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Agrifood System Transformation in the Midstream and Downstream: Research Findings, Implied Risks, and Implications for Policy and Value Chain Program Design

D. Tschirley, T. Reardon, B. Minten, and S. Liverpool-Tasie

Introduction

Research by Michigan State University and the International Food Policy Research Institute under the Food Security Policy Innovation lab has documented profound changes taking place in African agrifood systems, driven by rapid urbanization, growth in per capita incomes, and the increasing reach of globalized markets over the past fifteen- to twenty years. Based on detailed analysis of household expenditure data sets across East and Southern Africa, *processed food inventories* in eight cities of three countries, and ongoing survey research on rapidly growing and transforming value chains (teff in Ethiopia, poultry in Nigeria, and grain milling in Tanzania), this Policy Research Brief does three things: (1) summarizes the key research findings; (2) identifies the risks that these patterns of change imply for sustained and inclusive growth; and (3) highlights implications of the patterns and the implied risks for the design of policies and value chain programs in this dynamic environment.

Key Research Findings on Agrifood System Transformation in the Midstream and Downstream

A Diet Transformation is Occurring on the Demand Side: Population growth, rapid urbanization, and per capita income growth are driving very rapid growth in the amount of food demanded through markets, and in its composition: a diet transformation towards non-cereal foods, fresh foods (both animal and vegetable/fruit), processed foods, and food away from home, all increasingly sourced (even in rural areas) through markets. In short, food is increasingly purchased, perishable, and processed. This demand-

Key Findings

- A diet transformation on the demand side
- A quiet revolution on the supply side
- The primacy of domestic food value chains
- The primacy of urban demand, especially in secondary and tertiary cities
- Also a reverse flow of processed foods from urban- to rural areas
- Major implications for employment

side transformation represents an enormous opportunity for local and regional agribusiness firms if they can be competitive in supplying these rapidly growing and transforming markets. It also has troubling implications for nutrition and for the emerging “double burden” of malnutrition.

A Quiet Revolution is Unfolding on the Supply Side: In most countries, this diet transformation and its associated urbanization and income growth are fueling a quiet revolution in the “hidden middle” of the continent’s agrifood systems: investment, huge in aggregate, by millions of micro, small, and medium-sized firms (as well as large firms) in the wholesaling, processing, and logistical operations between farming and retailing. This segment of the agrifood system, and the rise of SMEs (small and medium enterprises) within it, has largely escaped the attention of donors and government policymakers.

Domestic Food Value Chains are Dominant: Most food is coming from domestic food value chains – in most countries, food import bills amount to only about 10% of total food consumption. Furthermore, while



imports are higher in urban areas (about 20%), in most urban areas of Africa their share does not rise with incomes. This means that, in most countries, domestic food systems, including for higher value foods, are competing with imports. Whether they are able to continue competing, and capture most of the growth in demand going forward, depends on governments making the right public investments and putting in place a business enabling environment that helps these firms compete.

Urban Demand, Especially in Secondary and Tertiary Cities, Increasingly Dominates:

Most food is flowing in rural-urban supply chains to urban areas that now are the majority of food markets even in the least urbanized areas of Africa. Secondary and tertiary cities and towns in Africa now hold more people than primary cities. They are thus crucial as demanders of food and as intermediate nodes for supply chains. The primacy of urban demand, combined with increasing dependence of rural people on markets for their food, mean that connecting rural farmers with urban demand is now central to reducing rural poverty and ensuring rural food security.

There is also a Reverse Flow of Processed Foods from Urban to Rural Areas:

About half of food consumption in rural areas is now sourced through markets. Most of this purchased food is processed in some way. A major emerging trend therefore is the flow of processed foods through markets within rural areas (rural-rural flows) and from urban areas to rural areas (urban-rural flows). There is almost no empirical research on this emerging phenomenon.

These Trends have Major Implications for Employment:

The specific employment implications, however, depend critically on the size distribution of the firms that capture growing demand. Policies that help micro firms grow in size, and that favor competitive response by small and medium-size firms, can generate substantial employment within the hidden middle. On the other hand, policies that favor consolidation into fewer, larger firms will result in less employment growth from this quiet revolution. Because women play major roles in most food processing and food

away from home, pro-employment policies in this area will favor gender equity.

Risks Emerging from Agrifood System Change, and Implications for Policy and Value Chain Program Design

The table below summarizes risks to sustained and inclusive growth that emerge from the findings on patterns of change, and identifies the implications for policy and value chain program design.

