



Can Cities or Towns Drive African Development? Economywide Analysis for Ethiopia and Uganda

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Summary. — Rapid urbanization is an important characteristic of African development and yet the structural transformation debate focuses on agriculture’s relative merits without also considering the benefits from urban agglomeration. As a result, African governments are often provided conflicting recommendations on the importance of rural agriculture or urban industry. We develop dynamic economywide models for Ethiopia and Uganda that capture both traditional aspects of the debate (growth linkages and foreign trade) and benefits from urbanization (internal migration and agglomeration effects). Simulations suggest that urban agglomeration is an important source of long-term growth and structural transformation, but that investing in cities does not greatly reduce national poverty over the short-term. In this regard, agricultural growth is more effective, albeit with slower national growth. Given these trade-offs, we conclude that, while urbanization’s benefits argue against an “agro-fundamentalist” approach to African development, the short-term imperative of reducing poverty necessitates further agricultural investment.

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Keywords — Structural transformation, Urban agglomeration, Economic growth, Poverty, Africa

1. INTRODUCTION

The relative importance of agriculture *versus* industry in African development remains a major area of debate (Collier & Dercon, 2014; Diao, Hazell, & Thurlow, 2010; Gollin, 2010; Hazell, Poulton, Wiggins, & Dorward, 2010). This debate is crucial since it informs the allocation of foreign development assistance across rural areas, towns, and cities at a time when Africa is rapidly urbanizing. The subject of the debate is also crucial for African governments who routinely allocate scarce resources across competing development objectives. For example, Uganda’s government must decide how best to reallocate resources away from southern regions toward post-conflict northern cities and rural areas (Dorosh & Thurlow, 2011). Similarly, Ethiopia’s government limits urban migration through its land tenure policies, but must weigh this policy against the benefits of urban development (see De Brauw & Mueller, 2012).

At its broadest level, the academic debate hinges on whether the traditional development models that sought to explain the drivers and process of structural transformation are still relevant for Africa. Early dual economy models viewed nonagriculture as the dynamic sector that draws surplus farm workers into more productive jobs (see, for example, Lewis, 1954). Agricultural growth was seen as necessary to prevent rising food prices and wages from slowing industrialization. Subsequent models attributed a more active role to agriculture given its industrial production linkages (Johnson & Mellor, 1961) and its household consumption linkages, particularly within rural economies (Adelman, 1984; Haggblade, Hazell, & Brown 1989). For those who Gollin (2010) terms “agro-fundamentalists,” these models still provide the core justification for an agriculture-led growth strategy in Africa. Agriculture is

also seen as a direct link to poorer Africans given their dependence on farm-based livelihoods (Diao *et al.*, 2010).

The traditional models face two major criticisms. First, integrated global markets mean that countries might be able to use food imports rather than domestic production to support industrialization. Secondly, the sources of growth are not explicitly identified in traditional models making it difficult to determine which sectors drive structural transformation. In this regard, African agriculture has yet to demonstrate that it is able to generate productivity gains like those experienced in Asia’s Green Revolution. Counter-arguments contend that a reliance on food imports would weaken inter-sectoral growth linkages and widen the rural–urban divide (Hazell *et al.*, 2010). Moreover, African agriculture’s historically poor performance might reflect long-term underinvestment in the sector rather than its growth potential.

The above arguments focus on agriculture itself and are well-trodden areas of the debate. An area that receives less attention is the benefits from urban agglomeration economies and the growing interest in new economic geography (see Fujita, Krugman, & Venables, 2001). From this perspective, economic growth accelerates when resources or activities concentrate within geographic areas (Henderson & Wang, 2005). Urbanization and industrial localization can generate positive externalities by situating producers closer to labor markets and customers, as well as to each other. Urban agglomeration could therefore generate the productivity gains required to drive structural transformation. Agglomeration economies were not explicitly considered in traditional models and so might provide an additional argument in favor of directing resources toward industries in major cities and towns (see World Bank, 2008).

In this paper we examine whether urban agglomeration economies significantly alters the debate over the potential

drivers of Africa's structural transformation. More specifically, we develop an economywide model that captures the benefits from urbanization. Unlike most models, ours distinguishes between rural areas, small towns, and major cities, and allows for internal migration and urban agglomeration effects. It captures rural–urban production and consumption linkages as well as international trade, thereby incorporating many of the arguments in favor of or against agriculture. We calibrate the models to data for Ethiopia and Uganda—two agriculture-based African countries where urban development is central to the policy debate.

The models are used to simulate the effects of accelerated urbanization, as well as the growth and poverty impacts (and trade-offs) of reallocating public investment between rural areas, towns, and major cities. Our results suggest that urbanization and agglomeration economies are important sources of economic growth and might well be a driver of long-term structural transformation in Africa. However, over the short-term, investing in major cities does little to address national poverty. Agricultural growth is found to be a more effective means of reaching the poor, albeit at the cost of slower national growth. Given these trade-offs, we conclude that while urban agglomeration does provide an argument against an “agro-fundamentalist” approach to African development, the shorter-term political and socioeconomic imperative of reducing poverty supports further investment in African agriculture.

