity and other outcomes by sector. Key determinants of labour productivity in Nairobi include the age of the establishment, location and size of the firm, number of hours worked and firms' wage levels. We show each of these factors' contributions to labour productivity at the firm level, in the regression results appended in Appendix 1.

Figure 20 has analysed the share of employment within Nairobi's services sector. The transport and storage sub-sector accounts for the largest share of employment, while Nairobi's arts, entertainment and recreation services contribute the smallest share.

Figure 20: Share of employment in the service sector (2017)



Source: KNBS (2017), Census of Establishments.

Our regression estimation on the drivers of ST using a multivariate analysis suggests interesting results (see Appendix 1). Beginning with spatial effects, there are significant spatial differences and firms located within Nairobi city county government's area tend to be more productive than firms in the adjoining counties. There are also significant location effects. Firms operating in commercial premises are significantly more productive than those located in industrial premises, market stalls, open market, kiosks and other premises; we surmise that this is because this location is convenient for customers. Controlling for establishment size, large enterprises are the most productive, followed by medium enterprises, then small enterprises, and finally micro enterprises. On average, the productivity level of a small enterprise is 42.3 percentage

points higher than that of micro enterprises. In addition, licensed firms (formal enterprises) are more productive than unlicensed firms (informal). On average, formal enterprises have 60 percentage points higher productivity than informal ones. Results from the regression also reveal that the establishment's age contributes to productivity differences, and older establishments are more productive.

We do not find any strong gender effects of employees on firms' productivity. Whilst there are indications that firms that employ more females than males are less productive, the magnitude of the difference is not significant. The gender composition of employees therefore does not seem to matter for the firm's productivity. The full regression results are appended.

In our qualitative research, we identified cost, economic and political constraints to structural transformation. Some of the political constraints include instances of political interference and instability, complicated bureaucracy and regulation/licensing problems, corruption (informal payments), inadequate government support services and unregulated/unrecognised service producers (cartels). Economic factors hindering structural transformation include high production costs, which are both direct (for example, acquiring inputs, taxes) and indirect, such as informal payments for the location of premises ("goodwill"); general infrastructure problems; tariff and non-tariff barriers; and unfair competition from foreign firms. Next, we continue to explore the roles of key governmental and non-state actors in this domain.

Actors in ST domain

The national government disburses funds to the county to execute their mandate in implementing the devolved functions, as well as setting national policies with implications for Nairobi's county government. It also jointly performs some functions with the county government.

For **Nairobi County** and other county governments, the Constitution has assigned 14 functions, including trade development and regulation; county planning and development; and county public works. Once elected, the governor constitutes a county government, but our FGDs noted some challenges, such as incomplete devolution, limited funding available, and high costs of doing business:

"All the 14 functions are a preserve of the county government, although some functions are not fully devolved. An example is trade that transcends across counties... The key challenge remains the costing of these functions, how much money is required to give a unit of service in county government? This comes against the undue financial pressure from the counties, which often is reflected in the private sector by the increased cost of doing business."⁴⁶

The role of the **private sector** in ST is broad and primarily concerned with enterprise investments and operations. In the public realm, they mainly influence the county's functions at the policy level, such as advocacy for the elimination of punitive fees and

⁴⁶ Focus group discussion with private sector actors, June 2022.

reduced amount of time to receive business permits. They also offer thought leadership to the county government, for example, advising on policies that affect business: “When counties come up with policy, the private sector actors try to ensure that the private sector perspective is captured, ensuring that policies being churned are pro-business and not punitive.”⁴⁷

Urban systems and structural transformation

One of Nairobi’s major impediments to structural transformation is poor public infrastructure. Based on our qualitative research, key systems for ST in Nairobi include energy, transport, financial, waste and water, healthcare, planning and enforcement, housing, ICT and education. Functional, efficient city systems can help attract investment in manufacturing and services industries, as they facilitate the flows and transfers of labour across and within sectors which are important for growth and structural change. Ample literature has demonstrated the links between efficient city systems (public capital) and aggregate output in an economy (Martinez-Bravo and Wantchekon, 2021). However, our respondents emphasised how the government’s limited investments in public infrastructure have negatively affected business operations.

Political settlements and structural transformation

Economically, Nairobi has a lot of significance to the elite: as the capital city, it is the site where sovereign authority is concentrated. Kenyan presidents’ longstanding urge to interfere in Nairobi’s administration is mainly due to its economic significance. According to our FGDs with private-sector actors, power contestations between the national/local levels of governance have significantly influenced city level ST:

“President Uhuru Kenyatta intervened in the city governance and empowered the Nairobi Metropolitan Services (NMS) to replace the governor of Nairobi... Even in the current regime of President Ruto, there have been looming tensions between the national government and the city’s leaders, as underscored in the recent heated verbal exchanges between the governor of Nairobi (Johnson Sakaja) and the deputy president (Rigathi Gachagua) over the amount of resources the city has and who should control it... Businesspeople still have to contend with rentseeking by both the national and county bureaucrats. There are still licensing obstacles and complicated bureaucracy in accessing government services to facilitate smooth operation of businesses.”⁴⁸

Political distortions may lead to misallocation of public investment, while also acting as a barrier to technological change. The most severe effects of political distortions are the manifestation of crony capitalism and elite capture, which adversely affect institutional and policy reforms (Martinez-Bravo and Wantchekon, 2021). Kenya’s political economy plays a major role in gaining political connections, which is significant for firms’ profitability and survival. Many enterprises lack connections and face potential closure, due to political pressures. Businesses often need to cut deals with politicians

⁴⁷ Key informant interview from Kenya Private Sector Alliance, June 2022.

