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Urbanisation and rural development in sub-Saharan Africa: A review of pathways and impacts

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ABSTRACT

This paper reviews the current state of literature on the impacts of urbanisation on rural development in the context of sub-Saharan Africa (SSA), with special emphasis to the pathways through which urbanisation affect rural economic development. Assessments of these effects diverge greatly. While some authors see urbanisation as strongly benefitting rural areas, for instance, through increased demand for agricultural goods and services, others highlight negative effects, for example, through the loss of livelihoods emanating from displacements and the conversion of agricultural land that may lead to urban sprawl. Given this complexity, a review that thoroughly analyses the causal relationships between urbanisation and rural development is warranted. To do this, the paper identifies seven pathways through which urbanisation affects rural development both positively and negatively: i) production and consumption linkages; ii) employment linkages; iii) financial linkages; iv) land market linkages; v) information and knowledge linkages; vi) social interactions linkages; and vii) environmental externalities linkages. The study suggests that recognising the importance of such linkages and incorporating them into the local and national economic policies is crucial for sustainable development. Overall, the review findings indicate that the impact of urbanisation on rural development in SSA is conditional and heterogeneous. It is conditional because countries need to be well-placed to reap the benefits of urbanisation, i.e., they need to have conducive infrastructure and institutional settings, as well as strong political commitment and leadership. When well-managed, however, urbanisation can play a pivotal role in reducing rural poverty, improving food security and creating opportunities for rural transformation. To this end, the review has identified research gaps that have important policy relevance in SSA. Addressing these gaps is imperative to harnessing the economic advantages of rapid urbanisation in a way that supports rural areas and promotes sustainable development.

Introduction

Urbanisation has been rapidly increasing in developing countries in recent decades, particularly in Africa and Asia (World Bank, 2018). According to United Nations projections, by 2050, more than two-thirds of the world's population is expected to live in urban areas (United Nations, 2011). The urban growth in Africa has been particularly notable, with the share of urban residents doubling in the past three decades (United Nations, Department of Economic and Social Affairs (UNDESA). United Nations Statistics Division. 2018 (UNDESA), 2018). The drivers underpinning the growth of cities also differ greatly in recent years (Duranton, 2015; Farrell, 2017). For instance, urbanisation in SSA is characterized by informal settlements, insufficient infrastructure, and the increasing impact of climate change, leading to disparities in access to services and opportunities between urban and rural areas (de Bruin, Dengerink, & van Vliet, 2021; van Vliet et al., 2020).

Although rapid urbanisation is occurring in many SSA countries, the trend varies across countries (See Fig. 1). For instance, Nigeria, the most populous country in Africa, has experienced a significant increase in urbanisation from 17% in 1960 to over 50% in 2020, with projections showing it will reach 68.4% by 2050. South Africa has a relatively high level of urbanisation compared to other SSA countries, but it is accompanied by high levels of inequality, particularly in informal settlements. Ghana and Kenya have also experienced significant rapid urbanisation in recent years accompanied by challenges such as environmental degradation, inadequate provision of services, and high levels of poverty and unemployment. Ethiopia, Chad and Uganda have a relatively low level of urbanisation, with urban populations of 21%, 24% and 25% in 2020, respectively (World Bank (2022), 2022).

The impact of urbanisation on rural development outcomes, such as poverty and inequality, has been the subject of considerable debate (Gong et al., 2012; Parnell & Walawege, 2011). The impact of these

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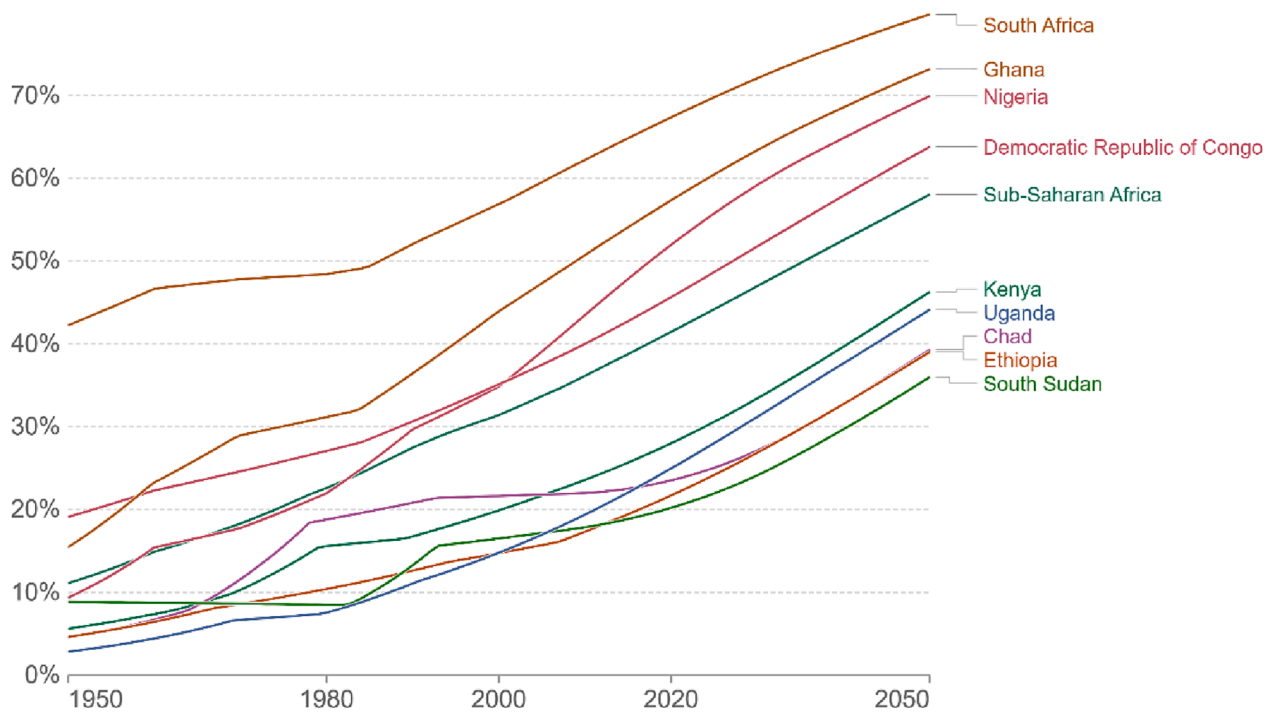


Fig. 1. Trends in urbanisation for selected SSA countries, 1950–2050. Source: Our World in Data (OWID) based on UN World Urbanisation Prospects 2018. Note: The definition of urban areas can vary by country as they are based on national definitions.

debates on development policy has changed over the years. In the 1950s, rural development was conceptualised in terms of modernisation process through industrialisation and urbanisation, whereby development in urban areas was a prerequisite for the transformation of rural livelihoods (Rogers, 1995). In the 1970s, the notion of urban bias – the view that urbanisation resulted in domination and exploitation of the rural poor – had dominated the debate (Lipton, 1977). Later on, Bates (1981) extended the notion of urban bias to include African bureaucracies, which focused on urban infrastructure and industrialization at the expense of agricultural production. These arguments have been widely implemented through structural adjustment programmes (SAPs) (Mkandawire & Soludo, 1999) where removal of urban-biased state policies was expected to stimulate private capital available to rural communities and increase local agricultural production (Corbridge, 1989). However, such a policy shift has failed to produce positive outcomes.

In the 1990s, the role of small and intermediate urban centres in rural economic development and poverty reduction reemerged and influenced the debate (Satterthwaite & Tacoli, 2003). The basic argument was that, since a high proportion of the urban population in most developing countries live in small and intermediate urban centres, these centres play an important role for rural economic transformation and poverty reduction. However, policymakers have often ignored their role and potential contribution.

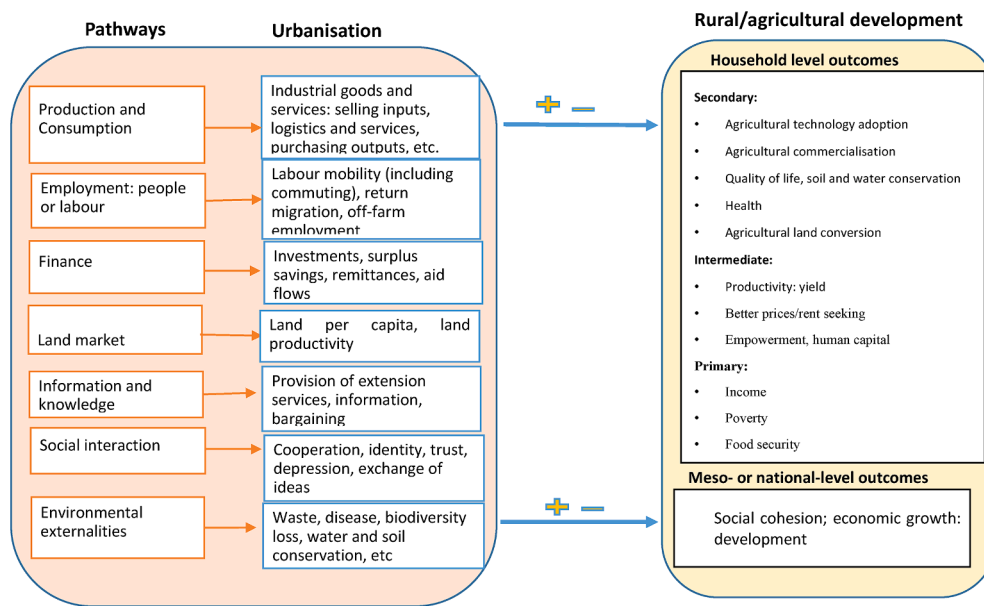
Since 2000s, both individual countries and the international development community have adopted various approaches to urbanisation. For instance, through its Sustainable Development Goals (SDGs), the United Nations has adopted the need to make cities and human settlement inclusive (SDG:11) with the objective of making cities attractive for all by offering opportunities while also reducing resource use and environmental degradation (UN, 2015). In fact, achieving SDG:11 would play an important role in achieving other SDGs such as goals of poverty eradication (SDG:1), healthy lives (SDG:3), equality (SDG:5), and economic growth (SDG:8), among others. Furthermore, in the post-2000s, sustainability has become the major issue in urban planning, as well as to integrate cities to rural development.

