

# Informality-sustainable city nexus: The place of informality in advancing sustainable Ghanaian cities

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## ABSTRACT

Economic and spatial informality dominates the cityscape of countries in the Global South. From the perspective of urban practitioners and other stakeholders, there are two main schools of thought that discuss the roles of informality in the urban development discourse. The first school maintains that informality hinders the urban development process while the other posits that informality could be helpful in the urban sustainability push. In this article, the researchers, focusing on the latter, explores the productive functions of informality in developing sustainable Ghanaian cities. The researchers relied predominantly on secondary data. Using the Boolean search methodology, data were extracted from 85 articles/reports/websites that were obtained from online data and journal publishing repositories such as JSTOR, Scopus, SAGE and Taylor and Francis. The results from the thematic analysis of the data indicate that informality plays a vital role in promoting the economic, environmental, and social sustainability of cities in Ghana. Specifically, the informal economy and informal spaces contribute to the employment of both men and women, household income, tax revenue, waste management, water access, organic farming, health care access, social equity, and innovation. The paper concludes that informality in Ghana could profoundly facilitate the attainment of the sustainable city development objectives. Viewing informality through a productive lens, as we have argued in the paper, calls for a shift from 'broad blanket and criminalisation' policies on informality to more inclusive and pro-poor policies. Additionally, understanding the enormous opportunities informality presents to cities in the Global South will lead to increased investment and restructuring to mitigate the barriers its poses to the city development process.

## 1. Introduction

The world is rapidly urbanising, and cities throughout the world continue to benefit enormously from the urbanisation process (Glaeser, 2013). As of 2015, 54 per cent (4 billion people) of the world's population lived in urban areas (UN-Habitat, 2016a). This is estimated to reach 66.4 per cent by 2050 (UN-DESA, 2014). The world's rapid urbanisation is expected to be driven by high population growth in the Global South—i.e. regions of Africa, Asia, South America and Oceania, which were previously referred to as developing economies (UN-DESA, 2017). The authorities of the rapidly urbanising cities in the Global South are scrambling to cope and adapt to population growth. Un-guarded urbanisation has provoked significant sustainable development

challenges (Jiboye, 2011; UN-Habitat, 2016a). This underlies the long held Malthusian-view that overurbanisation is the prime cause of urban development problems (Boateng, 2020) and lends credence to Marx's theory of metabolic rift. Consequently, *informality* has emerged as a coping mechanism for many urbanites in the Global South.

Given its global prominence and future prospects, informality continues to attract the attention of several urban planning practitioners, city authorities, and academics. Therefore, informality has taken a pole position in contemporary urban planning discourse. It is typically viewed from two perspectives: economic and spatial (Rigon, Walker, & Koroma, 2020).<sup>1</sup> With respect to economic informality, Hart (1973, p. 68) notes that it is a "world of economic activities outside the organised labour force". Economic informality comprises three dimensions

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<sup>1</sup> Where the term 'informality' is used without any specification to economic or spatial, we imply both strands. It should be noted that both are strongly linked: informal uses of space beget informal economic activities.

namely: informal economy, informal sector, and informal employment. The *informal economy* refers to production and employment in unincorporated or unregistered enterprises (i.e. the *informal sector*) as well as jobs or work without labour-based protection in informal enterprises, formal firms, and households (i.e. *informal employment*) (Basu & Chau, 2015; ILO, 1993). In short, while the informal sector only captures unregistered enterprises and informal employment covers both the formal and informal sector, the informal economy encompasses all informal employment and activities in the informal sector. From recent estimates, 61.2 per cent of total employment (or two billion people aged 15 years and above) are involved in the informal economy (Bonnet, Vanek, & Chen, 2019).

Spatial informality, on the other hand, consists of the politics and processes that are involved in the production and regulation of space (Brown, McGranahan, & Dodman, 2014; Roy, 2015; Roy & Alsayyad, 2003). The spatial outcomes of such appropriation and claim for space (Bayat, 2000) are what scholars refer to as *informal settlements*. Informal settlements have sometimes been used interchangeably with slums. However, this is quite contentious as ‘informal settlements’ appear to be a broader concept than ‘slums.’ The UN-Habitat defines slums as contiguous settlements that lack one or more of the following: 1) access to clean and potable water; 2) access to improved sanitation; 3) sufficient living area that is not overcrowded; 4) durable housing; and 5) security of tenure (UN-Habitat, 2016a). On the contrary, informal settlements only lack tenure security and are generally in violation of urban planning regulations such as zoning maps and land use maps (Rigon et al., 2020). Strictly speaking, all slums are rundown areas, which implies that households living in them lack the conditions required for decent living. On the other hand, the conditions needed to live decently and thrive as human beings are prevalent in some informal settlements, especially those that are produced by middle- and high-class households. The only deprivation is tenure security. Nevertheless, in the Global South, the term ‘informal settlement’ is used within academic and policy circles to mostly refer to ‘slums.’ In this paper, slums are seen as the by-product and outcome of informality.<sup>2</sup> The researchers acknowledge that the nomenclature of the term ‘slums’ is problematic as it “homogenise[s] and stigmatise[s] a global urban population” (Holston, 2009, p. 249) and downgrades the value and agency of such settlements (Atia, 2019; Butola, 2019; Mayne, 2017; Roy, 2011). On the contrary, the current paper seeks to emphasise the role slums play within the sustainable city discourse.

The African Union’s New Urban Agenda (i.e. Agenda 2063), which is the 50-year blueprint to guide Africa through the path of sustainable and inclusive development, has brought sustainability to the forefront of urban policy and practice. This quest for sustainable urban development is largely credited to the Brundtland Commission’s assertion that development must strive to “...meet the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 8). These needs can be realised by holistically considering the tripartite (three) dimensions of sustainability, namely economic, environmental, and social in all urban development interventions (Azunre, Amponsah, Peprah, Takyi, & Braimah, 2019; Huang, Wu, & Yan, 2015; Iniesta-Bonillo, Sánchez-Fernández, & Jiménez-Castillo, 2016; Michael, Zainon, & Figueroa, 2014). The 11th Sustainable Development Goal [SDG] reiterates the crucial importance of sustainable urban development. It emphasises the need to “make cities and human settlements inclusive, safe, resilient and sustainable” (Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) (2016)).

Over the years, informality in the Global South has been debated and

decoupled from the sustainable city development discourse. Consequently, there is a long-standing debate between two main schools of thought. The first school of thought believes that informality hinders economic, environmental, and social sustainability and constrains the ability of future generations to meet their needs. Contrarily, the other school maintains that informality propels urban sustainability (see Fig. 1). With respect to the former, conventional literature has extensively depicted the precarious nature of the socio-economic and environmental conditions in slums (Arimah, 2015; Butala, VanRooyen, & Patel, 2010; Mahama, Anaman, & Osei-Akoto, 2014; Monney, Odai, Buamah, Awuah, & Nyenje, 2013). Residents in these slums lack access to quality water and basic sanitation services (Lilford et al., 2017; Moosavi, 2011), which underlie the high prevalence of diseases such as cholera, malaria, and diarrhoea (Hala, 2013), affecting mostly vulnerable groups such as women and children (Ezeh, Oyeboode, Satterthwaite, Chen, Ndugwa, Sartori, & Lilford (2017); Takyi, Amponsah, Yeboah, & Mantey, 2020). The poor environmental conditions in slums also negatively affect a country or region’s economy by making it less appealing for investment and reducing its competitiveness in the global arena (Gambo, Idowu, & Anyakora, 2012).