⁴⁸ Focus group discussion, Kenya Private Sector Alliance, July 2022.

to operate, such as between the agents of political leaders and traders in the informal settlements, who lack the requisite documentation. Without these deals and informal payments, they would be visited by county officials, who would forcefully close their business. We found widespread use of kickbacks and informal payments to politicians and their agents, including amongst enterprises in informal settlements and in construction sector, as follows:

“For you to run businesses here in the slum, you must know certain people who are agents of politicians. Otherwise, you will be evicted the next day for lack of valid documents. We give informal payments of between Ksh 50 to Ksh 100 daily. Almost everyone does this.”⁴⁹

“Deals are necessary for survival of my business. I wouldn’t say it plays a significant role as much, but it matters. For me to get any government contracts and tenders, I must grease some hands. It is always a question of ‘what is in it for them?’ We must have informal engagements on how we both can benefit. Obviously, we have to give kickbacks from the tender awards.”⁵⁰

A key characteristic of Nairobi’s economy is the large informal labour force. The informal sector has been employing upwards of 85% of the population from 2018 to 2022. Some of these enterprises are in operation simply because they are not registered, which may prohibitively increase their cost of doing business. Data from Federation of Kenya Employers and ILO (2021) show that countrywide, there were 6,987,090 informal enterprises in 2016, the majority (99.4%) of whom were unlicensed microenterprises with an average age of seven years of operation and engaging low-skilled workers. Additionally, informal microenterprises are mainly run by females (58.5%) who have primary level of education. Meanwhile, the informal small- and medium-sized enterprises are mainly run by males with college level of education (55.6% and 51.2%, respectively).

There is a need to develop a new crosscutting framework for urban informality, including informal industries (locally known as *jua kali*), informal roadside vendors and other diverse livelihoods (Banks et al., 2020). Currently, there are limited specific policy interventions targeting the informal economy, which do not provide for an effective development framework for Nairobi’s burgeoning informal businesses.

Another key challenge is the entrenchment of informal service providers (“cartels”) in the business environment, some of them very powerful or working with powerful actors, like politicians. Lack of alternative opportunities to access basic services and public infrastructure have encouraged the involvement of informal service providers in the business sector. These cartels are involved in providing water and electricity (see CoS above); others are providing security (especially in low-income settlements) and business spaces (land), and still others are helping to secure necessary regulatory

49 Key informant interview from Mathare informal settlement, November 2022.

50 Key informant interview in construction sector, November 2022.

business papers. The potent challenge remains how to deal with these unrecognised actors, who are an integral part of the business environment.

5.4.4. *Conclusions*

We identified several political and economic factors that strongly influence the development of ST-related opportunities and the lack of such ST. For instance, economic barriers include high production costs, encompassing both direct costs – such as acquiring inputs and paying taxes – and indirect costs. Similarly, political constraints have impeded Nairobi's ST, with repeated instances of political interference and instability; complicated bureaucracy; and regulation/licensing problems.

Meanwhile, with respect to urban systems, the absence of reliable and affordable infrastructure makes it difficult for enterprises to grow. Political challenges are also present, which distort the business environment and create negative externalities. Other key interrelated concerns include the high cost of doing business (for example, limited access to start-up and operational capital); cartels' involvement in the business environment; and rentseeking (clientelist) behaviour of bureaucrats and political class. Additionally, Nairobi's large informal base of employees emerged as a priority complex problem, with further challenges linked to the lack of investment finance and inadequate skilled labour force.

There is a need to co-create mechanisms that can address informality in the city, such as generating mechanisms to identify Nairobi's informal enterprises in Nairobi and devising ways to improve their growth potential. Some KIIIs considered formalisation to be the long-term objective, but others suggest that this will not be possible. All agree that in the short to medium term, new ways are needed to boost informal enterprises' productivity without requiring them to formalise. For instance, this will include 1) investing in basic infrastructure, digital technology, financial inclusion and skills upgrading. While it is difficult to reduce the influence of cartels, key strategies may include 2) automated government service provision and 3) reducing the search costs (between buyers and sellers) by increasing access to information on digital platforms, thereby diminishing informal actors' involvement in business. This can also help to reduce the rentseeking opportunities for bureaucrats.

6. **Overarching analysis**

This report has explored how national and city-level politics, urban systems and particular configurations of actors, agencies, ideas and practices jointly shape Nairobi's development in the domains of safety and security (S&S); health, wellbeing and nutrition (HWN); housing; and structural transformation (ST). It has also shown that many developmental problems persist, affecting the wellbeing and life prospects of urban dwellers – particularly marginalised groups – and damaging the environment. The holistic analysis presented above can help to identify Nairobi's pressing developmental problems, in addition to the likely challenges associated with efforts to find equitable and environmentally and fiscally sustainable responses. In this

concluding section, we synthesise the main developmental problems in Nairobi and discuss potential ways of addressing them, in light of the described challenges.

6.1. Synthesis: Deep-rooted legacies and emerging trends in Nairobi

Colonial legacies strongly shape political trajectories and urbanisation patterns in Nairobi, even as the city radically stretches the spatial boundaries and capacities of many institutions it has inherited. We explored Nairobi's interrelated challenges with inadequate services and infrastructure (including the pivotal influence of cartels); clientelism, limited accountability, and unresponsiveness to low-income citizens; and disjointed, exclusionary city planning efforts. Such concerns have strong historical continuities: shelter provision and several underpinning systems remain biased in favour of colonial-era European areas, with many informal settlements in African areas that are still denied key services and forced to rely upon self-help or other improvised solutions (Jones, 2020; Obudho, 1997). Relatedly, low-quality rental housing accommodates nearly all Nairobi residents, while national and local governments have consistently failed to regulate shelter or land markets (see section on housing, above). And as argued above, Kenya's police have reproduced the logics of a colonial state seeking to quell insurgencies and violently extract bribes from low-income residents (see S&S section above; Glück, 2019; Kimari, 2024). Below we highlight other continuities and emerging challenges, such as often-precarious informal livelihoods, despite the expansion of IT or other service jobs; there are also longstanding concerns with crony capitalism, opaque land deals, and ethnic patronage systems, despite recent devolution reforms and electoral turnover in 2022.