Urbanisation is traditionally linked with positive economic

outcomes, such as increased income and growth, and can stimulate economic growth in urban and rural areas by providing better access to goods, services, employment opportunities, and markets for farmers (Dorosh & Thurlow, 2012). Integrating urban and rural areas can enhance productivity, growth, and living standards by facilitating the flow of goods and services, including agricultural products and industrial goods, and can help reduce disparities between urban and rural households (OECD & European Commission, 2020; Michaels, Rauch, & Redding, 2012). Well-governed urbanisation can put countries on a long-term trajectory towards prosperity (World Bank, 2020).

A growing number of studies, particularly in SSA, suggest a nuanced and ambiguous relationship between rural development and urbanisation (Gollin, Jedwab, & Vollrath, 2016; Turok & McGranahan, 2013). In other words, the relationship is not necessarily positive or negative and is conditional on factors such as the quality of institutions and available infrastructure (Clemente, Strano, & Batty, 2021). Hence, there is no linear relationship between urbanisation and economic development. In some cases, urbanisation has resulted in increased discrimination and economic inequality (Oyvatt, 2016), limited or no effect on economic growth, persistent poverty (Davis, 2013; Glaeser, 2014), slowed structural transformation, and negative impacts on the environment and natural resources (Brueckner & Helsley, 2011; Chen, 2007). The horizontal expansion of urban areas has also led to the conversion of agricultural land, reducing farmland and crop yields, and negatively impacting poverty reduction and food security (de Janvry & Sadoulet, 2010; Foley, 2005; Satterthwaite, McGranahan, & Tacoli, 2010). Some scholars argue that the inconsistencies in Africa's urbanisation outcomes may be due to the inadequate definition and measurement of urbanisation, which tends to overlook economic features (Potts, 2018) or focus solely on demographic changes (Christiaensen, De Weerd, & Todo, 2013). Thus, this mixed evidence on the effect of urbanisation could be an issue of definition and measurement, a point the review will further discuss later.

In a nutshell, there are two main opposing arguments in the literature: that urbanisation can reduce poverty reduction, improve incomes and strengthen economic growth (Bertinelli & Black, 2004; Kessides, 2007; Njoh, 2003); and that urbanisation has not led to economic



Notes: The pathways have been categorised on the bases of their nature and types: goods and services; income; labour which urban households buy from and supply to rural households); information and externality flows directly related to agricultural production and productivity. Household level outcomes as a result of urbanisation can occur through adopting agricultural technologies and practices (referred to here as secondary outcomes that can increase yield or agricultural productivity as well as higher prices (intermediate outcomes); all these contribute to improved income; poverty; or food security (primary outcomes). Meso- or national-level outcomes include social cohesion; economic growth and development. The sign ± indicates positive effects and/or negative effects of urbanisation. Source: Author, based on review of literature

Fig. 2. Conceptual framework of pathways. Notes: The pathways have been categorised on the bases of their nature and types: goods and services; income; labour which urban households buy from and supply to rural households); information and externality flows directly related to agricultural production and productivity. Household level outcomes as a result of urbanisation can occur through adopting agricultural technologies and practices (referred to here as secondary outcomes that can increase yield or agricultural productivity as well as higher prices (intermediate outcomes); all these contribute to improved income; poverty; or food security (primary outcomes). Meso- or national-level outcomes include social cohesion; economic growth and development. The sign ± indicates positive effects and/or negative effects of urbanisation. Source: Author, based on review of literature.

development or national economic growth, the latter referred as “urbanisation without growth” (Jedwab & Vollrath, 2015).

Studying the impact of urbanisation on rural development in SSA is crucial for several reasons. First, such study provides insight into how urbanisation affects the social and cultural fabric of rural communities and the economic opportunities available to them. Second, it is necessary to understand these changes to develop effective strategies that support rural economic development and reduce poverty. Finally, such study can help policymakers and development practitioners to identify challenges and opportunities created by urbanisation and promote sustainable and inclusive development in both urban and rural areas.

Given the enormous speed of urbanisation in SSA and the strongly diverging views of its effects on rural development, this paper aims to: (i) review literature on whether urbanisation is effective in stimulating the transformation of the rural economy and raise earnings, improve food security and reduce poverty in SSA countries, (ii) identify and examine the various pathways through which urbanisation affects rural development, (iii) understand how to optimise the design of rural-urban linkages in SSA in order to maximise the benefits of urbanisation, as well as scale up successful models while enhancing social cohesion, and (iv) identify gaps in the literature that need more research attention in the future, specifically on how to guide urban-rural linkages toward more inclusive development and greater societal interactions.

The remainder of this paper is structured as follows: Section 2 present a conceptual framework that guides the review process and framing of the study. The framework enables us to discuss the various hypotheses through which urbanisation could affect rural development outcomes. Following that it briefly discuss the study region and methods used to collect, organize and synthesis the identified literature in section 3. Section 4 presents the main results of the review, which are then discussed in section 5. Subsequently, in section 6, the review’s findings are summarised, and important gaps are identified.

Conceptual framework: Urbanisation effects and potential pathways

In order to carry out a good rapid review, two things are necessary: First, one needs clear definitions of the key concepts. This will be provided in subsection 3.1. Second, it needs a conceptual framework identifying the transmission pathways through which urbanisation affects rural development. The framework will also serve as an input to guide the review of empirical literature exploring the impact of urbanisation on rural development.

Definitions of key terms

Urbanisation and urban areas

Urban areas and urbanisation have been conceptualized and defined in various ways in the literature, using indicators such as demographic and structural change (but the size to define urban area various across countries), sectoral employment, provision of infrastructure and services, and physical surface. There is no universal definition of “urban areas,” but specific indicators include population size, level of urbanisation, physical expansion of urban areas, expansion of urban land uses, and shifts in settlement patterns (Gross & Ouyang, 2021).¹ For instance, the demographic definition of “urbanisation” refers to the increasing share of a nation’s population living in urban areas, hence a declining share of people living in rural areas (United Nations Development Programme (UNDP). (2010) (UNDP) (2010)), partly driven by rural to urban migration rather than by natural increase. The United Nations

¹ Generally, the rural–urban divide can be presented at five levels: very rural; rural; small towns; *perti*-urban; and very urban (metropolitan areas) (van Braun, 2007).

defines urban areas as a continuously built-up area with a minimum population of 2500. The level of urbanisation refers to the share and rate of change of the urban population (World Bank, 2020). Urbanisation can also refer to the expansion of urban land uses resulting from a shift from dense to more scattered settlement (Satterthwaite et al., 2010).

In recent years, new approaches have been proposed to measure and map urban and rural areas and their extent, as well as to explore potential pathways of urbanisation at national, regional and global levels from satellite imagery. One of such proposed approaches is the use of night light intensity and views from Google Earth (Chen, Zhou, Hu, & Zhou, 2020; Li & Gong, 2016; Zhou, Li, Asrar, Smith, & Imhoff, 2018). This approach might help to reduce the inconsistencies in definitions, harmonise measurements, and enable cross-country comparisons.