The lack of facilities, inadequate services, and limited employment opportunities in slums and within cities have created a huge socio-economic gap that needs to be addressed by city authorities and policy makers. Consequently, informal economic activities by households have mushroomed both within and outside slums. However, it is argued that these informal economic activities are unlawful, which require deterrent policies and strict sanctions and penalties to cure (Boeri & Garibaldi, 2007; Bosch & Esteban-Prete, 2012; Fugazza & Jacques, 2004). This gloomy reading of informality is what La Porta and Shleifer (2014) refer to as the “parasite view”, and Roy (2011) provocatively denotes as “dystopian and apocalyptic narratives”. Against this backdrop, protagonists of the pessimistic view of informality (i.e. both spatial and economic) maintain that informality is detrimental to the social, economic, and environmental sustainability of cities.

On the contrary, some studies refute the negative narrative about informality. The scholars underscore its productive functions, which can be exploited to foster sustainable development. A notable protagonist of this is Hernando de Soto in his book “*the mystery of capital: why capitalism triumphs in the West and fails everywhere else*”. Hernando de Soto observes that the informal economy is characterised by “dormant and defective assets [that] can be transformed into liquid capital; thereby, unleashing new frontiers of capital accumulation” (Roy, 2011). Similarly, some scholars (Brugmann, 2010; Malecki & Ewers, 2007) note that slum dwellers provide comparatively cheap labour to the middle classes and businesses. Also, a considerable number of informal enterprises offers services to urban residents and provides a substantial contribution to the Gross Domestic Product and revenue base of cities (Abunyewah, Ackuayi, & Nana, 2014; Mahabir, Crooks, Croitoru, & Agouris, 2016). For instance, 70 % of residents in the slums of Dharavi, India are employed in the informal sector, and they contribute an estimated US \$700 million annually (Chege & Mwisukha, 2013). On the environmental front, slum dwellers provide crucial waste management services for cities. A classic example is Cairo’s “Garbage City” within the Muqattam Mountains lower plateau, home to the *Zabbaleen*, which directly translates as “garbage people” (Fahmi & Sutton, 2010). The waste collection processes of the *Zabbaleen* have been widely celebrated as efficient, rapid, and sustainable (Fahmi & Sutton, 2006; Fahmi, 2005; Samson, 2010). In short, optimistic commentators contend that informality is a pivotal cog in developing sustainable urban economies.

To sum up, the debate on the informality-sustainable city development nexus is contested between two divides (see Fig. 1). However, a critical reading of the supposed two-sided empirical evidence indicates a skewness towards the challenges that informality and the activities of informal residents (e.g. slum dwellers) pose for sustainable city development. Literature has commonly depicted informal settlements (and its residents) as threats to national, regional, and global sustainable

<sup>2</sup> We use slums rather than informal settlements because statistical records only report on the scale and magnitude of ‘slums’: approximately 1 billion people live in slums (UN-Habitat, 2016b). Also, international accords tend to develop goals and targets around slums rather than informal settlements (see Sustainable Development Goal 11).

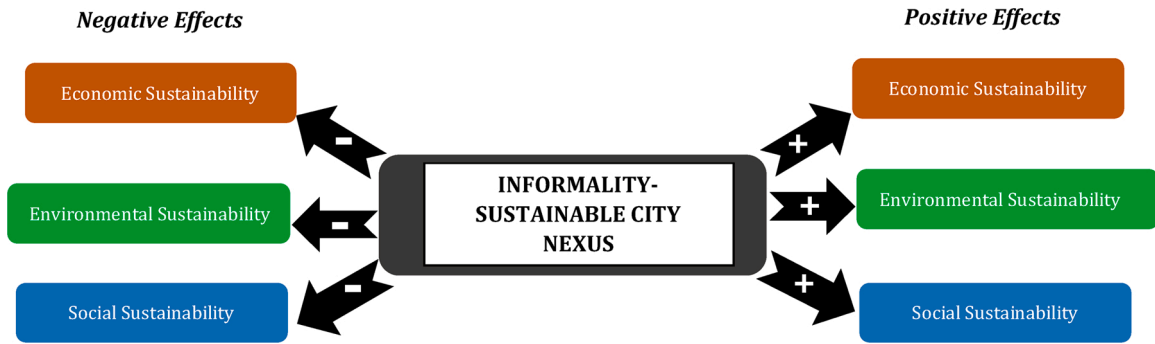


Fig. 1. Two-fold nexus of informality and sustainable cities.

development (Patel, 2012). This may be justified by the glaring dearth of basic services and infrastructural facilities in most of the informal settlements in the cities in the Global South. Nevertheless, the researchers

note that without critically exploring the potential roles that informality plays in cities, urban policies and planning interventions (such as slum redevelopment and comprehensive economic strategies) may overlook



Fig. 2. Map of Ghana in the context of Africa.

vital issues in developing sustainable, eco-friendly, and self-sufficient cities—the aim of SDG 11.

Some previous studies (e.g., Alam & Qiao, 2020; Montoya, Cartes, & Zumelzu, 2020; Suthar, Rayal, & Ahada, 2016) in high rated journals such as *Sustainable Cities and Society* have remediated the lopsided debate and provided a useful base for the current study. However, they still lack in examining the multi-dimensional and multi-faceted aspects of informality and sustainable city development. To holistically balance the narrative and draw attention to the potential roles of informality in the development of sustainable cities and society, the researchers use Ghana as a case study to systematically unveil the agency and productive roles of informal activities. The relevance of the paper stems from sub-Saharan Africa's agenda to make its cities and human settlements sustainable and inclusive. The agenda are exemplified in the global community's Agenda 2030 (Sustainable Development Goals, especially the 11th goal) and African Union's Agenda 2063. Drawing from the narrative that informality is a destination for many in the Global South and that the difference between formality and informality is only conceptual (Hodder, 2016), a clear understanding of the role of informality in the development of sustainable and inclusive societies will enhance urban planning within informality-dominated societies in the Global South. The article contributes to scholarly debates about the place of informality in the development of sustainable and inclusive cities and outlines specific strategies that will enable urban planners unleash the potentials of informality while addressing its associated threats.

## 2. Materials and methods

### 2.1. Ghana in perspective

This article explores the nexus between informality and sustainable city development in Ghana. Ghana is a West African country bordered to the North by Burkina Faso, the East by Togo, the West by Cote d'Ivoire, and the South by the Gulf of Guinea. Fig. 2 below shows the geographical location of Ghana in Africa and the 16 administrative regions of the country.

Ghana was carefully selected for a number of reasons. First, Ghanaian cities are rapidly urbanising. Cities such as Accra and Kumasi are the most urbanised cities in Ghana (see Table 1). For several decades, Ghana was predominantly rural with development and growth in cities running at a very lacklustre pace. However, since 2010 when Ghana's urban population for the first time surpassed the rural population (Ghana Statistical Service, 2014a), issues of sustainability have become much more critical and assumed prominence in the urban planning domain. For instance, several studies (e.g., Amponsah, Vigre, Schou, Boateng et al., 2015; Ayambire, Amponsah, Peprah, & Takyi, 2019; Azerigyik, Amponsah, & Takyi, 2018; Cobbinah & Aboagye, 2017) have reported rapid declines in urban and peri-urban agricultural lands,

**Table 1**  
Population growth trend of major Ghanaian cities.

City	1970	1984	2000	2010	2020*
Accra	624,091	969,195	1,658,937	2,070,463	3,070,463
Kumasi	346,336	469,628	1,170,270	2,035,064	3,035,064
Sekondi-Takoradi	143,982	188,203	289,595	539,548	946,000
Tamale	83,653	135,952	202,317	371,351	642,000
Cape Coast	56,601	65,763	82,291	169,894	259,894
Tema	60,767	100,052	141,479	139,784	155,782
Koforidua	46,235	58,731	87,315	120,971	156,266
Ho	24,199	37,777	61,658	104,532	149,998
Sunyani	23,780	38,834	61,992	74,240	80,299
Wa	13,740	36,067	66,644	71,051	78,107
Bolgatanga	18,896	32,495	49,162	65,549	74,430

\* Projections based on 2010 population census.