Nairobi faces an increasingly complex set of socioeconomic, health and spatial inequalities, whose manifestations include rising burdens of NCDs and new forms of unsafe or inaccessible housing. It is not only Nairobi's informal settlements where multiple disadvantages are concentrated; tenements and satellite areas may again grapple with highly inadequate WASH, transport networks and services (Mwau et al., 2020; Gillespie and Mwau, 2024). There are changing patterns of economic activity across Nairobi, with increasing spatial expansion and new commuting patterns across the burgeoning metropolitan area (ibid). Echoing broader trends across the global South, dietary changes and more sedentary activity patterns are leading to a shift towards NCDs in Nairobi, even as there are stubborn challenges with communicable diseases (HWN section above). As noted below, further research is needed to explore Nairobi's other health and socioeconomic inequalities, including the mental health toll of living with elevated levels of violence, precarious livelihoods, inadequate WASH and related gendered burdens.

6.2. Institutional fragmentation, incomplete decentralisation and failures in planning

Kenya has a broad-dispersed PS that is notable for its combination of shifting ethnic alliances, crony capitalism and competitive elections that still maintain a narrow elite in power. Despite high levels of underlying elite cohesion, political alliances in Kenya are

very fluid and elite pacts are frequently remade (see PS, Section 2). In Nairobi, local political leadership has often mirrored the national government's challenges, including limited accountability and widespread use of patronage. This hampers the delivery of critical services and infrastructure, especially in Nairobi's informal settlements. Furthermore, Nairobi holds a pivotal position in Kenya's national politics and economy, serving as a major hub for trade and business networks, which the elite regularly utilise to generate rents. Political elites often demand bribes or kickbacks from private sector firms, who in turn rely heavily on their political connections to maintain operations (ST above). More generally, there is often an overlap between business and political elites, while the latter often seek to influence or meddle in Nairobi's local governance. Nairobi's local government often has struggled to maintain its autonomy in the face of presidential machinations, as illustrated recently by Uhuru's establishment of NMS and with Moi appointing Nairobi's city council in the 1980s (K'Akumu, 2022; Ouma, 2023a). There are also risks of political deadlock, due to tensions in Nairobi's government, between Governor Sakaja and the county assembly, alongside internal tensions within the *Kenya Kwanza* alliance (see Kanyinga and Michuki, 2023). More fundamentally, Nairobi has long-term challenges with incomplete decentralisation, limited own-source revenue collection, and failures to spend the requisite 30% of revenues on development (Section 2 above).

A lack of farsighted urban planning, compounded by fragmented agencies and few cross-sectoral interventions, helps to explain the city's challenges in addressing climate-related and environmental risks. Climate change in Nairobi will result in rising temperatures; elevated risks of flooding (including in the riparian reserve) that may increase the risks of cholera outbreaks and damage to sanitary facilities (for example, low-quality latrines in informal settlements); and more acute water scarcity at other times of the year (Scott et al., 2017; Lebu et al., 2024). Based on recent qualitative research in Mukuru, key climate-related health impacts may include heightened risks of infectious disease, mental illness and NCDs; destroyed homes and disruption to work commutes (due to floods or other extreme weather events); and rising water and food insecurity (Greibe Andersen et al., 2021). Air pollution is another major concern in Nairobi, emanating from myriad sources, such as poorly maintained older vehicles, unclean cooking fuels, industrial and other emissions (West et al., 2020). Although Kenya has progressive legislation on air pollution and even has detailed data on Nairobi's key pollutants, such findings are not publicly available; action is further stymied by vested interests and multiple authorities who typically fail to harmonise their activities across national and local levels (deSouza, 2022). Kenya has a Climate Change directorate (established in 2016), yet there is no dedicated funding to address air pollution (ibid). Meanwhile, there is a danger of privileging Nairobi's middle-class interests in clean air over the complex concerns and multiple forms of air pollution facing low-income urban citizens (ibid).

Climate change and infrastructure initiatives have often struggled at the metro or regional level, as the city's development typically follows the lead of private developers, rather than advancing the public interest. For much of Nairobi's history, there have

been persistent challenges with regressive, opaque land allocations and a lack of joined-up interventions in shelter, land-use and key systems (Jones, 2020; Manji, 2020). Such shortfalls in planning have posed particularly acute concerns for WASH, transport and housing, as these urgently require harmonised investments across the metropolitan area (see CoS). For transboundary issues like air pollution and climate change, the city has again lacked the coordinated, multiscalar and multisectoral approaches needed to avoid piecemeal solutions (deSouza, 2022). Instead, there has been a pattern of contestations, duplication and/or discordant initiatives, precisely when coordination would be most essential. Moving forward, Nairobi's leadership will need to avoid short-term, merely reactive initiatives, and there is an urgent need for holistic approaches to rental housing, resilient infrastructure and inclusive economic development informed by ongoing transformations at the metropolitan scale (Mwau et al., 2020, also housing and ST above). More positively, there is a new Green Nairobi department in the county government that encompasses environment (including air pollution, SWM, energy and climate change); food, agriculture and natural resources; and WASH, flood mitigation and water conservation.⁵¹ Implementing such integrated strategies will be highly complex, especially in the face of pushback from officials and private sector groups benefiting from the status quo. We return to climate change in our concluding section, while below we discuss the ramifications of Nairobi's PS and poorly integrated systems across our four domains.