This paper employs various criteria, including demographic and economic factors, administrative categorizations, and satellite imagery, to define urbanisation and its impacts on rural development, such as poverty, food security, and income. However, these definitions vary across countries, making cross-country analyses challenging. For instance, in Benin a population of 10,000 inhabitants or more with at least a bank, a public treasury, running water, electricity, a health centre and a secondary school is considered an urban area while in other places such as in Ethiopia this classification is different, an urban cluster consists of at least 300 inhabitants per square kilometre and a minimum total population of 5000 (Eurostat, 2018). The other problem related to urbanisation is the conceptualisation of urban boundaries (Tacoli, 1998). The distinction between rural and urban areas is also becoming increasingly problematic due to *peri-urban* growth, urban agriculture, and the integration of agricultural and non-agricultural activities (Meth, Goodfellow, Todes, & Charlton, 2021). Additionally, due to increasing sectoral interactions and the increasing diversification of livelihoods, sectoral approaches do not fully capture the impact of urbanisation on rural development. Therefore, this paper considers secondary towns and cities as urban areas and focuses on understanding the effect of urbanisation on rural development at all levels: national, regional and household.²

Rural areas and rural development

Similar to the categorisation of urban areas, the definition of rural areas lacks uniformity and varies across countries and contexts, with various indicators used, including demography, settlement size, population density, economic advancement, and sectoral links (Potts, 2017). This paper adopts the definitions used in each literature item identified, including sectoral categorization and administrative boundaries. For example, sectoral categorisation of rural areas refer to those areas predominantly dependent on agriculture (Ashley & Maxwell, 2001; Bennett, Borders, Holmes, Kozhimannil, & Ziller, 2019). Rural development refers to sustainable improvement in the living standards of people living in rural areas (Ashley & Maxwell, 2001). At the household level, the study uses three outcome indicators, as shown in Fig. 2 below: primary such as income, poverty, and food security; intermediate such as yield, productivity, empowerment, and human capital; and secondary such as agricultural technology adoption, commercialisation, soil and water conservation, health, and others. Further elaboration of the key terms used in the paper is presented in Appendix B.

Rural-urban linkages

To fully understand the impact of urbanisation on rural development, it is essential to consider rural-urban linkages. These linkages are bidirectional and interdependent, and their definition and measurement can vary between countries, which can affect the interpretation of findings (Potts, 2017; Wineman, Alia, & Anderson, 2020). In this regards, the recent move by the coalition of six international

organisations, to develop a standardized method for defining cities, urban areas and rural areas is an important step (World Bank, 2020). The adoption of such method will enable and facilitate international comparisons. Since agriculture is the dominant sector in the rural economy, this review focuses more on the impacts of urbanisation on agriculture. In this paper, agricultural linkages refer to the impact of urbanisation on agricultural production, productivity, and input processing and exchange, whereas rural-urban linkages are broadly defined as the spatial movement and exchange of goods, services, people, capital, information, as well as interactions between economic sectors between rural and urban areas.

The variability in definitions of terms such as “urban” across countries has four important implications. First, caution is needed when using such terms and official classifications as they may refer to different concepts or categories depending on the country or region (Gollin et al., 2016; Potts, 2017). Second, even with the same terminology, cross-country comparisons can still be difficult (OECD & European Commission, 2020). Third, development interventions based solely on rural-urban classifications may overlook areas outside the predefined scope that are crucial for agricultural productivity and rural development (World Bank, 2020). For instance, in Egypt, being reclassified as urban areas would trigger additional public investment for higher-level service delivery requirements of government institutions such as police stations and courthouses (World Bank, 2020). Lastly, the absence of rigorous definitions limits policy-relevant analysis of urbanisation, particularly in Africa where urbanisation is viewed as a measure of economic transformation (Potts, 2017; Potts, 2018).

Let us now turn to discussing the underlying pathways through which urbanisation affects rural development outcomes.

Impact pathways

Several pathways through which urbanisation affect rural development exist. This paper will group these effects into seven and discuss the possible hypotheses associated with them. First, it discusses the production and consumption linkage effects. Second, it discusses the flow of people or the labour channel – employment linkages. Third, it presents the financial linkage effects of urbanisation and how these relate to rural development. Fourth, it discusses the land availability (market) effect of urbanisation on rural development. Fifth, it presents the information and knowledge linkage effects of urbanisation. Sixth, it discusses the social interaction effects of urbanisation on rural development. And, finally, it will discuss the potential impact of environmental externalities resulting from urbanisation on rural development.

Production and consumption linkage effects

Rural and urban areas are intrinsically linked. For instance, urban inhabitants depend on food and other natural resources, while urban services are vital for rural communities. The rural residents supply most of the food and natural resources for urban residents, demonstrating the interdependence between rural and urban areas. In other words, urban growth generates higher demand for agricultural products (Dorosh & Thurlow, 2012). In general, urbanisation can have both positive and negative effects on the production of agricultural products. On one hand, urbanisation often leads to increased demand for food, as more people move into cities and require food to be grown and transported from rural areas (de Bruin et al., 2021). This can drive up prices and increase economic incentives for farmers to produce more crops. On the other hand, urbanisation can also lead to the loss of fertile agricultural land as cities and suburbs expand, reducing the total amount of land available for farming (van Vliet, 2019). This can lead to decreased food production and decreased food security, particularly in areas where population growth is outpacing the development of new agricultural land. In addition, urbanisation can also lead to increased competition for resources, such as water and energy, which are essential for agriculture (Amadi & Igwe, 2018). This can drive up costs for farmers and reduce

² Secondary towns and cities refer to urban areas that are smaller in size and population compared to major metropolitan areas.

their ability to produce crops. Therefore, it is difficult to determine *a priori* the effects of urbanisation on agricultural production.

Employment: Flows of people or labour linkage effects

Human mobility between rural and urban areas, referred to as labour flow, can occur temporarily, permanently, through circular migration, or commuting. Urban expansion can diversify rural economic activities, positively affecting earnings and reducing surplus labour in rural areas. Such labour transfer from rural agriculture to urban industries or services can increase labour productivity in agriculture and upward pressure on rural wages, a point discussed further later, without hampering agricultural productivity (Jacoby & Minten, 2009; Lewis, 1954). However, if the migration is concentrated among the most productive agricultural workers, it may harm agricultural productivity and rural welfare outcomes. Urbanisation can also improve non-farm income (mainly in intermediary/secondary towns) through job creation in urban areas, financing innovation in the agricultural sector, and increasing total income (von Braun, 1995). However, human mobility prompted by urbanisation can induce a change in fertility and social relations that could improve or worsen social and economic structures, such as income inequalities. Urbanisation can also create opportunities for rural employment through increased demand for rural-produced goods and services and enhancing connectivity to urban markets. Thus, the overall effect of urbanisation through this channel cannot be determined *a priori* and varies across countries and sectors.

Financial linkage effects

Financial resources from urban areas are one of the main sources of finance pertinent to unlocking the economic potential of rural communities (Cali, 2014). Hence, urban areas constitute another potentially important economic linkage effect on rural development. Financial inflows from urban to rural areas include micro-credit schemes from financial institutions, remittances, loans, and investments by urban residents, along with investments by governments and aid agencies in the socioeconomic and infrastructural development of rural areas. For instance, remittance is one of the pathways, which provides significant sources of income for rural families (World Bank, 2020). In addition, urban to rural remittances play an important role in reducing the resource constraints rural households face in agricultural production and help to reduce the adverse effects of shocks such as droughts or floods (Cali & Menon, 2013; Stark & Lucas, 1988). Financial capital linkages also refer to the investment linkages that allow locally accumulated capital to be reinvested locally, which in turn provides capital rural areas. If properly utilised, the effects of such inflows would be positive.

Land market linkage effects

Urbanisation impacts rural economies through land linkage in three ways. First, urban expansion can transform agricultural land in *peri*-urban areas into developed land, affecting land use value, transportation costs, and agricultural productivity. For instance, von Thunen (1966) argued that land prices and transportation cost are the drivers of economic activity in the vicinity of a city. This conversion can either positively or negatively impact rural livelihoods, depending on factors such as the reduction of farmland and crop yields (Holden, Otsuka, & Place, 2009) as well as institutions and policies to manage land conversions and displacement (Dadi et al., 2016; Fairhead, Leach, & Scoones, 2012). Second, urbanisation modifies the rural land-to-labour ratio, increasing agricultural labour productivity as more workers move from agricultural to urban areas (de Bruin et al., 2021). Finally, urban expansion can increase the prices of agricultural land in *peri*-urban areas, generating higher income for farmers, but also putting pressure on the livelihoods of rural and urban poor (Swain & Teufel, 2017). Altogether, the net effect on rural welfare outcomes through this channel could be positive or negative, depending on various factors, a point discussed further in section 4.

Information and knowledge linkage effects

Urbanisation has a significant impact on rural development, and information exchange is one of the ways in which this influence manifests (de Bruin et al., 2021). Urban areas foster knowledge exchange and accumulation by promoting human interaction (Schlöpfer et al., 2014). Furthermore, cities provide economies of scale for specialized institutions, such as universities and public service providers, which makes it easier to deliver services like education or agricultural extension (Conventz, 2014). As a result, cities become centers of knowledge. The exchange of information from urban to rural areas is critical for rural development, as it provides knowledge on topics such as population needs, job opportunities, extension services, market information, innovations, and new technologies, which can increase agricultural production (Cobbinah & Addaney, 2022). A better flow of information between urban and rural areas can also bring new experiences, skills, and contacts, improving the bargaining power and social status of individuals and communities in labour markets and political spheres. Additionally, better information and knowledge can enhance labour productivity and improve the nutritional outcomes of rural people, ultimately leading to the development of human capital and a general improvement in rural development outcomes.