Source: Various censuses of Ghana Statistical Service (1970, 1984, 2000, 2010) cited in Cobbinah (2021, p. 3).

destruction of water resources, increasing use of unclean energy, and limited infrastructure and services. As a result, Ghanaian cities are increasingly vulnerable to the impacts of climate change and are unable to withstand heavy rainfalls (Amoako & Inkoom, 2018; Amoako, 2016; Amoako, Cobbinah, & Mensah Darkwah, 2019; Poku-Boansi, Amoako, Owusu-Ansah, & Cobbinah, 2020). This is evident in the constant flood events that citizens contend with annually (Mensah & Ahadzie, 2020). Ghana's urbanisation experience is similar to that of a number of countries in sub-Saharan Africa (SSA), hence the study will offer useful policy lessons to these countries.

Secondly, Ghana was selected because available evidence suggests that informality has become pervasive because of the country's urbanisation trajectory. Economically, Charnes (2012) observed that the informal economy represented about 65.5 % of total employment between 2005 and 2010. Similarly, two out of five urban dwellers (37.9 %) in Ghana live in slum settlements that lack major neighbourhood services (UN, 2017). The widespread nature of informality makes Ghana an interesting case to explore the informality-sustainability nexus and to serve as an essential input to further the country's quest for sustainable city development.

### 2.2. Research design

As illustrated in Fig. 3, a methodical research process was adopted in the current study. The data gathered and analysed primarily focused on the Ghanaian context. The case study approach was applied through a systematic review of *secondary data*. Secondary data is used in this study to refer to data by other researchers used to achieve research objectives different from the original collector (Hox & Boeije, 2005; Vartanian, 2011). The synthesis of secondary data aided in a cautious exploration of the rather passively stressed productive functions of informality. In what follows (i.e. Section 2.2.1), the inclusion and search process adopted to obtain relevant articles and reports are methodically presented.

#### 2.2.1. Data collection process

The study adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach to scientifically search and include relevant studies to aid in the analysis.

**2.2.1.1. Inclusion criteria.** The study relied on peer-reviewed journal articles, institutional documents, and grey literature (e.g., online news posts) that satisfied three criteria. Firstly, studies must be focused on informality (as operationally defined in the current article) in the Global South where Ghana is referenced. Secondly, studies must be based on primary data or an in-depth analysis of conventional literature. Third, studies ought to have reported on some of the roles or functions that informality plays in the social, economic, and environmental development of Ghanaian cities.

**2.2.1.2. Search process.** The literature search process was guided by the analytical themes of the study. Under each theme, a set of variables were pre-determined by reviewing conventional literature (see Table 3). Following this, the Boolean search methodology was used to pair primary keywords ("informality", "informal economy", "informal settlements", "slums", "social", "economic", "environmental", "sustainable city development", "Ghana") and their synonyms with secondary keywords that matched the analytical theme (e.g., "health", "waste collection", "revenue" "education" "civic engagement"). A combination of these keywords generated phrases that were run in search engines such as Google and Google Scholar to obtain literature from online data and journal publishing repositories such as JSTOR, Scopus, SAGE and Taylor and Francis.

The screening of journal articles was also done systematically through the following process: First, a quick scan of the abstract and conclusions of downloaded papers was done to grasp its content. After

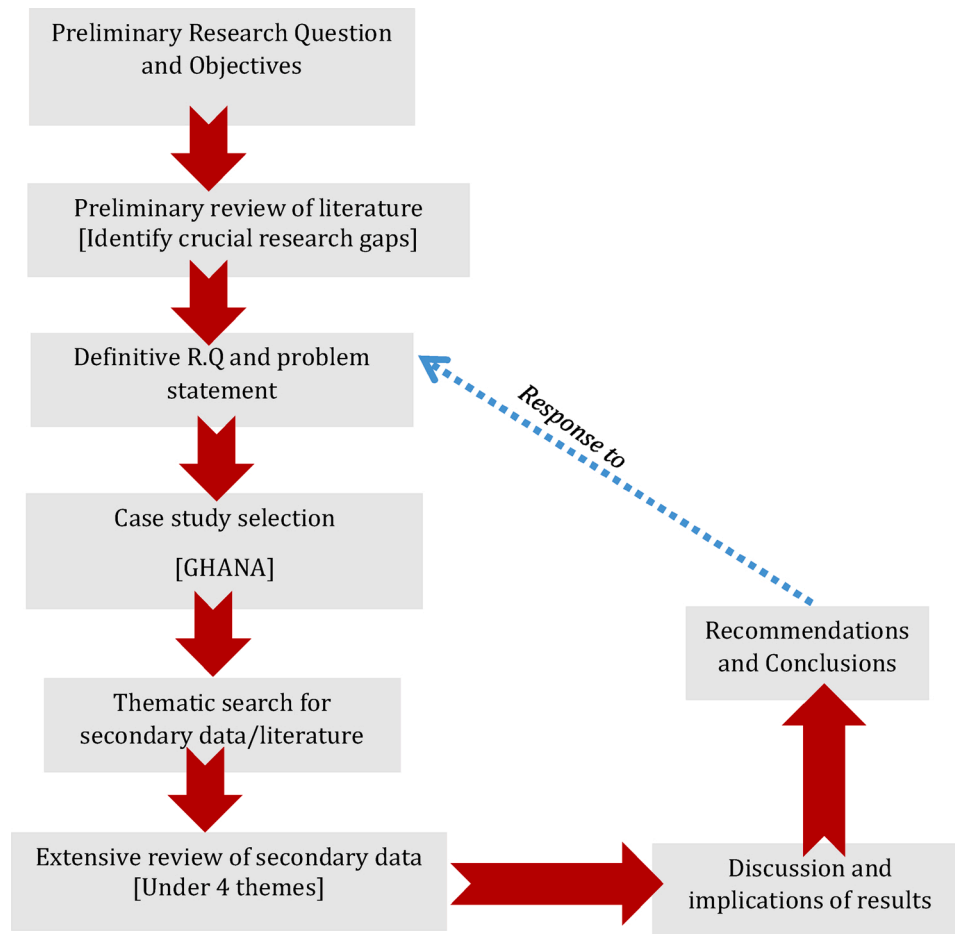


Fig. 3. Research design process.

an article fulfilled all the inclusivity checks, they were added to the reviewed articles. Second, to widen the scope of the search, bibliographies of all included articles were read to further obtain relevant literature for analysis. At the end of the search process, 85 articles/reports/websites were selected and used for the analytical part of the study (see

Table 2).

2.2.2. Analytical method

The study adopted content and thematic tools to analyse the data. The analyses captured both qualitative and quantitative data on the role

Table 2  
Literature Search Method.