6.3. Synthesis on political settlement implications, including for domains

Regarding **HWN**, the county government has made clear commitments that offer entry-points at the county level to promote children's health and nutrition, although the cost of living crisis and related budgetary constraints may prove challenging. Reforms in this domain may entail working closely with the newly created local departments of "Green Nairobi" (noted above) and "Health, Wellness and Nutrition". During the ACRC final workshop (9-10 March 2023), we identified key entry-points and stakeholders (including in these departments) to build on planned interventions and enhance their contributions to HWN. As discussed above, Nairobi's county government has launched an ambitious school lunch programme across Nairobi, although students attending private schools will not benefit (Kiru and Gelli, 2023). This initiative has aligned with the county's food system strategy, which aims to promote affordable, accessible and nutritious food (Nairobi City County, 2022). However, access to healthy diets has been negatively influenced by Kenya's cost of living crisis, especially amongst low-income residents. Nevertheless, the county's political commitment to school feeding does provide a valuable opening for this domain.

Housing. Recently, Governor Sakaja has prioritised addressing the challenge of demolitions without notice and working with the private sector to provide affordable homes. Additionally, the governor finds support in Ruto's regime, which has already prioritised affordable urban housing programmes for middle- and lower-income urban

⁵¹ See: <https://nairobi.go.ke/green-nairobi-environment-water-food-and-agriculture/> (accessed 15 October 2024).

residents. However, Nairobi's low-income residents have typically struggled to make their voices heard in this space, as housing plans are typically dominated by middle- and upper-class interests and regime-linked providers. Nairobi is replete with cases of widespread displacements as a result of demolitions of poor neighbourhoods, including in Muoroto and Kibarage slums (1990s) and recently in Mukuru Kwa Njenga slums (with over 75,000 people evicted in November 2021) (Ouma, 2023a; Klopp, 2012). To expand access to housing as well as generate employment, Uhuru Kenyatta's administration had promised to build 500,000 affordable homes by 2022, but failed to reach low-income households effectively. Subsequently, under Ruto, the Kenya Kwanza administration similarly promised to increase the supply of new housing to 250,000 units per year (Kenya Kwanza, 2022: 19). Like past initiatives, Ruto's Affordable Housing Project seems unlikely to benefit residents in informal settlements (given their low incomes), but legal challenges to the Affordable Housing Levy have not yet managed to overturn the president's efforts (Kiplagat, 2024). Nevertheless, vested economic and political interests are likely to block any changes, given their gains from the current modalities of low-quality rental housing (as discussed above). Kenya Kwanza's expanded social base may provide opportunities for reform here, though it will be important to develop models that can provide tailored solutions across various housing sub-markets (see also discussion of upgrading below).

ST. President Ruto and Governor Sakaja came to power promising a bottom-up economic model that would benefit low-income residents and foster an equitable, inclusive society, but they are struggling to realise this pledge. Some of Kenya Kwanza's initiatives have hurt low-income residents, including recent concerns about *unga* (flour) subsidies not being disbursed.⁵² At the same time, Ruto's Hustler Fund (with a focus on small-scale traders) may offer economic opportunities: from November 2022 to April 2023, almost Ksh 26 billion was borrowed, and Ksh 16.25 billion repaid.⁵³ But there are concerns about the Fund's high level of defaults, inadequate scale in the face of widespread unemployment, and potential for corruption.⁵⁴ Indeed, it is unclear if Ruto's ruling coalition, with its support base from low-income classes, can balance crony capitalist demands with its commitment to championing dynamic economic actors and informal sector workers. The ST analysis above also highlights the need for tackling Nairobi's cartels in services and electricity, which we discuss further in the CoS sub-section below.

For **S&S**, cost of living demonstrations and related Generation-Z-led protests in 2023-2024 have led to heightened uncertainties and instability, but there are also emerging possibilities to foster security and youth inclusion. Soon after his election, President Ruto disbanded Kenya's notorious Special Service Unit and thereby signalled his

52 See: <https://africacheck.org/fact-checks/reports/saving-face-and-subsidy-disappeared-fact-checking-kenyan-deputy-president> (accessed 15 October 2024).

53 See: www.the-star.co.ke/news/2023-04-12-hustler-fund-update-kenyans-have-borrowed-sh26-billion/ (accessed 15 October 2024).

54 See: www.standardmedia.co.ke/business/business/article/2001485173/hustler-fund-runs-out-of-steam (accessed 27 October 2024).

interest in changing key security institutions, noting that they had been involved in extrajudicial killings (including of Indians who were in Kenya, in July 2022) (Wambui, 2022). It is also crucial to underscore the role of international players, such as the European Union and US government, which have funded major S&S initiatives to counter terrorist threats, but with overwhelmingly negative impacts upon low-income Muslim young men in Nairobi (Glück, 2017). For his part, Governor Sakaja's manifesto highlighted the importance of supporting youth and fostering social inclusion, including with attention to sports and improved public spaces (Sakaja and Muchiri 2022). However, Kenya's escalating cost of living contributed to the opposition Azimio's political rallies calling for electoral justice and resignation of Ruto's regime (following the 2022 elections), which have deepened S&S challenges in Nairobi (Shilaho, 2023). More recently, demonstrations in response to difficult economic times may heighten insecurity, especially given the calls for regime change and the violent crackdown upon protests over several months in 2024 (Apollo et al., 2024).

Whilst security has proved a particularly difficult sector to reform (as noted above in S&S), we return to the potential of recent protests to catalyse meaningful reform in the final section.