Social interaction linkage effects

The social interactions that follow urbanisation is another important channel through which urbanisation affects rural development, yet one that is largely neglected in the literature. On the one hand, urbanisation can lead to change in social structure such as devolution of culture, identity and social capital (Putnam, 2000), weaken social cohesion or increase tensions, impacting economic outcomes (Bau, 2021; Fox & Bell, 2016; Hoare, Jacka, & Berk, 2019). Social cohesion refers to the ties or the 'glue' that holds societies together (Leininger, Burchi, Fiedler, Mross, Nowack, von Schiller, & Ziaja, 2021). On the other hand, it can also enhance cooperation, facilitate trade, idea exchange, and business networks between rural and urban areas, leading to economic interdependence and positive social interactions (Akkoyunlu, 2015; Cali & Menon, 2013). For instance, increased informal settlements in and around Lagos, Nigeria have created a unique rural-urban interaction with many rural residents maintaining their close connections to their hometowns, while also participating in the city's rapidly growing economy. Thus, the effect of urbanisation on social cohesion and, thereby on rural development outcomes can be either positive or negative.

Environmental externalities effects

Moreover, rapid urbanisation often leads to negative externalities such as waste despoilment of the natural environment, the increased incidence of the outbreak of disease, pollution, biodiversity loss, climate change, and the deterioration of soil and water conservation, among others (Thyberg & Tonjes, 2016). These negative externalities impede the productivity and health of the surrounding rural areas and can have adverse effects on the welfare of rural residents as well as on sustainability (Cobbinah, 2023). Some of the adverse effects of urbanisation, which are directly related to rural development, are the deterioration in soil and in water conservation in Harare (Zimbabwe), Nairobi (Kenya) and Johannesburg (South Africa) (Chipungu, Magidimisha, Hardman, & Beesley, 2015). In addition, urbanisation is associated with high environmental degradation, biodiversity loss, and high emission of greenhouse gases (Cai, Yin, & Varis, 2018; Hoornweg, Bhada-Tata, & Kennedy, 2013; Kalnay & Cai, 2003). This would negatively affect health, productivity and the overall development of a rural economy. Thus, the overall effects of urbanisation on rural development through these pathways can be negative.

In summary, urbanisation's impact on rural development is unclear, with both positive and negative effects possible. The degree and direction of this impact depend on factors such as proximity to urban areas, urbanisation scale, and institutional quality. Fig. 2 summarises these pathways and also serves as a conceptual framework through which to

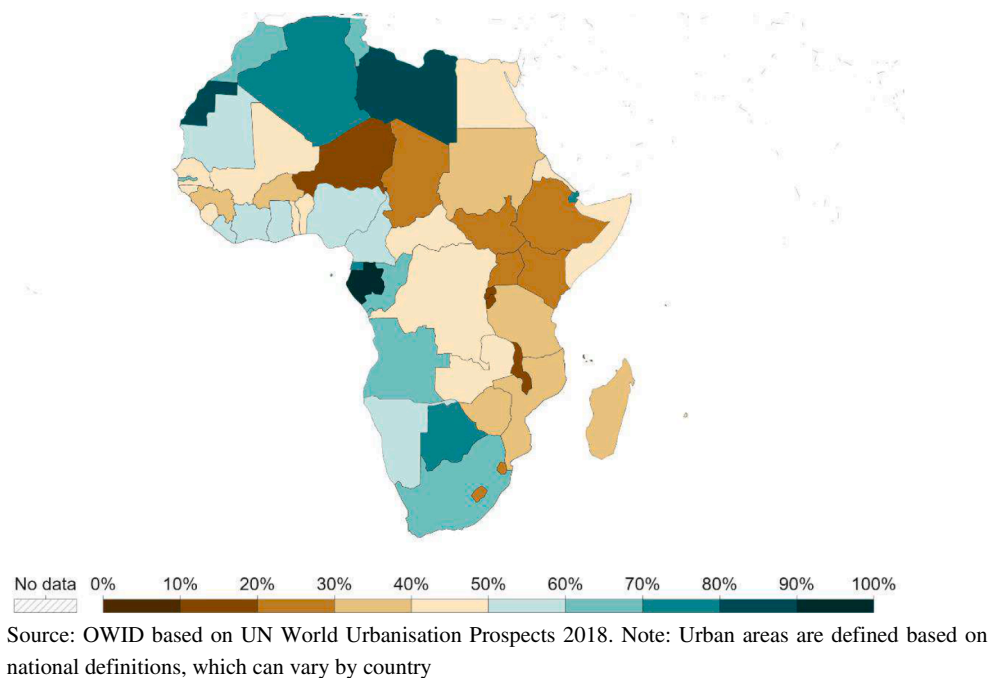


Fig. 3. Share of the population living in urban areas in 2020. Source: OWID based on UN World Urbanisation Prospects 2018. Note: Urban areas are defined based on national definitions, which can vary by country.

visualise how urbanisation affects rural development as well as the expected economic outcomes at household, community and national levels. This framework also served to guide the review of empirical literature exploring the impact of urbanisation on rural development. In doing so, the paper used the extended rapid review method, as described in the next section, Section 3.

Methodology

Study area

As stated earlier, this rapid review primarily concentrates on SSA countries. The review examines studies conducted since 2000. In addition to the aforementioned introduction, SSA countries were chosen as the primary focus due to (1) the prevalence of rapid urbanisation in SSA than in other countries (World Bank (2022), 2022), (ii) rapid land-use change as a result of this urbanisation are projected to continue in these countries (Andrade, Cassman, & Rattalino Edreira, 2022), and (iii) although rapid urbanisation is a prevalent trend, its influence on rural development is anticipated to vary across African countries due to differing patterns. Fig. 3 illustrates the urbanisation patterns of African countries during the year 2020.

Rapid review

Experts suggest that an extended rapid review follows systematic review principles to reduce the risk of bias while identifying main concepts, theories, sources, methods, and knowledge gaps across a broad range of literature (Grant & Booth, 2009; Tricco et al., 2018) while simultaneously also providing adequate advice on which to base policy decisions (Levac, Colquhoun, & O'Brien, 2010; Moons, Goossens, & Thompson, 2021; Watt et al., 2008).³ The 'Search, Appraisal, Synthesis and Analysis (SALSA) framework' was used in this review work, along

³ A systematic review requires at least two reviewers, and a priori review protocol must be developed prior to undertaking the review itself (Peters et al., 2015).

with recently developed rapid review methods (Garrity et al., 2021), adhering to actionable recommendations and minimum standards outlined by the Cochrane Rapid Reviews Methods Group (Moons et al., 2021; Watt et al., 2008). These steps include refining the research question, setting eligibility criteria, searching, study selection, data extraction, risk of bias assessment, synthesis, and consultation with relevant stakeholders (Moons et al., 2021; Watt et al., 2008).

The study developed a research protocol (Appendix B) shared with a panel of experts/reviewers, whose comments were incorporated before literature collection, and who also verified study quality. The protocol adheres to the standard approach of extended rapid reviews, containing details of background, methods (such as setting, unit of analysis, outcome variables of interest, publication, definitions guiding concepts for the review), research questions, eligibility criteria, search strategy, data management, selection process, critical appraisal, data charting, and synthesis (Appendix B). The protocol also greatly informed the conceptual framework presented in Section 3.

Search methods for identifying relevant studies

A comprehensive search strategy was developed to identify all research addressing the impact of urbanisation on rural development, with a special emphasis on SSA countries. A clear protocol highlighted above was developed before data collection began guiding the selection of studies for this review. Search terms include variations of the key concepts in the research question: rural-urban linkages; low- and middle-income countries; urbanisation and rural development; as well as terms related to agricultural development; poverty; information flows; and agricultural marketing pathways, among others. For this review, the relevant electronic databases were accessed: CAB abstracts (Clarivate analytics); Web of science core collection (Clarivate analytics); Scopus (Elsevier); EconLit (Ebsco); as well as some grey literature. Results were combined and duplicates removed, with some studies suggested by a panel of experts. Details of the search strategies used and the various different bibliographic databases searched is presented in Appendix B.

Study selection

Following the comprehensive search strategy, all the merged records

were imported into Covidence for title/abstract and full-text screening using pre-defined eligibility criteria in two phases.⁴ In the first step, two reviewers conducted the initial title and abstract screening, transferring studies with insufficient information to the full-text review phase. In the second phase, one reviewer conducted the full-text screening. The selection process was facilitated by systematic review software, and electronic databases such as Scopus and Web of Science Collection/Google were used to exclude records that did not meet the pre-defined eligibility criteria. The search engines in Scopus/Google Scholar allowed for customization of the search range and sorting of publications by relevance or category.

Selection criteria

This rapid review focuses on the recent advancements in understanding the effects of urbanisation on rural development in SSA. Additionally, a selected number of studies that analyse the connections between rural and urban agriculture in Asia have been incorporated. The main outcomes of interest (that is, rural development indicators) were grouped into primary outcomes (income, poverty, and food security); intermediate outcomes (yields, improved quality of output, rent seeking, empowerment); secondary outcomes that should subsequently affect intermediate outcomes (technology adoption, practices to improve quality of agricultural productivity and conservation of natural resources, agricultural commercialisation, emissions and health outcomes) all at the household level; and meso- or national-level outcomes (social cohesion, growth, development) (see Fig. 2).