S/N	Theme	Primary keywords	Secondary keywords	Resources	Web Address
1.	Overview of some major slums in Ghana		-Purchased slums -Indigenous slums -Extra-legal slums -Total employment -Employment of women -Tax revenue	<b>Search Engines</b> Google Google Scholar	<a href="http://www.google.com">http://www.google.com</a> <a href="http://www.scholar.google.com">http://www.scholar.google.com</a>
2.	Productive economic sustainability functions	-Informality -Informal economy -Informal settlements -Slums	-Household income -National income -Waste management	<b>Databases</b> JSTOR Elsevier SAGE	<a href="https://www.jstor.org/">https://www.jstor.org/</a> <a href="https://www.elsevier.com/">https://www.elsevier.com/</a> <a href="https://us.sagepub.com/en-us/nam/home">https://us.sagepub.com/en-us/nam/home</a>
3.	Productive environmental sustainability functions	-Social sustainability -Economic sustainability -Environmental sustainability -Sustainable city development -Ghana	-Waste Recycling -Water Supply -Wastewater Reuse -Organic Farming -Education -Civic Resources -Social Capital	Taylor and Francis	<a href="https://www.tandfonline.com/">https://www.tandfonline.com/</a>
4.	Productive social sustainability functions		-Social Equity and Gender Equality -Tourism -Health -Innovation	<b>Websites</b>	<a href="https://www.viator.com">https://www.viator.com</a> <a href="https://www.lonelyplanet.com">https://www.lonelyplanet.com</a> <a href="https://statsghana.gov.gh/">https://statsghana.gov.gh/</a> <a href="https://www.pdghana.org/">https://www.pdghana.org/</a> <a href="https://www.pbs.org">https://www.pbs.org</a> <a href="https://www.in-formality.com">https://www.in-formality.com</a>
<b>Total literature used</b>				<b>85</b>	



**Table 3**  
Sustainable City Variables.

Sustainable City Development Dimension	Definition	Abridged Variables
Economic Sustainability	Economic sustainability refers to the ability of a system to sustain long-term economic growth.	1. Total Employment 2. Women in Employment 3. Household Income 4. Tax Revenue 5. National Income
Environmental Sustainability	Environmental sustainability refers to the protection and supply of environmental resources to guarantee long-term gains.	1. Waste Collection 2. Waste Recycling 3. Water Supply 4. Wastewater Reuse 5. Organic Farming
Social Sustainability	Social sustainability refers to the ability of formal and informal processes, systems, and structures to create and sustain healthy and liveable communities.	1. Education 2. Civic Resources 3. Social Capital 4. Social Equity and Gender Equality 5. Tourism 6. Health 7. Innovation

Source: Adapted from (Azunre et al., 2019).

of informality in the sustainability of Ghanaian cities. Thematically, the analyses began by presenting a general overview of spatial informality (i.e. slums) in two major cities in Ghana: Accra and Kumasi. This synopsis was done to clearly characterise Ghanaian slums and to assess their locations relative to the centre of the cities. Following this, three other themes: i) productive economic sustainability functions, ii) productive environmental sustainability functions, and iii) productive social sustainability functions were developed from the tripartite dimensions of sustainable city used in the present study. The synthesis of literature and analyses of results focused on a set of variables adapted from the work of Azunre et al. (2019). This served as the analytical framework (see Table 3 below).

### 3. Informality-sustainable city nexus in Ghana

In this section, the relationship between informality and sustainability in Ghanaian cities is established based on four themes. The first theme aims at illustrating the spatiality of informality (i.e. slum formation) while the other three focuses on the tripartite dimensions of sustainable city development.

#### 3.1. An overview of major slums in Ghana

Slums in Ghana are commonly defined according to UN-Habitat's five dimensions or characterisations (Adusei, Oduro-ofori, & Amponsah, 2017; Ministry of Water Resources Works & Housing, 2015). These dimensions are 1) access to improved drinking water, 2) access to improved sanitation, 3) durability of housing, 4) sufficient area (living space), and 5) security of tenure. In the past years, other scholarly works in Ghana have moved to validate these dimensions. The studies have expanded the dimensions based on contextual specificities to include poor roads or street networks, choked drains, weedy surroundings, poor building structures, and inadequate home toilets (Adubofour, Obiri-danso, & Quansah, 2012; Dinye & Acheampong, 2013). Despite this, there is still a litany of debates on the definition of slums and their specific typologies. In this study, we adopt Paller's (2015) three-pronged classification of Ghanaian slums as it depicts a more vivid and clear appreciation of the cultural and social context, the specific slum formation processes, and their incremental assumption of legitimacy.

Firstly, *extra-legal slums* are settlements viewed as illegitimate and not officially recognised by local and national authorities. Their illegitimacy is primarily explained by their formation on unauthorised lands with land ownership processes violating the existing customary norms. These settlements are commonly referred to as *squatter settlements* (see Fig. 4).

Secondly, *indigenous slums* are traditional settlements that have descended into slums because of the failures of urban planning institutions to enforce planning regulations and the limited public investment in services (Arguello, Grant, Oteng-Ababio, & Ayele, 2013). These settlements form a significant part of the historical centre of cities. The governance processes within indigenous slums are dominated by customary and traditional norms and practices. The third type of slums is the *purchased slums* and these are settlements whose legitimacy is unquestioned because of the customary legal processes that were followed by early settlers (Paller, 2015). A classic example is Nima in the capital city Accra. Historical records indicate that Alhaji Futa purchased the Nima land and formed the settlement in 1931 by exchanging gifts with customary authorities who held the allodial titles to the land (Peil, 1976).

In Fig. 4, the locations of some selected slums in the two largest cities of Ghana—Accra and Kumasi—has been mapped and distinguished according to the three classifications adopted in the present study. From the maps, it can be observed that most slums are in close proximity to the cities' Central Business Districts (CBD). A study by Takyi et al. (2020) reports that on average, slums in the Kumasi Metropolis are 3.2 km away from the CBD. The study further observed that slum communities such as Dakwodwam and Asawase are the closest to Kumasi central with distances of 1.5 km and 2.5 km, respectively. Additionally, slum communities such as Ga Mashie and James Town are closest to Accra Central with distances of about 1 km and 1.4 km, respectively. The foregoing is indicative of how entrenched informality and its consequent neighbourhood outcomes are in the urban fabric of Ghanaian cities.

#### 3.2. Productive economic sustainability functions

Informal activities and businesses offer useful economic contributions to cities in Ghana. Specifically, economic informality increases total employment, employment of women, tax revenue, household income, and national income. According to IIED (2016), the informal economy spans a wide range of sectors, which include 1) trade (including market trading, street vendors), 2) crafts (e.g., woodwork, pottery, handicraft, basketry), 3) production (e.g., timber, charcoal, food processing), 4) mining (e.g., diggers, washers), 5) construction (building, brickmaking, plumbing), 6) services (transport, waste pickers, gardening, shoe polishing), and 7) farming (smallholders, pastoralists, fisherfolk). In Ghana, many households are engaged in these sectors and sometimes reside in slum communities. For instance, slums such as Agbogbloshie in Accra and Dagomba Line in Kumasi have emerged as hubs for electronic waste recycling. Agbogbloshie is also home to a thriving open space market in which the aforementioned sectors thrive. This lends credence to the slum modernisation theory, which maintains that slums are a transitory phenomenon characteristic of fast-growing economies (Frankenhoff, 1967; Turner, 1969).

As presented in Fig. 5, the informal private sector engages about two out of every five (41.9 %) of the currently employed persons 15 years and older. Also, three-fifths (61.5 %) of the employed urban population are informal private workers, whereas less than one-quarter (23.3 %) of their rural counterparts are informally employed. Regardless of locality, more females than males are usually engaged by informal private employers. Generally, the data shows that 47.8 % of Ghanaian female economic actors are employed in the informal sector compared to 35.5 % males. Within cities and urban areas, significantly more females (69.3 %) are employed informally in comparison to males (52.8 %). Due to insufficient data, the statistics here covers the informal sector and must, therefore, be treated with caution. This means that the Ghanaian informal economy should be reporting higher figures because it would