6.4. City of systems implications for domains: Impacts of low-quality, insecure and poorly integrated systems

Across low- and high-income areas, shortfalls in Nairobi's systems may lead to starkly divergent outcomes and inequitable coping strategies. The police have become obsolete amongst both low- and high-income communities (see S&S), whilst armed security guards, fortified residences, and malls or other elite enclaves are inevitably available only to wealthy Nairobians. Many systems are largely privatised in both low- and high-income areas – for example, healthcare, education and SWM – but the quality and forms of private provision vary markedly along the income gradient (see CoS). Similarly, inadequate formal water and electricity networks have widely differing impacts across Nairobi. Water rationing has disproportionately affected low-income rather than wealthier areas, and richer residents also have far better options to manage breakdowns or intermittency. For instance, Nairobi's affluent households can store larger quantities of water and utilise generators to manage blackouts more effectively than their low-income counterparts (Kasper and Schramm, 2023). Regarding transport, low- and middle-income households rely mainly on *matatu* and NMT, with almost non-existent public transport options, but interventions in Nairobi cater overwhelmingly to private cars that serve a tiny swathe of the population (Klopp, 2012; Nyamai and Schramm, 2023). Such transport-related inequalities underscore the regressive political economy of Nairobi's systems: most low-income residents face a “poverty penalty”, due to inaccessible, low-quality or extractive provision (AMT et al., 2014), while the wealthy are either better served via formal networks or can access high-quality private substitutes.

Taken together, our findings indicate that poorly integrated, low-quality systems have major negative knock-on effects for housing, HWN, ST and S&S, which especially

burden Nairobi's low-income residents. A lack of affordable, reliable joined-up infrastructure not only deters foreign direct investment, but it also curtails the productivity of MSMEs that employ most Nairobi residents (see ST). Moreover, meagre WASH, unclean cooking fuels and electricity for refrigeration, inadequate roads to transport foods or access healthcare, and limited SWM and drainage (especially during the rainy season) jointly undermine food security and health outcomes in informal settlements. As noted above, peripheral areas as well as Nairobi's informal settlements typically lack decent shelter and complementary systems. Indeed, shortfalls in housing, schools and other key systems increasingly have led lower- and middle-class households to move into peri-urban areas or satellite towns, where they may access homeownership but still lack adequate WASH and other systems (Mwau et al., 2020; Gillespie and Mwau, 2024). Nairobi's poorly joined-up systems have also created insidious opportunities for extraction, especially in informal settlements. For instance, non-state service providers may clash amongst themselves (such as at Dandora dumpsite) or raise prices to create scarcity and undercut formalisation strategies (for example, water and electricity cartels). At the same time, low-quality shelter and services can be extremely lucrative for private developers and politicians who benefit from kickbacks. Mwau and Sverdlik (2020) found that investors in Nairobi's low-cost rental housing market can realise up to **four times higher returns**, and with a shorter payback period, than formal middle- and high-income housing (for both rental and sale). This is based on estimating the rental yield and payback period for a unit in Mukuru vs Nairobi's upmarket housing area of Kilimani (ibid; also Mutinda et al., 2020). As noted above, there is also a nexus of corrupt and collusive relations between local politicians, physical planners and private developers in Nairobi, leading to a lack of farsighted planning and rampant private-sector-led development in both high-income housing and tenement areas (cf Schramm and Bize 2023; Gillespie and Mwau, 2024).

Our findings repeatedly underscore the pivotal role of cartels and other informal providers, whose sometimes knotty links to official actors can make them extremely difficult to dislodge. Water cartels can receive protection from Nairobi's politicians, who may rely on these cartels to mobilise voters (CoS above). Additionally, there are collusive and corrupt ties between Kenya Power, the police and electricity cartels in informal settlements, helping to explain the slow progress of Nairobi's formal electrification efforts (de Bercegol and Monstadt, 2018; Guma and Wiig, 2022). In transport, the semi-legal *matatu* industry is often linked with gangs that control these bus routes, and there is evidence of endemic bribery and corruption in the *matatu* sector, frequently involving the police and county enforcement officers (for example, Otieno, 2016; Kiplagat, 2021). More generally, relations between formal providers and informal non-state actors can markedly differ in their levels of conflict, collusion and harassment of the latter (Sverdlik, 2017). Additional comparative analyses of Nairobi's systems can help to unearth the multifaceted relations between formal/informal providers, with attention to their political drivers, spatial variations across the metro area, and changes over time.

6.5. Gendered inequalities

Unreliable, insecure WASH has resulted in gender-inequitable impacts, including time poverty, reduced earnings and undignified coping strategies amongst women and girls. Such concerns are epitomised by inadequate sanitation in the context of elevated violence/insecurity, limited electricity and minimal footpaths in informal settlements (Sommer et al., 2015; Winter et al., 2019). Women and girls are at heightened risk of gender-based violence if they venture out at night to use public toilets in informal settlements, especially in areas lacking adequate public lighting and with elevated levels of insecurity (Corburn and Hildebrand, 2015). Rather than going out after dark, women may resort to “flying toilets” (plastic bags with excreta), small basins at home or other undignified solutions (ibid). As in other global South cities, Nairobi’s inadequate water access is also linked with 1) time poverty and opportunity costs for women and girls (such as missing work or school); 2) challenges with safe food preparation, caring for the sick or elderly, and other reproductive labour; and 3) difficulties with paid labour amongst food vendors, laundresses and others requiring adequate water as a productive input (Crow and Odaba, 2010; Sarkar, 2020). Inadequate WASH is also associated with a wide array of health burdens (including mental health impacts) that again weigh especially heavily upon women and girls, given their gendered roles as caregivers, including in the wake of Covid-19 (Kimani et al., 2021).

Meanwhile, women in Nairobi often confront safety concerns when using public transport, especially at night, and women consistently face harassment from *matatu* crews and male passengers (Muhoza et al., 2021). Such harassment usually goes unreported, even if the *matatu* vehicles are equipped with CCTV (UN Women, 2021). Many women also experience harassment when walking to or from *matatu* stops, which can prevent women from accessing employment opportunities, healthcare or other vital services. Moving forward, further research can explore how the lack of joined-up shelter and systems has been linked to undignified, tenuous solutions, exclusion from jobs and public participation, and entrenched marginalisation of certain groups, such as people living with disabilities or HIV/AIDS (cf Peletz et al., 2013). More positively, the final section identifies future research and policy priorities, including to capitalise on emerging opportunities for progressive change in Nairobi.