The study protocol specified that eligible studies must meet the following criteria: explicitly relevant to rural households or agricultural producers in SSA, published in 2000 or later unless strongly relevant to the SSA context, use observational, non-quasi experimental survey-based, participation or modelling as its methodological approach, focus on the direct impact of urbanisation on rural development outcomes indicated in Fig. 2, and makes a clear link between rural and urban areas. Details of the study protocol are presented in Appendix B.

Data extraction

Data extraction involve different phases of pre-screening based on specific characteristics: country; year; and keywords; followed by title; and abstract screening of all de-duplicated citations against inclusion and exclusion criteria listed above and then finally a full-text screening of all articles deemed relevant against inclusion and exclusion criteria. The data extraction template was developed in Excel to document all the information that the study wanted to collect and use for the synthesis.

Synthesis

After screening the full text, the findings were tagged and mapped based on predetermined criteria. The author graded the certainty of evidence using verification and critical feedback from the review committee. Finally, the extracted data was synthesized based on the conceptual framework and research questions, and summarized according to main themes. The summary also included policy implications and research gaps. Since the review evaluated multiple outcomes, a narrative synthesis was preferred over a meta-analysis (Moons et al., 2021).

Review results

In this section, the results of the review grouped according to the various pathways identified in Section 2 are presented. The survey of existing literature included in this study has suggested that there has been a drastic increase in research interest in the relationship between urbanisation and rural development in recent years (see Fig. A1). In terms of country distribution, South Africa, Ghana and Ethiopia are

widely covered (Fig. A2). In terms of outcomes of interest, the majority of the studies included focused on poverty, income, food security and only very little literature existed in the areas of intermediate outcomes such as environmental effects (including urbanisation-induced adoption of environmentally sound agricultural practices or health), social cohesion, and biodiversity. This is a clear reflection of gaps in the literature.

Given the fact that cities are the highest polluters and as urbanisation continues to increase rapidly in African countries (Hoorweg et al., 2013), understanding the consequences of these externalities (both positive and negative) on rural welfare and the social cohesion of rural people is vital but has been largely ignored in the recent literature. Furthermore, the review suggests that there are a few studies that focus explicitly on the link between gender and urbanisation, so this is also another gap. For this reason, future research on the link between gender and urbanisation and their interaction with rural economic outcomes (e.g. on earnings of men versus women) are needed to guide efforts that promote sustainable and inclusive rural development.⁵ This paper will now turn to presenting the key findings of this review along the pathways identified earlier.

Production and consumption linkage effect

Urbanisation has resulted in a reduction in available land for crop cultivation (Andrade et al., 2022), a decline in the number of people engaged in agriculture (Cohen & Garrett, 2009), and a shift in consumer preferences towards processed and imported food products (Blekking et al., 2022). These factors have all contributed to a decrease in agricultural production. In addition, a transition away from unsustainable consumer demand could result in detrimental impacts on both the food system and the environment (Alapiki & Amadi, 2021). Nonetheless, this trend is not universal and varies by countries, as demonstrated by evidence from China. For instance, Wang et al. (2021) found that crop production in China actually increased with urbanisation due to increased crop area and crop yield. Section 4.4 provides additional discussion on the production linkage effect.

Urban areas are important markets for agricultural produce and can stimulate rural economies and incomes by raising the demand for natural resources (Dorosh & Thurlow, 2012). However, the impact of urbanisation on rural productivity and incomes depends on socioeconomic conditions, institutions, and infrastructure (Duranton, 2015). Urban populations in SSA often have low incomes and live in slums (Anant, 2011), and have a low level of income (Christiaensen & Todo, 2013) which limits their ability to stimulate demand for agricultural products. For instance, urbanisation in Sierra Leone is occurring at a per capita income of USD 410 (World Bank, 2018), and more than 70% of Africa's urban population is estimated to live under "slum conditions," exacerbating socioeconomic disparities. Similarly, a study in Ethiopia suggests that improvements in household incomes is the driver of calorie intakes (Worku, Dereje, Minten, & Hirvonen, 2017). For this reason, rising urbanisation has not induced increased demand, agricultural productivity and overall welfare in these areas as had been expected. Thus, increasing urban household incomes is expected to have a higher and significant effect on food security and poverty reduction of rural households (Jedwab & Vollrath, 2015; Worku et al., 2017).

The review suggests that the growth of cities has often been accompanied by the rapid rise of large supermarkets, which have transformed the agri-food markets in a way that sometimes lead to exclusion of small farms, and small processing and distribution of firms (Reardon, Timmer, Barrett, & Berdegue, 2003). However, the rise of supermarkets in regions with emerging middle-class consumers who

⁴ Covidence was an online systematic review software used in this rapid review to streamline the process.

⁵ There is vast literature on gender issues related to agriculture or rural development but little attention has been paid to the potential differential effects of urbanisation on females compared to their male counterparts.

demand diversified, higher quality, and safe products has increased the flow of agricultural goods and services, thereby increasing agricultural growth. This enhances purchase consolidation, participation in value chains, specialisation, and quality standards, leading to the transformation of the national economy (Weatherspoon & Reardon, 2003). Nevertheless, direct sourcing by supermarkets from farmers is limited to a few fresh products, and public interventions could help in directly linking supermarkets with farmers to reduce marketing costs and pass incentives to producers (Nair, Chisoro, & Ziba, 2018).

Urbanisation plays a critical role in linking African producers of natural resources and agriculture-based products to international markets. The impact of urbanisation through agricultural product consumption is not uniform and varies based on proximity to urban centers and available infrastructure (Henderson, Storeygard, & Deichmann, 2017). For instance, empirical evidence from Ethiopia, India and Vietnam suggests that the effects of urbanisation is stronger in areas closer to urban areas than in remote areas due to weakly integrated agricultural markets (Cali & Menon, 2013; Jha, Murthy, & Sharma, 2008). The review shows that the effect of urbanisation is stronger in areas closer to urban centers than in remote areas due to weakly integrated agricultural markets, and can introduce spatial differences in farm productivity within high-value products such as the high-dairy sector. Therefore, as rapid urbanisation continues to take place, measures that enable remote farmers to participate in value chains have important benefits for the transformation of the agricultural sector and rural livelihoods as a whole (Vandercasteelen, Minten, & Tamru, 2021).

Finally, urbanisation drives agricultural commercialisation, resulting in increased demand for agricultural inputs and services, higher rural income, and the emergence of small businesses such as traders, processors, and logistic providers (Kankwamba & Kornher, 2019; Tadesse, Oenema, van Beek, & Ocho, 2018). This leads to the growth of off-farm incomes and the transformation of the rural economy. The modernisation of agriculture and the use of technologies and infrastructure manufactured in urban centres create opportunities for rental activities such as planting, sowing, fertilisation, and harvesting, resulting in increased labour productivity and improved earnings for farmers and other value chain actors (Tadesse et al., 2018).

Employment: Flows of people and labour

This review suggests that urbanisation in rural areas is leading to the diversification of rural livelihoods and providing new economic opportunities such as employment, particularly in small and secondary towns (Ørtenblad, Birch-Thomsen, & Msese, 2019; World Bank, 2014). This trend has contributed significantly to poverty reduction, particularly in secondary towns, as evidenced in Tanzania where approximately half of the households who exited poverty did so by transitioning out of agriculture into secondary towns (Christiaensen et al., 2013). However, urbanisation can also lead to income inequality if it excludes vulnerable populations such as women and young people (Oyvat, 2016). To ensure that smallholder farmers are protected, appropriate policies should be put in place.

Renewed interest in the role of secondary towns and cities in rural development stems from the need for inclusive economic development, reduced migration to big cities, and potential opportunities for diversification of the local economy (Agergaard, Tacoli, Steel, & Ørtenblad, 2019; Karg et al., 2019). Given that the majority of the labour force in secondary towns and cities are unskilled and semi-skilled workers, these areas are more attractive to poor and rural communities compared to big cities (Berdegué, Escobal, & Bebbington, 2015). This renewed interest has also resulted in policy changes in the 1990s, such as the decentralization of administrative functions in developing countries (Satterthwaite & Tacoli, 2003).

Small towns and urban centers serve as both “market towns” providing markets and services for small-scale producers and as “administrative towns” where a significant proportion of households

earn income from government services, mediating the flow of inputs, goods and services between rural areas and larger urban centers. This intermediary role makes them effective generators of non-farm employment for the poor and can positively influence rural development and agricultural productivity (Dorosh & Thurlow, 2012; Haggblade, Hazell, & Dorosh, 2007). Micro-empirical evidence from Tanzania and Senegal and a cross-country study of 51 developing countries suggest that secondary cities and towns have a stronger effect on poverty reduction than big cities, indicating that rural diversification and secondary town expansion can yield faster poverty reduction and more inclusive growth (Christiaensen et al., 2013; Tacoli, 2013). However, it is important to note that the benefits of small town growth are not equally distributed among all households (Ørtenblad et al., 2019).