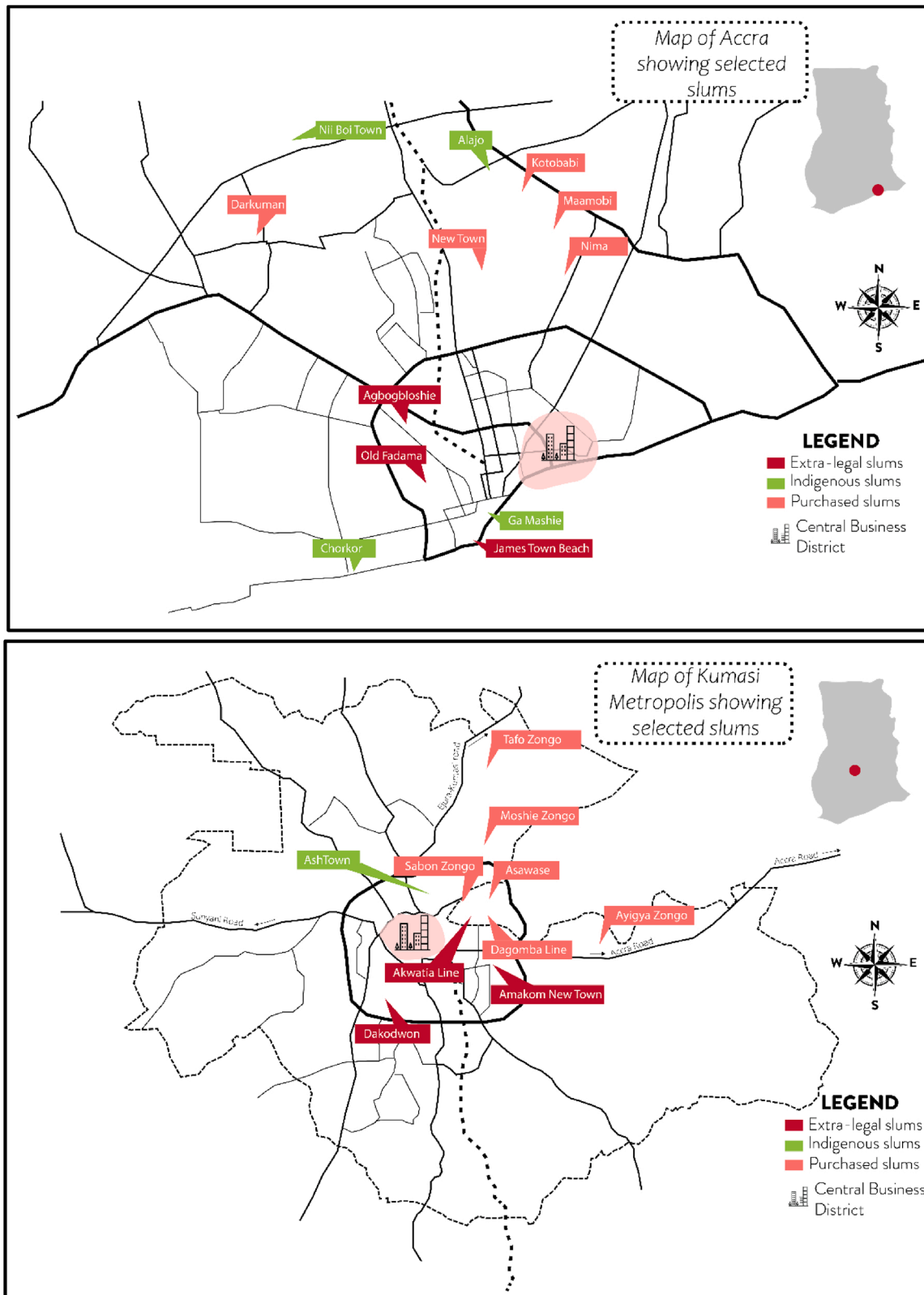


Fig. 4. Spatial distribution of slums in Accra and Kumasi, Ghana.

include informal employment in the formal sector. However, the available estimates point to an urban dimension and the significance of non-farm informal operators in Ghana.

The foregoing analysis confirms the profound role of economic informality in creating employment for both men and women in Ghana.

However, soaring decent work deficits within the informal economy causes informal operators (wage workers and employers) to receive relatively low earnings than their counterparts in the formal sector (International Labour Organization, 2020). This does not imply that informal operators are poor. On the contrary, there are several formal

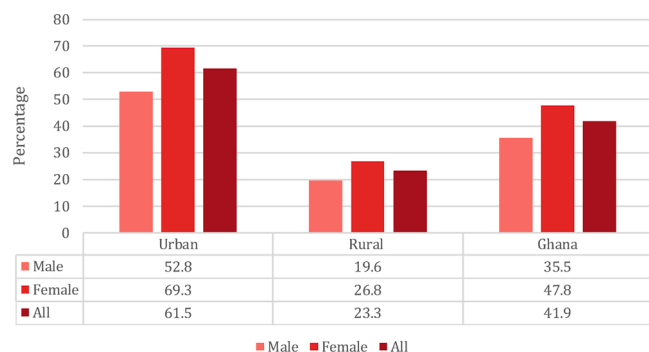


Fig. 5. Informal labour economy in Ghana.  
Source: (Ghana Statistical Service, 2014b).

operators that receive lower incomes in comparison to informal operators (IIED, 2016; ILO, 2018). Overall, informal economic activities have provided the Ghanaian urban poor households with an opportunity to obtain appreciable incomes.

However, there is a gender pay gap within the informal sector. The *hierarchy of earnings and employment segmentation* established in the WIEGO multi-segmented model (Chen, 2012) posits different rungs of employment for both males and females. The model shows more females than males at the lower rungs of the informal employment hierarchy who are mostly involved in unpaid family work, home-work, and casual work. This biased nature of economic informality can be partly observed in Ghana with activities such as hawking, food vending, homecare, hairdressing, and commercial sex work dominated by females (Tutu, 2013). Nevertheless, this trend is slowly changing as Ghanaian women are currently breaking the shackles that confine them to unpaid work by assuming positions as employers and entrepreneurs high on the hierarchy (see: Adom, 2015; Langevang, Gough, Yankson, Owusu, & Osei, 2015).

Furthermore, economic informality has always been associated with the erosion and evasion of national tax revenues (Cassim, Lilienstein, Oosthuizen, & Steenkamp, 2016; Verick, 2006). In Ghana, several institutions are responsible for tax collection: 1) the Ministry of Finance, 2) Ghana Revenue Authority (GRA), which comprises of the Internal Revenue Service (IRS), Value Added Tax (VAT) Service and the Customs, Excise and Preventive Service (CEPS), and 3) Metropolitan, Municipal, and District Assemblies (MMDAs). These institutions have historically struggled to efficiently collect both direct and indirect taxes. Although there is a paucity of empirical data to accurately estimate the scale of tax evasion in Ghana, some studies (e.g., Ameyaw, Oppong, Abbruch, & Ashalley, 2016; Amoh & Adafula, 2019; Danquah & Osei-Assibey, 2016) have reported that evasion is more synonymous with informal processes. Focusing on informal non-farm operators under the tax stamp system of Ghana, Danquah and Osei-Assibey (2016) estimated that in 2013, tax revenue of GHS801,940.00 (US\$334,142) was anticipated. However, the actual annual tax collected by GRA was GHS205,589.32 (US\$85,662), indicating a tax gap or loss of about GHS596,350.70 (US\$248,480).

Consequently, the high tax gap has shaped the narrative that informal workers are ‘evaders’ (i.e. purposefully evade taxes). However, studies have argued that not all informal workers deliberately avoid taxes. In contrast, a growing number have started paying various kinds of taxes such as VAT, licence fees, and site fees to operate in specific locations (Chen, 2012). This assertion can be vividly observed in Ghana. A study by Caroll (2011) found that only 5 per cent of surveyed women in the informal sector reported evasion and non-compliance with tax regulations. The study further indicated that women who earn GHS31-50 (US\$19-25) per month tend to pay taxes of GHS5-10 (US\$3-6) per month, while those earning between GHS201-300 (US\$126-188) per month pay GHS25 (US\$16) and higher. A crucial finding from

Caroll’s (2011) research was the excessive tax burdens faced by low earning women who sometimes paid more than 125 per cent of their monthly earnings as tax. This was chiefly attributable to market fees and the unscrupulous seizure of items by tax collectors. The actual tax payment attribute of informal operators was corroborated by Baa-h-Ennumh and Adom-Asamoah (2012) who observed that wholesalers and retailers generally pay market tolls ranging from 5GHP to 10GHP (0.01 USD–0.02 USD). The implication of this is that even though a relatively high percentage of informal operators do not pay taxes or sometimes pay minimal amounts, the few who do contribute to national and local income.