6.6. Implications for future research and interventions

6.6.1. Local capacities, key precedents and emerging interventions

Although we focused above on Nairobi’s challenges, it is equally important to highlight the significant opportunities and capacities for action, including amongst civil society groups and other reform-minded stakeholders. Nairobi’s civil society networks range from middle-class urbanists in “Naipolitans” and Cycle Queens (which promotes women’s bicycling) to the robust Muungano Alliance, over ten social justice centres (Jones and Gachihi, 2022), and other community-led organisations. The city is also distinguished by its social enterprises, IT hubs and innovative efforts to improve infrastructure or service delivery such as Sanergy’s ecotoilets and Umande Trust’s

biocentres (O’Keefe et al., 2015; Van Welie et al., 2019). Nairobi is well connected with global, regional and national policymakers and practitioners, thanks to its links with urban networks (such as C40 Cities) and international agencies based in the city (such as UNEP, World Bank, UN-Habitat). Furthermore, there is significant research capacity, including in several universities and research centres (such as APHRC and Partnership for African Social and Governance Research or PASGR). These clusters of policy networks, start-ups and mobilised civil society actors together make Nairobi a particularly fertile ground for innovations and reform coalitions, as discussed briefly below.



Source: Muungano wa Wanavijiji.⁵⁵

Amongst Muungano’s major successes in Nairobi is the Mukuru SPA upgrading programme, which has helped to transform citizen participation and foster holistic, large-scale interventions.⁵⁶ Mukuru SPA’s eight planning consortia (Figure 21 above) with academic, private-sector, civil society and government actors collaborated over several years, serving as a pioneering example of how to scale up participation and support multi-pronged infrastructure provision (Ouma, 2023b; Horn, 2021). There were also clear financial reasons for government to intervene in Mukuru to counter the massive loss of revenues as a result of the cartels’ stranglehold on services, as per Muungano’s action-research (AMT et al., 2014). Relatedly, the partners argued that Mukuru households face a sizable “poverty penalty” because of cartels’ extractive, low-quality provision. For instance, Mukuru residents pay as much as 172% more per cubic metre of water than residents living in nearby formal areas (SDI and AMT, 2017). However, major concerns remain about the limited community consultation and top-down nature of implementation of Mukuru SPA, as it was the military-led NMS that subsequently improved Mukuru’s water, simplified sewerage, roads and hospitals (Ouma, 2023b). But the relative success of the Mukuru upgrading has led civil society groups to seek to replicate the SPA elsewhere in Nairobi, including in Kibera and Mathare. In the latter settlement, a loose constellation of grassroots organisations (known as “MSPARC”) has mobilised to support bottom-up upgrading and address

⁵⁵ See www.muungano.net/mukuru-spa (accessed 28 October 2024).

⁵⁶ See Ouma (2024a) for further discussion of Mukuru SPA.

multiple challenges, including police violence, inadequate shelter and political marginalisation (Kimari et al., 2022).

Albeit at a smaller scale than Mukuru SPA, Kambi Moto's incremental upgrading of hundreds of homes also developed a model of community land tenure and housing provision benefiting structure-owners and tenants alike (Weru, 2004). From 2003 onwards, Muungano's community-led upgrading programme in Kambi Moto (a neighbourhood in the informal settlement of Huruma) has demonstrated that grassroots organisations can partner effectively with local officials to change official planning standards for housing (Lines and Makau, 2017: 46). Structure-owners and tenants in Kambi Moto both agreed to receive one structure, even if the structure-owners had previously rented out multiple structures. The shared threats of eviction, fires and low-quality shelter in Kambi Moto helped to unify both structure-owners and tenants behind the upgrading programme. Difficulties with controlling costs and the slow pace of incremental upgrading inevitably have curtailed the reach of the Kambi Moto. However, it still provides a valuable precedent of how to implement in situ upgrading for both tenants and structure-owners (Lines et al., 2020). Such examples illustrate the significant potential of grassroots-led solutions to generate equitable, co-produced initiatives with official stakeholders and other stakeholders in Nairobi. Below we identify other promising areas for action research and interventions (and emerging coalitions rising to the challenge), with attention to gender, climate and finance.

6.6.2. Potential further research and interventions

Nairobi has incipient coalitions seeking to **improve NMT and address air pollution**, which may provide the basis for promoting climate resilience, health and cross-class alliances. After the county approved an NMT policy in 2015, Nairobi's walking infrastructure was improved under NMS, including in the CBD (Kinyanjui, 2022). NMT is still largely sidelined in Nairobi's planning and practice, but there has been recent civil society action to improve cycling and walking paths (Odhiambo, 2021). If there is a focus on promoting women's cycling and access to safe NMT amongst low-income groups, there are potentially important gains in health, gender equality and sociospatial inclusion. Recent action research partnerships have also highlighted Nairobi's elevated levels of air pollution, including a collaboration in Mukuru between the Muungano Alliance and Stockholm Environmental Institute (SEI) (West et al., 2020). Given the multiple and poorly regulated sources of air pollution in Nairobi, as noted above, there is a need for harmonised action that has typically proved difficult, especially to tackle industrial emissions and overcome conflicts of interest (deSouza, 2022). In 2015, the Kenya Air Quality Network was formed by SEI and other CSOs to spur action on air quality, including successful mobilisation by middle-class Kenyans (ibid). To achieve broader gains in air quality and inclusive urbanisation pathways, these initiatives may require a newfound focus on equity and multisectoral interventions. Much as with NMT, Nairobi's low-income residents bear the heaviest environmental injustices of air pollution. For NMT and air pollution initiatives moving forward, there is a need for

further cross-class coalitions to gain political traction, as well as to achieve multiple benefits for healthy, sustainable urban development.