Improved off-farm employment in cities can increase remittance flows and investments, leading to improved agricultural productivity and other outcomes. The share of non-farm income in rural households, largely driven by off-farm employment and migration at nearby urban centres, has been increasing and can contribute up to 40–50% of the average rural household income in SSA (Start, 2001). This rise in off-farm income can lead to increased migration and remittances, which, in turn, can improve agricultural productivity and enhance household incomes, reduce poverty, and improve food security (Christiaensen et al., 2013).

Urbanisation affects men and women differently and through various pathways. This has implications on rural development. For instance, the expansion of urban areas changes gender roles, creates more economic opportunities or increases exposure to risks such as sexual violence or the loss of agricultural lands (Moser, 2016). However, even if there are critical gaps in this regard, existing empirical evidence from SSA suggests that urbanisation increases gender equality in employment (Anyanwu & Augustine, 2013) and improves the livelihoods of women through providing job opportunities, education, family-planning and reproductive health care (Tacoli, 2012). Rural women have gained economic and social freedom through improved livelihoods, particularly through access to public services such as family planning (Beguy, Ezech, Mberu, & Emina, 2017).

Financial linkage effects

The review suggests that the financial linkages between urban and rural areas in African countries have been found to benefit rural areas through increased flows of remittances, investments, credits, and services provided by banks and microfinance institutions. However, some studies have found negative effects, such as reduced agricultural productivity, insufficient revenue generation, and crowding out of investment. Remittances from urban to rural areas have been increasing due to rural to urban migration (Crush & Caesar, 2018), and structural transformation and urban remittances have been identified as important pathways for improving welfare in developing countries (Christiaensen et al., 2013; Wouterse, 2010). Removing barriers to rural-urban mobility and implementing supportive policies, markets, and infrastructure investments can facilitate rural economic transformation (Turok & McGranahan, 2013). Remittances also alleviate liquidity constraints faced by farmers, enabling reinvestment in agriculture and related activities, ultimately improving agricultural productivity (Kapri & Ghimire, 2020).

The review also highlights that urban-rural remittances have positive spillover effects on rural areas by improving income, living standards, and food security (Cali & Menon, 2013; Dupas & Robinson, 2013). However, some studies suggest that remittances are not sufficient to induce major investments in agriculture and may only complement subsistence farming (Jokinen, 2018; Rempel & Lobdell, 2007). In Burkina Faso, for instance, an increase in remittances received by farm households caused a significant decrease in agricultural productivity: measured in terms of total production, total production per unit of land, and total production per unit of labour (Dedewanou & Kpekou Tossou,

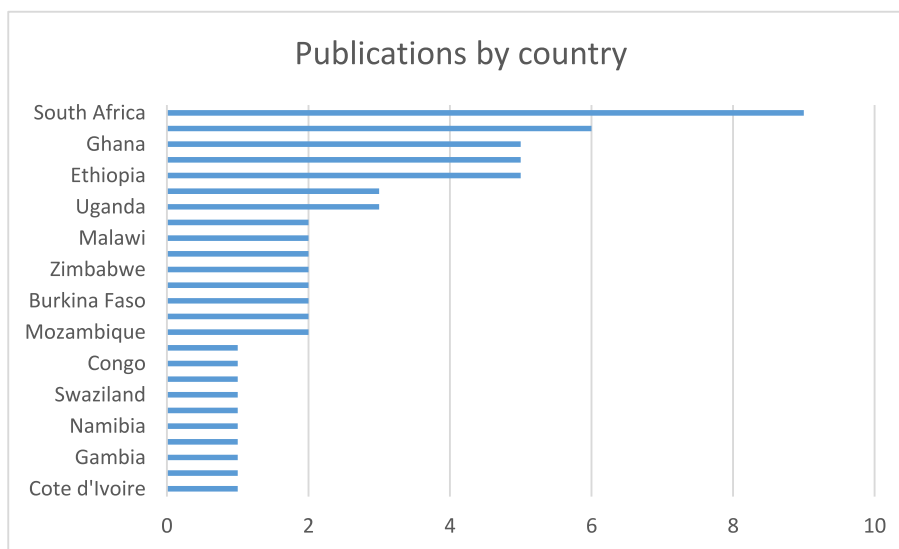


Fig. A1. Distribution of publications by country.

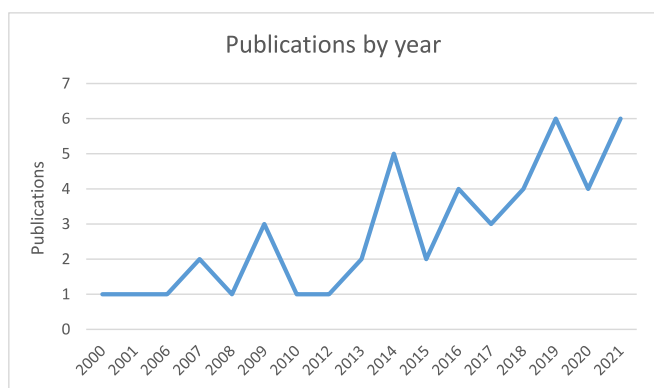


Fig. A2. Publications by year since 2000.

2021). Additionally, rural to urban remittances are also important but often neglected in policy and research (Crush & Caesar, 2018). Urbanisation may decrease agricultural productivity through labour loss and lower use of appropriate technology (Azam & Gubert, 2006; Taylor, Rozelle, & de Brauw, 2003). The effect of urbanisation is heterogeneous depending on proximity to urban areas and city size. Future research is needed to better understand the role of rural to urban remittances in the urbanisation process in SSA countries.

Land market linkage effects

The review findings identified four mechanisms through which urbanisation affects land availability and rural land markets, with corresponding impacts on agricultural productivity and rural welfare outcomes: (i) migration can increase agricultural land per capita and lead to higher productivity; (ii) urban sprawl can decrease farmland availability and increase land value; (iii) urban middle classes may invest in productive or speculative land markets; (iv) urban sprawl can reduce farm land and agricultural production; (v) changes in farm size can impact the efficiency of production inputs. These alterations have significant implications for agricultural growth and rural development (Lambin, Geist, & Lepers, 2003).

With regard to the first mechanism, Wu, Jiang, Luo, Zhang, and Skitmore (2019) show that small farm size coupled with surplus labour is often an impediment for introducing improved agricultural practices and a challenge for the sustainable development of agriculture. On the

contrary, Wang et al. (2021) find that urbanisation increases the total cropland areas and decreases the rural population due to migration. This phenomenon results in a higher per-capita cropland area for rural households, and hence higher farm sizes. Increase in farm size has implications for agricultural production, especially for smallholder farmers. In other words, farm size plays a vital role in increasing agricultural productivity. Overall, the study finds that the effect of urbanisation on per-capita cropland (or farm size) is inclusive.

As to the second mechanism, the review found that urbanisation's conversion of farmland to urban use has increased land prices, especially in rapidly urbanizing areas (Rondhi, Pratiwi, Handini, Sunartomo, & Budiman, 2018). Farms near urban areas benefit from lower transportation costs and greater access to infrastructure and markets, while farmland on the outskirts of cities can provide amenities that generate higher profits than comparable lands farther away. However, urbanisation can also displace farmers without adequate compensation, since land markets and policies in most countries are underdeveloped (Niasse & Cherlet, 2014). Urbanisation's impact on land values is correlated with proximity to major urban centers and surrounding agricultural land characteristics, including recreation potential. "Urban sprawl," which has characterized many African cities in recent decades, alters land use patterns and land values, often leading to fragmentation that negatively affects agricultural production (Dadi et al., 2016).

As to the third mechanism, evidence suggests that urbanisation reduces cropland fragmentation in rural areas while increasing rural land release (for instance, through reclamation) for agricultural production coupled with a decrease in rural population, benefiting large-scale farming (Wang et al., 2021). However, ensuring the benefits of urbanisation in this regard makes it necessary to adopt an integrated urban-rural development plan as well as to manage population growth. This is because, with increased urbanisation coupled with population growth, there will be less potential for rural land release. As African countries are likely to undergo rapid urbanisation in the coming decades, the research gap that needs to be addressed is the expected impact of urban influence on land prices in the coming years and its consequences on the well-being of rural communities.

On the fourth mechanism, two opposing views exist in the literature: urbanisation reducing crop production on the one hand, and urbanisation increasing cropland and hence crop production. According to Brend'Amour et al. (2017) urbanisation can lead to a loss of global croplands, resulting in a reduction of worldwide crop production, particularly in Asia and Africa. According to this estimate, global urban expansion will result in a 1.8 to 2.4 percent loss of global croplands by 2030 which

could translate into a 3 to 4 per cent reduction in worldwide crop production, with a substantial cropland loss occurring in Asia and Africa (about 80 per cent). However, recent empirical evidence from China suggests that urbanisation can benefit agricultural production by releasing rural land for agricultural use, benefiting large-scale farming and environmental protection (Wang et al., 2021). The potential trade-offs between urbanisation and agricultural production in SSA have not been thoroughly studied, and their impact on food security remains largely ignored. Therefore, it is crucial for African countries to learn from the best practices elsewhere, such as those in China, and conduct further research on the impact of urbanisation on agricultural production. On the fifth mechanism, existing empirical studies have found that increased farm size is associated with more use of fixed inputs (such as machinery and knowledge) compared with variable inputs (like fertilisers and pesticides), thus increasing crop yields (Ren et al., 2019).