The paper is structured as follows: We first outline the economic structure of the two case study countries (Section 2) and their rural and urban economies (Section 3). We then describe the economywide model (Section 4) and our simulations and results (Section 5). The final section summarizes our findings.

2. ETHIOPIA AND UGANDA CASE STUDIES

Ethiopia and Uganda have characteristics similar to many low-income countries in Sub-Saharan Africa. Both have agriculture-based economies, with agriculture generating roughly half of Ethiopia's gross domestic product (GDP) and a quarter of Ugandan GDP (see Section 3). Despite this difference, about four-fifths of both countries' populations are rural smallholder farmers. Agriculture is also the chief export earner, thus underscoring its importance for both rural and national incomes.

Industries' contribution to national GDP is twice as large in Uganda than in Ethiopia. However, like much of Africa, neither country has a large manufacturing base (about 10% of GDP in Uganda), and most manufacturing is agriculture-related. The remaining industry is mainly construction, with mining currently playing a minor role.¹ Like most African countries, services form the bulk of the nonagricultural economies, primarily nontradable public services and retail trade.

National GDP per capita is twice as large in Uganda, i.e., US\$295 in 2009 compared to US\$151 in Ethiopia (World Bank, 2011).² This is due to Uganda's larger nonfarm economy. In fact, agriculture generates similar value-added per capita in both countries (i.e., about US\$70 per year). Economic growth has been equally rapid in our case studies at 7% per year during 1995–2009. Industry expanded faster than agriculture in both countries, albeit from a low base, causing agriculture's share of GDP to fall. National poverty rates have also fallen—by a third in Ethiopia and a half in Uganda (World Bank, 2011).³ Moreover, while total populations grew at 2.7% and 3.2% each year in Ethiopia and Uganda, respectively, urban populations grew more rapidly at 4.3% and 4.1%.

The economic structures and trends of our case studies are broadly consistent with Sub-Saharan Africa as a whole. Modest industrialization has been accompanied by urbanization, but with little evidence to suggest that economic transformation is taking place (see McMillan & Rodrik, 2014). There is also a gradual urbanization of poverty (Ravallion, Chen, & Sangraula, 2007). The share of the poor population living in Uganda's urban areas rose from 3.4% to 4.8% during 2000–09, while in Ethiopia it rose from 10.1% to 14.3% during 1995–2004 (World Bank, 2011). Rising urban poverty might justify greater investment in urban areas. However, as Lipton (1980) and other studies argue, migrants can be “pushed” by poor agricultural conditions rather than “pulled” by new urban job opportunities, and so urban investments might treat the symptoms of urban poverty rather than the cause.

Concerns about rising urban poverty are reflected in national policy debates. It has underpinned a land tenure policy in Ethiopia that discourages internal migration (and hence urbanization) by limiting the transferability of land rights between migrants and nonmigrants (see De Brauw & Mueller, 2012). Land tenure is less of a concern in Uganda (Baland, Gaspart, Place, & Platteau, 2007), where the policy debate has focused more on whether the national development plan should emphasize economic growth in the capital city or in smaller towns (see Dorosh & Thurlow, 2011). This is especially pertinent given that northern Ugandan towns have lagged behind the rest of the economy, partly as a result of civil conflict. Both Ethiopia and Uganda therefore face trade-offs between investing their scarce public resources in rural agriculture or urban industry, and for the latter, in smaller towns or larger cities.

3. DISTINGUISHING CITIES, TOWNS, AND RURAL AREAS

To examine the growth and poverty impacts of spatially-targeted investments, we separate Ethiopia and Uganda into three sub-national areas, namely cities, towns, and rural areas. We follow the same approach in both countries. We first identify rural areas based on the countries' official “urban” definitions.⁴ Urban areas are then divided into “cities” and “towns” using population census data (CSA (Central Statistical Agency), 2007; UBOS (Uganda Bureau of Statistics), 2002a). We define cities as having more than 250,000 inhabitants. They include capital cities, i.e., Addis Ababa and Kampala, and large urban centers, i.e., Dire Dawa and Harar in Ethiopia, and Entebbe and Mukono in Uganda. In 2005, cities accounted for 3.6 and 1.7 million people out of Ethiopia and Uganda's total populations of 71.0 and 27.2 million, respectively (see Table 1). The remaining urban areas were classified as “towns” and contain around 10% of the population.

In order to capture economic linkages between rural and urban areas, we disaggregate each country's individual sectors and households across cities, towns, and rural areas. We start from the representation of each economy contained in their national social accounting matrices (SAMs) (EDRI (Ethiopian Development Research Institute), 2009; Thurlow, Diao, & Zhu, 2007). These economywide databases capture all income and expenditure flows between producers, households, and government and foreign sectors within a consistent accounting framework. We use nationally-representative industrial and household surveys to disaggregate national production and employment, and household incomes and expenditures across the three sub-national areas (CSA, 2006, 2009; UBOS, 2002b, 2006).⁵

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