Nairobi's **riparian reserve** is another priority for policymakers and CSOs, again with potential to foster climate resilience and social inclusion, but only if holistic, equitable strategies are utilised. In February 2023, President Ruto launched the Nairobi River Commission with support from UNEP; the Commission is meant to provide green jobs and rehabilitate Nairobi's polluted rivers.⁵⁷ Additionally, Muungano is part of the Voices for Just Climate Action programme, a grassroots initiative that has prioritised inclusive river restoration.⁵⁸ Indeed, there are key opportunities to foster S&S via riparian rehabilitation and other public space initiatives in informal settlements. As already demonstrated by a youth group called Komb Green,⁵⁹ riparian restoration in Nairobi's informal settlements can promote green jobs (for example, livelihoods in recycling and maintaining parks) while also enhancing community pride and improving security as these areas are rehabilitated. Komb Green has even fostered food security (for example, via planting vegetables) and built partnerships between youth groups and Kenyan environmental officials. At the same time, afforestation and riparian restoration could improve water networks and environmental health more generally, with concomitant climate benefits (such as reduced intensity of flooding and heatwaves). However, Nairobi county has previously had challenges with its surrounding counties regarding cross-border river catchments (TNC, 2015). The city's main water sources are located in two adjoining counties (Murang'a and Nyandarua); there are longstanding issues with inter-basin transfers from these areas to Nairobi, as well as with Nairobi's water pollution and untreated sewerage, all of which may hamper efforts at riparian restoration (Mwau and Sverdlik, 2023). There are also substantial concerns over low-income residents' relocation from flood-prone riverine areas, especially following the large-scale forced evictions in Nairobi's riparian settlements after major floods in May 2024 (Ouma, 2024b). In sum, this topic would benefit from action research to explore whether these emerging coalitions can coalesce effectively and how the potential health, ecological, climate and livelihood-related benefits can be realised in practice.

Having identified **Nairobi's cartels** as a pivotal set of actors across our four domains, additional research is needed to understand their socioeconomic, health and security impacts over time. This could include comparative, in-depth analyses of their relations with politicians, police, utilities and other formal actors. Relatedly, further studies can examine changing levels of violence, the role of ethnicity in cartels' organisation and

57 See: www.unep.org/news-and-stories/speech/restoring-nairobis-rivers and www.standardmedia.co.ke/nairobi/article/2001467720/hope-for-cleaner-nairobi-river-as-ruto-launches-commission (both accessed 21 October 2024).

58 See: <https://voicesforjustclimateaction.org/countries/kenya/>, <https://voicesforjustclimateaction.org/about-us/> and www.standardmedia.co.ke/nairobi/article/2001467720/hope-for-cleaner-nairobi-river-as-ruto-launches-commission (all accessed 21 October 2024).

59 See: www.trvst.world/charity-civil-society/komb-green-solutions-creating-nairobis-first-peoples-park/ (accessed 21 October 2024).

linkages with official actors, and how cartels have influenced local private firms and living conditions across the city. Nairobi's cartels have often stymied formalisation efforts in water and electricity (as noted above), and it will be important to explore new strategies that can incorporate these actors (for example, as utilities agents or maintenance workers) while also reducing their extractive, violent and corrupt practices. During Muungano's action research in Mukuru, the "poverty penalty" and the costs of cartels were important findings that helped spark the county's declaration of the SPA (SDI and AMT, 2017). Moving forward, a more systematic analysis of the politics of cartels across key domains and related sectors may offer further valuable insights for research and practice. This could include a thoroughgoing analysis of cartels' financial costs (for businesses, government and residents across the city) as well as consideration of the gendered burdens, quality concerns and insecurity stemming from extractive provision. Cartels' key role in shaping informal livelihoods and ST pathways, safety and security, health outcomes and shelter provision, in sum, would be promising areas for cross-domain research, including to illuminate the costs of cartels and the politics of their stranglehold upon major sectors in Nairobi.

Nairobi has several innovative **upgrading programmes** – including led by UN-Habitat and World Bank, as well as bottom-up, collaborative initiatives with Muungano – and future action research can analyse key lessons from these interventions. For instance, subsequent studies can examine how to incorporate ACRC's key concerns, such as the links between upgrading and climate resilience, health, S&S, gender equality and informal livelihoods. **Agenda-setting research and evaluations** of Mukuru SPA and other upgrading initiatives could offer valuable lessons and build on Nairobi's connections with a range of global urban policy networks (for example, C40, UN-Habitat). It will be especially helpful to consider how to improve rental housing inclusively and any emerging innovations in land tenure or other incremental solutions, especially to foster replication in other cities. Analysing the planning and governance lessons (such as contributions of SPA planning consortia, adjusted planning standards in Mukuru and Huruma, and so on) and the associated politics would be a valuable set of findings and would benefit from utilising a political settlements lens.

It will also be important to analyse the lasting impacts of Nairobi's **cost-of-living demonstrations** and their **political implications**, including for youth and other newly mobilised groups. Further research can explore if these protests ("maandamano") may lead to more inclusive power configurations at local and/or national scales, including the potential for enhanced cross-class alliances and participation by Nairobi youth (Apollo et al., 2024). Past protests in Kenya have often been dominated by elite interests and struggled to foster transformative change (Kalmoy, 2023; Shilaho, 2023). There are also underlying concerns about Kenya's rising debt burdens: Kenya's public debt as a share of GDP reached 73%, with 48% due to multilateral agencies, 29% to bilateral agencies and 23% to private creditors.⁶⁰ Such unsustainable debt burdens help to explain Ruto's efforts to raise taxes, which led to a fierce bottom-up backlash

60 See <https://unctad.org/publication/world-of-debt/dashboard> (accessed 22 October 2024).

and protests. For now, it remains too soon to say whether this recent upsurge of protests will have more progressive potential or again lead to entrenchment of dominant interests in Nairobi and Kenya more generally.