It should also be noted that it is not only urbanisation (particularly urban sprawl) that induces changes in land use (or farmland loss) but also the infrastructure development that goes with urbanisation such as road construction. In this regard, urban sprawl and infrastructure development associated with residential expansions are the main drivers of extensive agricultural land conversion in Africa (Dadi et al., 2016). Again, such analysis is required to guide policy formulation in SSA countries as huge resources are going to urban and infrastructural development.

Information and knowledge linkage effects

This review identifies five areas through which urbanisation accelerates human interaction and thus the accumulation of knowledge pertinent to improving rural well-being: i) urban areas are sources of complementary services; ii) urbanisation fosters information and knowledge flows from urban to rural areas; iii) urban areas accelerate human interaction, hence also the exchange and accumulation of knowledge; iv) urban areas provide economies of scale for specialised institutions; (v) information and knowledge accumulation to empowerment.

Urban areas are crucial for the provision of complementary services such as transportation, communication, and extension services that foster learning, innovation, employment and human capital accumulation, ultimately leading to improved welfare outcomes for smallholder farmers (Akkoyunlu, 2015; Njiraini, Mwema, & Nzuma, 2018). Additionally, urban centers serve as meeting places for value chain actors, including traders, processors, and logistics companies, that provide services to smallholder farmers, with small and medium towns playing a significant role in shaping agricultural value chains in Africa (AGRA, 2019b). These towns provide nearby markets for local producers, input requirements, and services such as financial services, storage facilities, and extension services that facilitate inclusive growth and lower transportation costs, ultimately benefiting farmers. However, the potential benefits of urbanisation in SSA are limited by critical gaps in urban service delivery.

Second, urbanisation can facilitate the transmission of knowledge and information from urban to rural areas, which can enhance human capital accumulation in rural regions (Filmer & Fox, 2014). This information flow can induce the adoption of novel livelihood practices that increase yields, enhance income, or improve food security.

Third, rural-urban linkages facilitate social interaction and information exchange between urban and rural residents, which can lead to better decision-making regarding migration, remittances, and employment (Brueckner & Largey, 2008; Epstein et al., 1967; Munshi, 2020). These interactions also allow for the sharing of knowledge and best practices, including through technology and urban-rural interactions (Bertoli, Ozden, & Packard, 2021). Stronger rural-urban integration can reduce the risk and cost of migration by enabling rural residents to find employment and shelter in urban areas (Munshi, 2020). Increased flow of information to rural areas regarding employment opportunities can

augment financial flows from urban areas, increasing agricultural productivity and other outcomes as shown in Fig. 2.

Fourth, urban areas facilitate the provision of specialized institutions that contribute to improving livelihoods, by providing economies of scale. Such economies arise from labour market pooling, input sharing, and knowledge spillovers, which are crucial for agglomeration economies (Rosenthal & Strange, 2004). Focusing on specialized institutions in urban areas provides better outcomes compared to large and generalist institutions.

Fifth, urbanisation can contribute to social and political empowerment by facilitating information and knowledge linkages (Start, 2001). Labour market effects that enable rural residents to interact with non-agricultural workers, leading to new experiences, skills, and contacts that can enhance their bargaining base and civil rights exemplify this. Ghosh and Roy (1997) also suggest that such interactions can improve social status. However, the dispersal of migratory labour forces to outside their vicinity can reduce the bargaining base, thus negatively affecting social and political empowerment of households and individuals, as noted by Start (2001).

This study highlights the limited research on the impact of knowledge spillovers on rural development, with current studies primarily mapping the flows without proper analysis of their effects. Understanding the effects of public services and empowerment on rural development is crucial for designing interventions that improve welfare outcomes such as nutrition. For example, a recent study in Ethiopia suggests that improving women's knowledge of nutrition and empowerment has a significant effect on enhancing children's dietary diversity and reducing stunting (Melesse, 2021).

Social interaction linkage effects

The rapid urbanisation over the past few decades has significant implications for societal integration and cohesion. As more people transition from rural to urban areas, there is a shift from agricultural to industrial and service sectors (McGranahan & Martine, 2014). This leads to new social structures and interactions. Despite some emerging empirical, for instance, Ravallion, Chen, and Sangraula (2007), and theoretical such as Anand and Kanbur (1985) and Ravallion (2002) explanations of the relationship between urbanisation and social interactions, and its potential impact on social cohesion and rural development, there is still limited research on this topic. Therefore, examining the effects of urbanisation on social cohesion is crucial for promoting societal peace and achieving sustainable development.

On the one hand, urbanisation can induce changes in social structure, culture, identity, and social capital, as argued by scholars such as Putnam (2000) and Tacoli (2011). Baker (2019) explores how the development of small towns can impact the existing culture in Ethiopia, which can have both positive and negative effects on rural and urban livelihoods (Dessie, 2013). However, urbanisation can also worsen living conditions, fuel dissatisfaction and social unrest, and lead to environmental degradation and inefficient use of land. Furthermore, urbanisation in many African countries has been linked to an increased threat of conflict, insecurity, depression, economic strain, and diminished social networks (Hoare et al., 2019).

On the other hand, urbanisation offers opportunities for interaction, cooperation and the exchange of ideas through various pathways discussed in Section 2. For instance, urban areas provide a vibrant public realm and a creative environment for people from diverse backgrounds to interact (Cali & Menon, 2013). Although this internal transformation promotes social cohesion within cities, it has weakened rural-urban interactions (Cali & Menon, 2013). Furthermore, Lall, Henderson, and Venables (2017) found that African cities have 40% fewer neighbours to interact with than Asian and Latin American cities.

Moreover, social cohesion plays a critical role in mediating the flow of information, inputs, goods, services, people, and ideas between rural and urban areas (Foltz, Guo, & Yao, 2020). Trust within and between

societies can reduce migration costs, enabling individuals to take advantage of the information available in their networks, and fostering labour flows such as migration to urban areas for employment opportunities. Urbanisation can also moderate the relationship between social cohesion and other flows, such as remittances and agricultural markets. For example, agricultural cooperatives in Ethiopia link rural farmers with urban markets and buyers, providing access to resources that would otherwise be unavailable. These cooperatives foster social cohesion by building relationships and networks, promoting a sense of shared purpose and mutual support, and increasing bargaining power (Tadesse, 2021). The extent of the positive spillover effects of urbanisation on rural development is also influenced by the degree of social cohesion within societies.

Furthermore, urbanisation can also have a positive effect on social cohesion and rural development by contributing to peacebuilding in conflict-affected areas, particularly through the development of small towns. Büscher and Mathys (2019) found that the transformation of rural villages in the Kivu Province of the Democratic Republic of Congo (DRC) into vibrant towns has greatly improved the local peace in those areas. However, the governance of rural-urban transformations is crucial. Overall, urbanisation affects social cohesion through labour market linkages, rural-urban migration, rural-urban partnerships in work and experience, and in relation to social and political unrest (Fox & Bell, 2016).

Environmental externalities effects

According to Hoorweg et al. (2013), rapid urbanisation in SSA has led to an increase in solid-waste generation, which will continue to rise with urban population growth and improvements in living standards. This increase can have significant implications for sustainable development and agricultural production, especially if urban development is uncontrolled or ad hoc. However, improved awareness among urban residents about waste management has led to a reduction in food and horticultural waste, which is the largest component of solid waste.

According to Anikwe (2002), waste disposal and pollution can have negative impacts on soil productivity, water quality, and human health. Long-term studies conducted in one of the urban areas of Nigeria have shown that the dumping of municipal waste can negatively influence soil properties and productivity, and the use of these wastes in farming without adequate ecotoxicological assessments can result in the increased uptake of heavy metals by crops, which can have harmful effects on human health. Furthermore, the growth of cities can lead to increased urban air pollution, which poses serious health risks to rural areas, including increased mortality rates, contamination of water sources, and the spread of infectious diseases. However, properly managed waste can enhance soil fertility and improve soil physical properties, which can reduce the cost of crop production (Anikwe, 2000).

The review suggests that rapid urbanisation is associated with crowding, environmental degradation, and the emission of greenhouse gases, negatively affecting rural development outcomes (Bloom, Canning, & Fink, 2008; Foley, 2005; Kalnay & Cai, 2003). Cities consume the highest proportion of energy and account for over 70% of greenhouse gas emissions (Lall et al., 2017), putting pressure on land and natural resources in SSA cities. This has important implications for the rural economy, particularly agriculture, as it increases farmers' exposure to the risks of disaster. However, urbanisation can also help to reduce the risks and costs resulting from climate change by concentrating people in cities and enabling more effective climate change adaptation strategies (World Bank, 2013, 2013).

