

Rural-Urban Linkages and Frictions

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Introduction

- Rural-urban linkages in today's developing countries are characterized by frictions of various kinds.
 - ▶ Frictions in the physical movement of people and goods.
 - ▶ Frictions (perhaps declining) in the flow of information.
 - ▶ Policy and institutional barriers.
- Less tangible barriers: social and cultural barriers.
 - ▶ An emerging friction: changes in urban food systems.
- Understanding these linkages and frictions matters for development, structural transformation, and growth.

Traditional views: frictionless linkages

- Two views of rural-urban linkages are common in the policy discussion.
- Different views of the structural transformation process and the transition from agriculture to non-agriculture.
 - ▶ Urbanization / industrialization leading to rural growth
 - ▶ Agriculture / rural growth leading to urbanization / industrialization

Urban drivers of transformation

- Urbanization-led growth
 - ▶ Urban growth (perhaps linked to export manufacturing) will create demand for agricultural goods.
 - ▶ Agricultural dynamism in peri-urban areas will steadily spill into more remote areas.
 - ▶ Rural areas will transform in response to urban growth.
 - ▶ Duranton (2008, 2014); Hsieh and Moretti (2015); Moretti (2014)

Rural drivers of transformation

- Agricultural-led growth

- ▶ Increasing agricultural productivity will release labor from rural areas.
- ▶ Cheaper food will allow industry to become more competitive.
- ▶ Dynamic rural areas will create the demand for manufactured goods and services.
- ▶ Johnston and Mellor (1961); Mellor (1995, 2017); Timmer (1988, 2002)

The importance of frictions

- Both views implicitly see the linkages between rural and urban areas as being relatively frictionless.
- But much literature suggests that there are significant frictions between rural and urban economies, especially in contemporary sub-Saharan Africa.
 - ▶ Differences in average labor productivity; see Gollin, Lagakos, and Waugh (2014).
 - ▶ Differences in realized living standards; see Gollin, Kirchberger, and Lagakos (2017).
 - ▶ High costs of moving goods; see Atkin and Donaldson (2015); Gunning, Krishnan, and Mengistu (2018).

Disequilibrium pressures

- Spatial and sectoral disparities (rural/urban, agriculture/non-agriculture) create pressures for equalization.
- Spatial equilibrium could be obtained through movements of labor, capital, or goods.
- But:
 - ▶ Capital does not necessarily move freely through the economy.
 - ▶ Goods do not move easily.
- Movement of people has become the primary vehicle for equilibration of spatial and sectoral disparities.
 - ▶ But an imperfect vehicle; movement of people can also be costly; see Bryan, Chowdhury, and Mobarak (2014).

Policy implications

- These frictions point to one set of important policy implications:
 - ▶ Investments in physical infrastructure.
 - ▶ Institutions that lower transactions costs.
- Programs that improve domestic market integration can generate significant Smithian growth.
 - ▶ e.g., Costinot and Donaldson (2011); Donaldson and Hornbeck (2016); Donaldson (2018).

An emerging new friction?

- Our models of rural-urban linkage have generally assumed that rural areas play a key role in supplying urban areas with food and raw materials.
- A valid assumption in the historical context in Europe and North America.
- Also a valid assumption in the context of East Asia and Southeast Asia.
- No longer obvious, especially in sub-Saharan Africa.

Old models of linkage

- A key assumption of most models of structural transformation is that national economies are closed and must produce their own food.
- Availability of imports weakens that mechanism.
- For sub-Saharan Africa in 2018, urbanization and infrastructure improvements put many people within plausible reach of food imports.
 - ▶ An important difference with Asia in 1960s or Africa in 1980s.
- Emerging disconnect in Africa between urban diets and rural production.

Dietary changes

- Africa's urban consumers appear to be moving rapidly away from foods that are produced in rural areas.
 - ▶ Different from Asia in 1960s, when urban consumers simply wanted larger quantities of grains.
- Interesting evidence from recent work by Cockx, Colen, and De Weerd (2018) on dietary changes in Tanzania.
 - ▶ Draws on Tanzania LSMS-ISA and detailed analysis of consumption patterns.
 - ▶ Examines shifting dietary habits of migrants from rural to urban areas.
 - ▶ Challenges the idea that diets are fixed!
 - ▶ Addresses the possibility that differences between rural and urban diets simply reflect regional differences in consumption preferences.