A key point of note is that the challenges in tax collection are primarily institutional and indicative of sub-par tax collection and legal systems (Cassim et al., 2016; ECOSOC, 2015). Generally, informal operators in Ghana have been noted to be willing to pay taxes. The only caveat is that they require labour and social protection, tax breaks, incentive packages, as well as all the benefits that are enjoyed by formal operators. Without these, the cost of paying taxes exceeds the benefits, which will continue to be a driver for informal operators to avoid the payment of taxes. This phenomenon was reported in a study by Caroll (2011) where the informal operators strongly recommended that taxes should be used to address their infrastructural needs such as water and sanitation facilities in the open markets, improved access roads and alleys in these markets, recycling infrastructure for waste collectors, among others. It is, thus, recommended that the debate on tax revenue from the informal economy in Ghana should be re-directed to solving institutional and structural deficiencies as well as providing noticeable benefits to taxpayers. To sum up, the results point to promising roles economic informality plays in the economic sustainability of Ghanaian cities.

### 3.3. Productive environmental sustainability functions

The environmental sustainability of Ghanaian cities has been enhanced by informal economic and spatial processes. First, the management of solid waste in rapidly urbanising Ghanaian cities have been predominantly performed by the informal sector. Ghana, like many sub-Saharan African countries, is faced with an underwhelming formal waste management system (Major, Omojola, Dettinger, Hanson, & Sanchez-Rodriguez, 2011; Nzeadibe, 2013; WWAP, 2017). Management of municipal waste has been traditionally mandated to Metropolitan, Municipal, and District Assemblies under the Local Government Act (Act 462) of 1992, now Local Governance Act (Act 936) of 2016. In 1999, the central government decided to involve the private sector through a national public-private partnership (PPP) scheme to help improve waste management. Private companies such as Chagnon City and Country Waste Ltd (CCWL) and Zoomlion Ghana Limited were tasked to assist in nationwide waste management (Oteng-Ababio, Owusu-Sekyere, & Amoah, 2017). However, these initiatives did not achieve substantial successes as average daily collection coverage in some major cities paled in comparison to cities in the Global North (see Table 4). In fact, the low coverage was partly attributable to the over-concentration of the private and public formal operators in high-income, low-density neighbourhoods at the expense of poor neighbourhoods (Oduro-Appiah, Afful, Kotey, & de Vries, 2019; Oteng-Ababio, 2012a). Consequently, the informal sector emerged and assumed the role as ‘gap fillers’ to provide essential waste management services to households in middle- and low-income communities.

In Ghana, the informal waste sector involves individuals who use carts or tricycles to provide waste collection services on a door-to-door basis. Asibey, Amponsah, and Yeboah (2019) note that they normally use improvised sirens to signal their arrival at respective spots or neighbourhoods. They also use buckets (observed to carry between 2 m<sup>3</sup> and 4 m<sup>3</sup>) to collect and transport wastes at the cost of GHS1 (US \$0.22/tonne of waste bag) to formal waste collection points. While informal waste collectors have commonly worked in low-income areas,



**Table 4**

Waste generation and average collection in Ghanaian cities.

City	Daily waste generation (tonne)	Per capita waste generation (kg/day)	Average daily collection coverage (tonne)	Average daily collection coverage (%)
Accra	1800	0.51	1200	67
Kumasi	1000	0.77	700	70
Tema	250	0.50	200	80
Tamale	180	0.58	85	47
Sekondi-Takoradi	250	0.83	165	66

Source: Accra Metropolitan Assembly/Waste Management Department (2007) cited in (Oteng-Ababio, 2012a)

recent improvements in efficiency and professionalism have seen them move into middle and high-income neighbourhoods at the expense of formal collectors (Oteng-Ababio, 2012a). Apart from transportation and collection of household waste by the informal waste collectors, the informal recycling sector (IRS) in Ghana offers very noticeable waste management functions. Specifically, the e-waste recycling sector is emblematic as less than 1 % of generated electronic waste is managed by the formal sector (Dogbevi, 2020). Despite several reports by some scholars on the indiscriminate burning and severe heavy metal contamination of soils and water bodies by the IRS (Asibey, Lykke, & King, 2020; Nartey, 2016; Oteng-Ababio, 2012b), informal electronic waste processing sites offer enormous environmental functions. For instance, they offer a reference point for which waste is collected and recycled. The Agbogboshie e-waste Processing Site (AEPS) in Accra, which is the largest in the world, as well as other e-waste sites such as Dagomba-Line in Kumasi, have provided households with employment and incomes and have helped in the processing of e-waste generated both within the city and in peri-urban areas (Asibey et al., 2020).

In sum, the management of solid waste and the informal recycling help to reduce indiscriminate waste disposal and burning, which would have otherwise polluted water bodies and the air. Informal waste management is, therefore, facilitating the use of the untapped resource potential of waste, thereby creating a circular economy. This underscores the need for city authorities to intervene to address the negative externalities from these informal economic activities.

Furthermore, water access has become problematic across the globe, especially in Ghana, because of the growing population and water demand (Burek et al., 2016); changing water consumption patterns from competing uses such as agriculture, hydroelectric power generation, industry, and households (UNESCO, 2019; WWAP, 2016); and climate change (UNESCO, 2019). Ghanaian authorities struggle to provide potable water to both formal and informal neighbourhoods. Public utility coverage levels are low, which has left several households water-poor. The situation is more precarious in informal neighbourhoods. Studies reveal that these neighbourhoods are often excluded from formal utility connections due to their illegitimacy in the eyes of the state (Acheampong, Swilling, & Urama, 2016; Adusei et al., 2017). Resolving some of the general water coverage difficulties has been the

duty of the informal economy. Water in Ghana is sometimes informally provided through wholesale vendors (e.g. tanker trucks), distributing vendors (e.g. hand/bicycle carts, animal-drawn carts), and direct vendors (e.g. water kiosks, roadside sellers). Distributing vendors such as the motorised water carts and water trucks, as shown in Fig. 6, are able to navigate formal and informal neighbourhoods to supply relatively clean water to the residents. Despite several challenges with regards to poverty penalties or premiums from informal vendors (Amankwaa, 2016; Braimah, Obeng Nti, & Amponsah, 2018; Peloso & Morinville, 2014), informal water services have presented a platform for which the water needs of several urban Ghanaians are satisfied.

Finally, agriculture (especially organic farming) has been enhanced through informal irrigation and sale of agricultural inputs. As discussed earlier, access to freshwater in Ghana is erratic with farmers having to devise new ways of accessing water. One of such mechanisms is through wastewater reuse because it offers urban and peri-urban farmers with a cheaper irrigation option while also reducing freshwater withdrawals in the country (Nolasco, 2011; Van Der Hoek et al., 2002). The use of wastewater by Ghanaian farmers has also helped in the management of liquid waste of cities. For instance, Lydecker and Drechsel (2010) found that urban vegetable farms in Accra, Ghana treat the wastewater from about 225,000 households. While studies have associated untreated wastewater and unrestricted irrigation with a myriad of health risks (e.g., Drechsel, Scott, Raschid-Sally, Redwood, & Bahri, 2010; Keraita & Drechsel, 2004), the potential of wastewater must not be ignored as informal households are greatly benefitting from it. Restricted irrigation mechanisms must, therefore, be favoured over complete neglect of wastewater reuse for irrigation. Ensuring the farmers' compliance with the World Health Organisation's Multiple Barrier Approach could also be a useful strategy for the safe use of untreated wastewater for irrigation purposes (Abaidoo et al., 2009). Therefore, the barriers that are associated with the adoption of the WHO multiple barrier interventions (such as high cost of drip kits, land tenure insecurity and consumers' preferences for fresh vegetables) will have to be addressed (Amponsah, Vigre, Schou, Braimah, & Abaidoo, 2015).