Finally understanding the impact of urbanisation on biodiversity and ecosystem services is important for achieving sustainable development and ensuring food security and nutrition in both rural and urban areas. While limited evidence from Central Europe and the United States suggests that urbanisation can be both a threat and an opportunity for

biodiversity conservation (Theodorou et al., 2020; Wilson & Jamieson, 2019), there are critical gaps in the literature that need to be addressed to gain a better understanding of the effects of urbanisation on biodiversity and ecosystem services.

All in all, the review results shed light on a set of interesting issues related to urbanisation and its effects on rural development which have important implications for both research and policy formulation, as discussed further in Section 5.

Discussions

The relationship between urbanisation and rural development is a critical policy concern in SSA, and is subject to different perspectives. On the one hand, urbanisation in SSA presents opportunities in economic, social, political, and environmental domains, such as the release of rural land for agricultural purposes. On the other hand, urbanisation also poses developmental challenges, such as discrimination, social marginalisation, and heightened polarisation. Evidence from literature shows limited support for the widely held belief that urbanisation has a negative effect on agricultural production in SSA, particularly regarding the reduction of agricultural land due to urban expansion. It is important to note that the benefits and challenges of urbanisation can vary among countries and regions.

To promote sustainable rural development amid rapid urbanisation and urban-rural linkages, policymakers must address key constraints to achieve the desired outcomes, focus on geographic targeting and appropriate institutional settings in urban centers, and promote rural-urban linkages for social interaction and can foster social cohesion within neighborhoods, and economic transformation. Such efforts with political will can contribute to achieving multiple Sustainable Development Goals, including SDG1, SDG2, SDG8, SDG9, SDG11, and SDG12. However, external forces such as multinational enterprises, central government, and local elites may also negatively affect the effectiveness of these efforts (Southall, 1988). Further research is needed to determine the extent to which the promotion of SDG11 can lead to the attainment of other SDGs.

The potential of urbanisation to improve rural living standards is influenced by factors that either facilitate positive outcomes or hinder them. These outcomes refer to rural development indicators presented in Fig. 2. The positive outcomes of urbanisation can be facilitated by favourable infrastructure, institutional settings, and policies, as well as the emergence of new marketing pathways such as rapid super-marketisation, digitalization, and demographic and geographic characteristics of urban center (Jedwab & Vollrath, 2015). The level and quality of urbanisation also play a role in influencing its impact on welfare outcomes. However, negative outcomes can result from factors such as urban sprawl, corruption, lack of consideration for sociocultural context, and insufficient coordinated infrastructure linking rural areas to urban centers, and lack of governance capacities as well as absence of clear property rights to agricultural land (Olagunju et al., 2019; World Bank, 2017). In addition, most of the growth in SSA is driven by natural resource extraction and is not naturally urban-oriented, limiting the potential benefits of urbanisation (Gollin et al., 2016). To optimize the benefits of urbanisation on rural development, it is essential to improve the current process by strengthening small and medium-sized towns, which can provide better services for rural households and have a stronger effect on poverty reduction (de Noronha & Vaz, 2020; Fahmi, Hudalah, Rahayu, & Woltjer, 2014). This involves supporting small towns through infrastructure, access to finance, and movement of people and goods.

To attract global investment and make African cities drivers of rural development, structural problems such as congestion, disconnection, and high costs need to be addressed. The majority of Africa's urban population lives under "slum conditions", exacerbating socioeconomic disparities. For instance, urbanisation in Sierra Leone is occurring at a per capita income of USD 410 (World Bank, 2018). Strong political will

and leadership are necessary to connect urban growth with rural development plans, recognizing the interconnectedness of small town development and rural areas (World Bank, 2017; Steel et al., 2019). In addition, policies to upgrade slum conditions and settlements can improve welfare, increase demand for labour, and raise human capital (World Bank, 2018). However, the current literature on rural-urban linkages lacks coherence, leading to difficulties in scaling up best practices and conducting context-relevant analysis. South-South cooperation for knowledge exchange can be beneficial. The use of emerging approaches, such as night light intensity and investing in new data sources like satellite images and mobile apps, can help to reduce inconsistencies in definitions and measurements of urban and rural areas and allow for better monitoring and evaluation of progress.

In sum, in order to fully leverage the potential benefits of urbanisation for African rural development, significant investments in infrastructure and coordinated planning efforts are necessary, drawing upon both successful and unsuccessful urbanisation experiences. This requires addressing the lack of empirical evidence on effective strategies, policies, and contextual factors, by evaluating existing urbanisation initiatives comprehensively. Such evaluations may help integrate urban and rural areas into national rural development policies and practices. To design effective policies, it is crucial to understand the local context and unique circumstances of each country. Leaders and policymakers need to make concerted efforts to connect urban growth with rural development plans and address structural problems constraining African cities.

Conclusions and gaps to be filled by future research

This study reviewed the effects of urbanisation on rural development at households, national and/or regional levels, and the various pathways through which these effects materialise, including production and consumption linkages, employment linkages, financial linkages, land per capita linkage, information and knowledge linkages, social interaction linkages, and environmental externalities linkages. Understanding these linkages is essential in designing effective programs and policies for sustainable development. The review also identified factors that hinder the positive effects of urbanisation on rural economic transformation and proposed remedies to address these constraints. Overall, the findings suggest that the relationship between urbanisation and rural development is more complex and nuanced than previously thought. Urbanisation has a multifaceted impact on rural development, and the mechanisms through which this impact occurs are varied and complex. The literature presents different viewpoints, with some arguing that urbanisation is a positive force for poverty reduction, income growth, and economic development, while others claim that it has not facilitated the necessary structural transformation and has had a limited impact on overall economic growth. Some critics even suggest that urbanisation has a detrimental effect on rural livelihoods and the environment. However, recent empirical research indicates that the impact of urbanisation on economic development in SSA, particularly in rural areas, is context-specific and non-linear, with the potential to bring both positive and negative outcomes.

On the positive side, urbanisation can enhance the release of rural land for agriculture, leading to improved commercialization and food security, and driving the adoption of new technologies and modernisation of agricultural value chains. It can also increase demand, prices, employment, and productivity for agricultural products. However, these positive impacts depend on availability of infrastructure, institutions, political commitment, and leadership, proximity to urban centers as well as scale and nature of urbanisation. In fact, many countries in SSA have not fully utilised the opportunities that urbanisation provides, and only a few have successfully reduced poverty through urbanisation.

On the negative side, improperly planned urbanisation has resulted in persistent poverty, low rural wages in rural areas, and limited economic growth. This can create a challenge for increasing productivity

and economic integration between rural and urban areas. To overcome these challenges, the study suggests improving rural-urban linkages, promoting interdependence and cooperation, improving access to basic services, protecting the environment and implement reform programs to expand positive impacts and reduce negative impacts. For instance, sustainable urban planning practices and investment in renewable energy and green transport can mitigate the negative environmental impact of urbanisation. Furthermore, continuous monitoring and evaluation are necessary to ensure sustainable rural development in the long-term. Future rural development prospects largely hinges on how well these rapid urbanisation are managed.

Despite growing literature on the impact of urbanisation on rural development, there are still gaps that are particularly pertinent to the SSA. Specifically, empirical evidence of the impacts of rapid urbanisation on rural welfare outcomes, productivity, and the wider multiplier effect of urbanisation – such as social cohesion and spillovers – are still scarce or inconclusive. Some of the gaps identified during the review that have development relevance in SSA include the following. The relevance and degree of importance of these gaps could vary from country to country depending on the degree of urbanisation and on the socio-political context.

First, the lack of appropriate theoretical research and measurement issues in rural-urban linkages lead to inconsistency and ambiguity in the literature. There is a need for improved conceptualisation and formulation of theories that consider the unique socioeconomic conditions and characteristics of SSA cities. Second, urbanisation can change social relations positively or negatively, but there is a lack of empirical evidence on its impact on social interactions and economic outcomes. Further research is needed to analyse the effects of urbanisation on social cohesion and identify key mechanisms through which urban-rural linkages foster sustainable rural development. Third, urbanisation is also putting pressure on land and water resources, and research is required on the impact of farmland loss and the role of institutions and policies in shaping urban-rural agricultural linkages. Fourth, there is a lack of empirical evidence on the differential effects of urbanisation on rural women and men. Fifth, the impact of urban sprawl on rural economic development and agricultural productivity, including the implications of changing urban demands for agricultural products, requires further investigation. Lastly, the impact of urban externalities such as pollution and waste on rural development and sustainability requires more research.

To this end, it is important to acknowledge the limitations of this study. First, this study relies on the use of rapid review methods that have inherent limitations. Second, caution should be taken when applying specific recommendations stated in this study to different countries due to variations in the definitions of urban and rural areas across countries. Finally, the study has a broad focus on rural development indicators in SSA countries to provide a comprehensive understanding of the issues, with various units of analysis, including households, countries, and regions, which could affect the interpretation of findings.

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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Appendix A

Fig. A1 and A2.

Appendix B. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.resglo.2023.100133>.

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