Finally, Nairobi's **network of social justice centres** can play a catalytic role in documenting rights violations and pioneering alternatives to punitive policing strategies. Mathare Social Justice Centre was founded in 2014, and ten other social justice centres in Nairobi were established subsequently (Gachihi, 2018; Jones and Gachihi, 2022; Jones et al., 2017). These bottom-up organisations have focused on several topics, including reproductive justice, right to water, and the police's extrajudicial killings in informal settlements (ibid). Their wide-ranging tactics have included community dialogues, detailed reports of police killings, and social media campaigns, complemented by powerful direct action, such as high-profile marches and "die-ins" at a Nairobi police station notorious for violence (Jones and Gachihi, 2022). Some of Nairobi's informal settlements have reported "quite significant drops" in extrajudicial killings after these community dialogues and marches (ibid: 178). Furthermore, social justice centres have conducted participatory action research and sought to mobilise communities, including to raise consciousness and generate alternative leadership structures (Gachihi, 2018). Given the need to secure external funding while maintaining a strong grassroots orientation, the centres may struggle to navigate tensions between an NGO-style "professional" orientation and community-led approaches (Jones and Gachihi, 2022). Future action research can seek to bolster the centres' capacities and advocacy potential, including opportunities to enhance their visibility and media profile (for example, through peer-to-peer learning and communications capacity-building). At the same time, it will be crucial to reflect upon how to ensure their autonomy and continue to develop novel tactics, alliances and action research that can promote the accountability of Kenya's official agencies.

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Appendix 1: Drivers of firm-level productivity

Correlates	(1) Firm size	(2) 1 and sectoral effects	(3) 2 and formality status	(4) 3, Age and employer characteristics	(5) 4 and utilities	(6) 5 and location controls
Firm size						
Small	0.423*** (0.0841)	0.691*** (0.107)	0.477*** (0.107)	0.511*** (0.111)	0.119 (0.118)	-0.180 (0.125)
Medium	0.850*** (0.274)	1.130*** (0.401)	0.925** (0.374)	1.043*** (0.400)	0.477 (0.383)	0.231 (0.459)
Large	2.127*** (0.314)	2.087*** (0.559)	1.737*** (0.534)	2.500*** (0.672)	1.834*** (0.614)	1.688** (0.683)
Formal enterprises			0.601*** (0.0671)	0.586*** (0.0661)	0.213*** (0.0750)	0.220*** (0.0775)
Age of the firm				0.0129** (0.00505)	0.0135*** (0.00474)	0.0134*** (0.00461)
Number of female employees				-0.0157** (0.00619)	-0.0150** (0.00597)	-0.0127* (0.00686)
Number of male employees				0.00137 (0.00386)	0.000693 (0.00343)	-6.89e-05 (0.00311)
Firm has piped water					0.225*** (0.0672)	0.170** (0.0745)
Firm has electricity					-0.131 (0.184)	-0.127 (0.161)
Firm has mobile phone					0.213*** (0.0671)	0.258*** (0.0692)
Firm has computer					0.396*** (0.0984)	0.250** (0.0976)

Firm has a website					0.495*** (0.115)	0.428*** (0.115)
Firm has access to tarmac road					0.0908 (0.0668)	0.0141 (0.0716)
Firm has improved toilet					0.241*** (0.0820)	0.314*** (0.0912)
Firm has proper effluent management					0.0282 (0.0713)	-0.0333 (0.0779)
Constant	8.882*** (0.0328)	8.066*** (1.073)	8.607*** (0.0389)	8.547*** (0.0508)	8.174*** (0.192)	8.305*** (0.170)
Observations	2,496	2,496	2,496	2,496	2,479	2,413
R-squared	0.030	0.143	0.178	0.189	0.235	0.157

Source: Authors' estimation from MSME (2016).

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Beginning with spatial effects, there are significant spatial differences in LP: firms located within Nairobi city tend to be more productive than firms in the adjoining counties. This could be because factors of production (labour and capital) are concentrated in Nairobi city, enabling firms to acquire these resources more rapidly and potentially cheaply and expand, relative to firms in the adjoining Muranga, Kiambu and Kajjado counties.

There also exist significant location effects. Firms operating in commercial premises are significantly more productive than those located in industrial premises, market stalls, open market, kiosks and other premises, partly because this location is convenient for customers.

Controlling for establishment size only, column 1 shows that firm's productivity increases by its size. Large enterprises are the most productive, followed by medium enterprises, and small enterprises, relative to micro enterprises (omitted category). On average, the productivity level of a small enterprise is 42.3 percentage points higher than that of micro enterprises. The productivity difference is even bigger between micro enterprises and medium enterprises. These differences are statistically significant at all levels. The productivity differences by size of the firm remain robust after controlling for sectoral fixed effects in an absorbed regression, as shown in column 2.

Adding firm's formality status to size and sectoral effects, we find that the effect of firm size on productivity remains significant. In addition, licensed firms (formal enterprises) are more productive than unlicensed firms (informal). On average, formal enterprises have 60 percentage points higher productivity than informal ones. The productivity difference by formality remains true across all controls: age of the establishment (column 3), employer characteristics (column 4), access to key infrastructure (column 5), and location of the enterprise (column 6).

Results from the regression also reveal that the establishment's age contributes to productivity differences. Older firms are significantly more productive than the younger ones. The effect of age remains robust against all controls (columns 4, 5, 6).

We do not find any strong gender effects of employees on firms' productivity. Whilst there are indications that firms that employ more females than males are less productive, the magnitude of the difference is not economically significant, almost a zero difference. The gender composition of employees therefore does not seem to matter for the firm's productivity.

Even though we have ascertained the correlates of firm productivity, there is a caveat to these results. The coefficient of determination (R-squared) shows that our correlates explain only about 20-30% of the variation in labour productivity. This suggests that further investigations can benefit from using new data of higher quality to unearth the drivers of these variations.

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