Evidence on Tanzania from Cockx, Colen, and De Weerd (2018)

- At baseline (2008-09) urban residents consumed fewer calories from maize, cassava, and other starchy foods, compared to rural people:
 - ▶ Urban: 755 kcal/day, relative to total intake of 2,652 kcal/day (28%)
 - ▶ Rural: 1,432 kcal/day, relative to total intake of 2,507 kcal/day (57%)
- Urban residents consumed more rice, bread, pasta, sugar, sweets, pastries, snack food.
- Rural-urban migrants changed diets dramatically:
 - ▶ Those who migrated between 2008-09 and 2012-13 reduced consumption of maize, cassava, and other starchy foods by ≈ 500 kcal/day.
 - ▶ Big increases in consumption of rice, bread.

Dietary changes, cont.

- Many reasons for the changes in diet:
 - ▶ Rising value of women's time: rice and bread are convenience foods, as shown in Senauer, Asp, Kinsey, et al. (1991)
 - ▶ Decreasing availability of kitchen space.
 - ▶ High costs of cooking fuel.
 - ▶ Greater urban mobility (for food away from home).
 - ▶ Cultural issues / status.
- A global shift: Urban consumers want processed and prepared foods.
- An African specificity: Much of this processed and prepared food is imported.

Macro consequences of shifting diets

- In 2014, Tanzania imported around \$1.24 billion of agricultural products (COMTRADE).
- Over 70 percent were processed and semi-processed items:
 - ▶ Sugar and sweeteners, beverages, tobacco products, processed grains, and dairy products.
 - ▶ Processed and semi-processed foods made up 6.9 percent of total imports, 1.65 percent of GDP.
- No direct data on the import share of urban food expenditure, but it is clear that there is a close match.

A broken linkage?

- If cities become increasingly integrated into global food systems (and increasingly dependent on imports of processed foods), then rural-urban linkages weaken.
 - ▶ Urban growth will not create strong backward linkages into rural areas.
 - ▶ Agricultural productivity growth will not reduce real costs of labor in urban areas.
- Urban and rural growth may become increasingly disarticulated.
 - ▶ Agricultural growth will depend on external markets for cash crops;

Needed: better models of structural transformation

- Our models of structural change overwhelmingly assume that economies are closed (or, occasionally, open).
 - ▶ For developing countries, we need better models in which economies can be *partly open and partly closed*; i.e., in which domestic trade frictions are explicitly modelled.
 - ▶ These economies may be open at the border but with limited pass-through of imports.

Needed: better models of food systems

- We also need models in which $A \neq F$; i.e., in which the agricultural sector does not produce food directly.
- Agriculture produces a good that is an input into food production.
 - ▶ Agricultural goods can be consumed directly on the farm or can be transported and processed into foods that are consumed in urban areas.
- Models of this kind will point out the importance of productivity and costs in transport and processing.

Needed: better ways for understanding urban hinterlands

- A corollary is that our models of economic geography may need to consider the globalization of urban hinterlands.
 - ▶ The rural hinterland for Dar es Salaam may not lie in Tanzania;
 - ▶ Perhaps it lies instead in Minnesota, Vietnam, or Paraguay.
- The urban focal points for rural Africa may in turn lie in the cities where cash crops are processed or consumed.

Agro-processing

- Can (should) African countries produce their own processed and prepared foods?
- Green Revolution Asia could be smallholder dependent:
 - ▶ Individual smallholders could sell a bag of rice to the urban market
- Contemporary urban food systems may face more challenges in connecting smallholders to consumers:
 - ▶ Processing tends to rely more heavily on large-scale production, consistent supply and quality.

Promoting processing sectors

- Limited historical success in efforts to promote agro-processing sectors in developing countries.
 - ▶ Often driven from the supply side, based on subsidies to processors.
- Better to start from demand?
 - ▶ Can market-sensitive retailers be effective in sourcing urban foods?

Conclusion

- We need to re-think our models of transformation and growth.
- Urban and rural economies are not always closely connected.
- Africa's urban growth is disconnected from rural growth in ways that pose new challenges.
- Frictions imply that growth in one sector may not effectively propel growth in the other...
- Lack of market integration gives rise to a case for policy interventions; e.g., Fajgelbaum and Gaubert (2018); Kucheryavyy, Lyn, and Rodríguez-Clare (2016).

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