Similarly, farm inputs in Ghana are commonly supplied through informal channels. With respect to crop farming, earlier scholars (Amoah, Drechsel, Henseler, & Abaidoo, 2007; Harris, Lloyd,



**Fig. 6.** Informal Water Vendors in Ghana: A = Motorised water cart; B = Water truck.  
Source: (Braimah et al., 2018).

Hofny-Collins, Baret, & Browne, 1998; Oti Agyekum, Ohene-Yankyer, Keraita, Cudjoe Fialor, & Abaidoo, 2014) observed that Ghana's informal market supplies animal manure such as poultry droppings to farmers. This helps farmers to produce fresh vegetables, fruits, and herbs and directs them away from using synthetic chemical compounded fertilisers which are associated with greenhouse gases. Also, on-farm labour services, sale of seeds, and extension services are sometimes provided through informal channels. Overall, informality profoundly contributes to the environmental sustainability of Ghanaian cities. To sustain these environmental benefits, critical steps must be taken to safeguard informality's place in the urban realm while reducing its negative environmental externalities.

### 3.4. Productive social sustainability functions

Economic and spatial informality provides essential social sustainability services to cities in Ghana. This is especially true concerning education, civic engagement, social capital, social equity, tourism, health, and innovation. As mentioned earlier, the informal economy has provided several Ghanaians with employment and income. Households are now able to afford the educational expenses of their children, providing them with an opportunity for upward social mobility and breaking away from poverty traps. Also, basic private schools in extra-legal slums (i.e. informal/illegal slums) are increasingly being provided through informal mechanisms. In Ghana, the unsettled legal-illegal outlook for slum settlements affects public investment in essential social services such as educational facilities. For instance, Nima (a legal slum or purchased slum) has been noted to benefit from substantial basic education investments unlike their counterparts in illegal slums (e.g. Old Fadama) (Azunre, 2021). Informal day-care centres and primary schools are therefore parts of the very few sources of affordable basic education for children living in "illegal" settlements.

Another way informality enhances social sustainability is through civic resources and assets. A well-known example in the literature on the civic attributes of spatial informality is the frequent contestations against slum eviction. In Ghana, the case of Old Fadama is particularly intriguing. Old Fadama has been touted as illegal because households historically occupied and presently squat on 31 ha of government-owned land beside the Odaw River and near the Korle Lagoon in Accra, Ghana (Farouk & Owusu, 2012). According to Yeboah and Obeng-Odoom (2010) and Afenah (2012), this settlement has persisted because it assumed a political tussle among local and central political actors, which crippled all attempts to evict the residents. Through collaboration with several organisations such as Shack Dwellers International, People's Dialogue on Human Settlement and the 'Ghana Federation of the Urban Poor-GHAFUP', residents have been able to resist several eviction attempts since 2002. The civic richness in informal spaces is also firmly seen in the various community-driven initiatives such as the community-led population enumerations in Old Fadama, Accra (Farouk & Owusu, 2012).

Civic resources tend to fuel social capital in informal communities. Households draw on social assets to finance basic services (e.g., water, sanitation) and respond to disasters such as flooding and fire outbreaks. One key example through which informal social capital helps in social sustainability is in housing construction. In Ghana, 90 % of housing is supplied by individual households or the informal sector through self-building or cooperative enterprises (UN-HABITAT, 2011). Houses are mostly constructed through an incremental self-building process over several years to reflect the gradual change in the socio-economic status of owners (McFarlane, 2011). This incremental process is accompanied by an incremental financing scheme, which is difficult to track (Amoako & Boamah, 2017). Most households in slums resort to informal sources of finance because of their inability to access loans from reliable formal banking and mortgage systems (Boamah, 2009). Individual savings through 'susu', community-driven savings or cooperative financing, borrowing from relatives, receiving remittances from abroad are some of

the major informal sources of housing finance (Asare & Whitehead, 2006; Boamah, 2014; Karley, 2002).

Additionally, Ghanaian slums have become an attractive destination for tourists. Aseye and Opoku (2015) identified slum tourism to be a significant social phenomenon in Old Fadama, Accra where visitors, both foreign and nationals, discover the culture and heritage of the neighbourhood. Small group walking tours can easily be booked online on websites such as <https://www.viator.com>. Aside from the social aspects of slum tourism, residents earn income by providing entertainment in the form of songs (*Dzama*), dances (*Zibo*), drama, and cinema. Furthermore, social equity and gender equality have been supported by the informal economy because it absorbs an enormous number of female workers. As presented in Fig. 5, more working-age females than males are employed in Ghana's informal sector. This has helped to bridge the gender employment gap in the country thereby validating the 'labour force feminisation' assertion by Brown et al. (2014). However, gender pay gaps are prevalent within the sector with women engaged as domestic workers, home-based workers or contributing family workers. These jobs typically attract low wages and perpetuate income inequalities. Nonetheless, economic informality has enabled females to gain a much higher degree of economic autonomy.

Informal procedures have also helped to improve the state of health in Ghanaian cities. The informal economy's contribution to water delivery and waste management are crucial services for promoting and sustaining healthy cities. Also, the organic farming functions of the informal sector helps to improve food security, access to healthy foods and self-sufficiency of cities. The informal health economy made up of traditional healers, midwives, and individual medicine sellers also perform critical health care services. The use of mobile phones by the youth in Ghana to access healthcare informally—termed 'informal m-health'—adds to informality's impact on Ghana's health sector (Hampshire et al., 2015).

Lastly, informal spaces are one of the very few urban systems in the Global South that are receptive to innovation. To survive in cities, informal households have had to be fluid by constantly re-adapting to the urban environment. Necessity has indeed been the mother of innovation for these households. The concept of "jugaad urbanism" has been used to underscore the 'inspired, duct-taped ingenuity' of the urban poor (Roy, 2015). Originating from the Hindi term *jugadu*, informality has become synonymous with innovation among urban poor households (Roy, 2011). Conventionally, Ghanaian informal households have grown with regards to innovation in housing construction, designing commercial products such as apparels and footwear, and transforming recycled materials into new products. The implication of the foregone is that spatial informal zones are ripe locations for the experimental urbanism philosophy needed for innovation. To sum up, the social sustainability of Ghanaian cities cannot be detached from informal spatial and economic processes. Like the profound economic and environmental functions, informality must not be overlooked because of its social functions.

## 4. The implications of the roles of informality for sustainable cities and society

Informality has rapidly become ubiquitous, dotting Ghana's cityscape. Through informal housing and informal occupation of space by the urban poor, slums are proliferating. Consequently, a vicious cycle has emerged where inadequate services within slums and cities have motivated informal economic activities to fill the gap. This scenario seems to fuel the informality trajectory of rapidly urbanising Ghanaian cities. However, this is not unique to Ghana as several other countries in the Global South, especially those in the sub-Saharan African Region such as Nigeria, Burkina Faso, Mali, and Uganda, are observing rapid growth in economic and spatial informality (Charmes, 2012; UN, 2017). The findings, as summarised in the informality-sustainable city and society nexus in Fig. 7, indicate that informality plays a profound role in

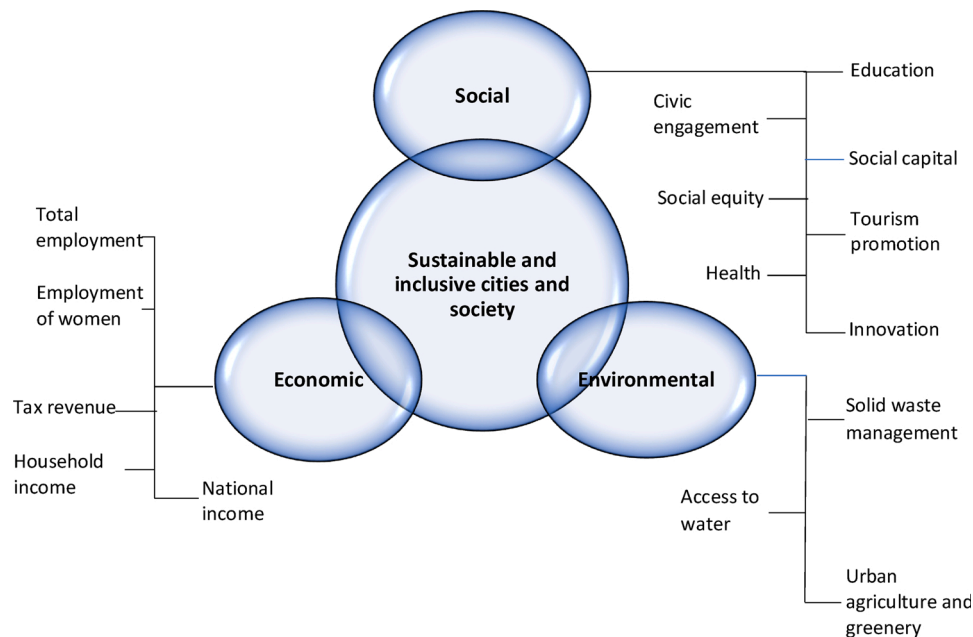


Fig. 7. Informality-sustainable city and society nexus.

the development of cities in Ghana. The roles are economic (such as employment creation for both men and women, tax revenue, household and national income), social (such as education, civic engagement, social capital formation, social equity, health, tourism and innovation), and environmental (such as solid waste management, access to water and urban agriculture and greenery) in nature. The article rightly locates the place of informality in the development of sustainable and inclusive cities and society.

Given the above context, informality presents critical lessons for the development of sustainable cities and society. First, the study points to some crucial sustainability functions of informality that are generally relegated to the background. These roles cover the three main dimensions of sustainability (i.e. economic, environmental, and social) and suggest that informality could be an asset for the development of sustainable cities and society in informality-dominated countries if managed well. Previous studies (Amoako & Boamah, 2017; Asibey et al., 2019, 2020; Braimah et al., 2018; Ferronato & Torretta, 2019; Oten-g-Ababio, 2012a; Potts, 2008) align with this claim—albeit they focused on individual aspects of sustainability and informality. Second, the findings lend credence to policies and strategies that have been developed by several countries in the Global South to draw on informality for sustainable development. For instance, in Cairo in Egypt, the Zabbaleen (informal waste collectors/recyclers) have been integrated into city waste management regimes. Prior to this, in 2002, city officials decided to privatise waste management and neglected the functions of the Zabbaleen (Fahmi, 2005). This waste reform failed as private companies were inefficient and unable to navigate the narrow streets of several neighbourhoods (Brinkley, 2020). Recognising the enormous role of the Zabbaleen in waste management, city authorities have now allowed them to continue to manage and recycle waste, albeit, with compliance with health and safety measures.

This paper draws attention to the agency of informality for the attainment of the 11th goal of Agenda 2030 (which is “to make cities and human settlements inclusive, safe, resilient and sustainable”) and African Union’s Agenda 2063 (which is the 50-year blueprint to guide Africa through the path of sustainable and inclusive development). The article provides important entry points to drive sustainability in the cities in Ghana, and by extension SSA. Therefore, the urban planning process should aim to exploit the potentials that are inherent in informality while striving to mitigate the associated problems. This is critical

because informality appears to have become the employment destination for many in the Global South, coupled with the claim that the difference between formality and informality is only conceptual (Hodder, 2016). Regularising the activities within the informal sector and communities may eliminate the misconceptions about informality and allow the actors to tap their assets and use their agency to improve their activities and contribute to the development of sustainable cities and society. The inability of the authorities of the cities of the Global South to eliminate informality, coupled with its increasing intensity as the years go by, necessitate the discontinuation of the “blanket criminalisation” of and disregard for informality.

## 5. Conclusions and recommendations

It has been 50 years since the informal sector was thematised by Hart (1973) and ILO (1972). Ever since, the utility of informality—economic and spatial—in the urban sphere continues to be debated. On one side, it is argued that cities may not attain high levels of development with informality being the prominent socio-spatial system. The modernisation theory of national development proposed by Rostow (1960) typifies these arguments. On the other side, other scholars argue that informality may be a crucial cog in the development machinery of cities. With little impetus given to the latter’s claims, this study aimed to balance the narrative and explore the contributions of informality to the development of sustainable Ghanaian cities.

Focusing on the tripartite dimensions of sustainability in the review of literature, the results revealed that informality contributes immensely to the economic, environmental, and social sustainability of Ghanaian cities. On the economic front, informality plays a vital role in creating employment for the urban poor and women in particular, increasing tax revenue, household income, and national income. With respect to environmental sustainability, informality improves urban solid waste management, waste recycling, water access, wastewater reuse, and organic farming. These functions dovetail well with calls to tap the resource potential of wastes, also embedded in the circular economy concept. Finally, in terms of the social dimension of sustainability, informality improves access to education, civic engagement, social capital, social equity, tourism, health, and innovation. The implication from the analyses is that informality could be an asset especially for the urban poor if managed well. Therefore, it is important for city



authorities to consider the productive roles of informality in their quest to promoting the sustainability of cities and society.

To conclude, this paper succinctly emphasises the sustainability functions that informality provides for Ghanaian cities. It is worthy to note that the researchers are in no way pitching the idea that the adverse effects engendered by informality should go unnoticed. Of course, there are several positive and negative effects of most activities performed informally (Amoako & Inkoom, 2018; Drechsel, Graefe, Sonou, & Cofie, 2006; Farrell, 2004; Mohlakoana, de Groot, Knox, & Bressers, 2019; Nartey, 2016; Oteng-Ababio, 2012b). This paper chooses to underscore the positive effects of informality in an attempt to justify its regularisation instead of criminalisation. Future studies could also explore the role of informality from the perspective of the two schools of thought and this will help paint a more nuanced picture of the informality-sustainability nexus. Nevertheless, the researchers propose a critical recognition of the productive functions of informality in order not to run the risk of losing them through radical, non-inclusive, and unrealistic policies. For instance, policies such as slum upgrading should not aggravate unemployment and poverty levels by destroying available employment opportunities in the informal economy. Rather, such policies should try to recognise the agency of slum labour force and innovatively integrate them into the upgrading process. For instance, instead of awarding upgrading contracts to wet-core contractors, city authorities can opt for a consortium of informal artisans, train, and contract them to lead upgrading processes. Such strategies may facilitate the regularisation of informal employment, and with supervision, alleviate the problems of informality in the cityscape.

Our findings, supported elsewhere (see Asibey, King, Lykke, & Inkoom, 2021), further signal a call to action to optimally harness the sustainability attributes of informality while minimising its negative consequences. This is by no means an undemanding task. As a way forward, the researchers recommend that authorities decry 'broad blanket or umbrella' policies that treat informality as a homogenous or binary group. By doing this, policies can target specific aspects and activities of informality—that is, economic, social, and spatial—which are complex in and of themselves. Also, policies that try to criminalise informality should be re-evaluated as they may undermine informality's promising sustainability potentials. The lessons and recommendations offered in this study are more applicable to Global South cities than those in the Global North because of how informality manifests. For instance, informal settlements in the Global North tend to have better services and facilities as they are commonly produced by middle- and high-income households unlike those in the Global South. Consequently, informal economic activities by households within such settlements as well as in cities differ dramatically. We, thus, call for caution in drawing implications from the results.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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