Conclusion

The past fifteen- to twenty years have seen unprecedented change in African agrifood systems that we are only now beginning to understand. Policy and program design, if they are to be effective in driving sustained and inclusive growth, cannot be based on outmoded assumptions about how these systems work. This brief has laid out our best current understanding of the patterns of change, implied risks, and implications for policy and program design to address those risks. Yet much research remains to be done, and policy and program design needs to remain flexible to incorporate implications of new findings as they emerge.

This *Brief* draws from several other FSP publications on this topic. Tschirley can be reached at tschirley@msu.edu.

Tschirley is Professor, International Development and Co-Director of the Food Security Group (FSG); Reardon is Distinguished Professor and AAEA Fellow; and Liverpool-Tasie is Assistant Professor, all in the Department of Agricultural, Food, and Resource Economics at Michigan State University (MSU). Minten is Senior Research Fellow at IFPRI.

Key message	Risks to be addressed	Implications for policy or value chain program design
<p>A <u>diet transformation</u> in which food is increasingly:</p> <ul style="list-style-type: none"> - Purchased (even in rural areas) - Perishable - Processed 	<ol style="list-style-type: none"> 1. Capture of rapidly growing urban market by imports and/or large local firms, sidelining local SMEs, with negative implications for employment and equity; 2. Capture of growing market in rural areas and 2^a and 3^a cities by large city manufacturers, resulting in less rural income growth and less poverty reduction; 3. Slow reductions in real prices of perishable and processed goods whose demand is growing most rapidly; 4. Food safety risks, perhaps especially from SMEs; 5. Rising obesity and NCDs paired with low diet diversity/poor nutrition among consumers. 	<ul style="list-style-type: none"> - Ag research: need more research to <u>increase productivity of dairy, fresh produce, fish, and poultry</u> - Other research: perishability and processing mean that <u>post-farm cost reductions</u> are at least as important as on-farm; - Rural areas: rural poverty reduction and food security now depend on <u>strong rural-to-urban marketing links</u>, as well as income from RNFE; - <u>Food safety and quality</u> will be increasingly important (function of perishability and processing + growing urban incomes); promote strong national public standards that SMEs can piggy-back on, together with programs to assist these firms in doing so (driving insight: economies of scale in developing brand loyalty, so SMEs cannot bear full cost and remain competitive); - Develop <u>nutritional labeling</u> standards for processed foods, and assistance to SMEs to comply; - Health education.
<p>A <u>quiet revolution</u> on the supply side featuring micro-, small-, and medium enterprises in the middle of the value chain</p>		<ul style="list-style-type: none"> - Need for much more effective <u>assistance to SMEs</u> in the agrifood system. Most countries have agencies focused on small-scale industry, but they need increased funding and a more dynamic vision for the sector. Should emphasize technical training, financial management, and access to technology (including through credit); - <u>Energy</u> access—reliable and lower cost—is crucial to SMEs, especially in rural areas. Traditional diesel power is more reliable than electricity but very expensive. Solar energy may increasingly provide a reliable and affordable solution. Emphasize financing models to solve problems of up-front cost; - <u>Food Away From Home</u> is major growth opportunity for SMEs, especially for women; provide training to micro- and small firms in food safety and business skills.
<p>The primacy of <u>domestic demand</u> (also regional)</p>		<ul style="list-style-type: none"> - Prioritize domestic value chains in the mix of VC investments; - Promote <u>regional trade</u>—coordinated safety and quality standards; border clearance procedures; common tariffs with outside, none within; - Continue to invest in <u>linking farmers to local processors</u>; take advantage of the rising number of medium scale farmers and promote their linkages with local manufacturers—this may be a more sustainable model and would provide some additional rural employment.

Key message	Risks to be addressed	Implications for policy or value chain program design
The primacy of <u>urban demand</u> (esp. 2 ^a and 3 ^a cities)		<ul style="list-style-type: none"> - Marketing infrastructure in African cities continues to be deplorable. Need <u>new investment</u> under real public-private <u>ownership and management models</u> to ensure proper maintenance and adaptability to changing consumer demand; - Design the physical <u>food environment</u> to promote healthy food choices (combined with healthy eating campaigns through radio, TV, and messages inside markets); integrate prepared foods (FAFH) into the environment; - Develop systems to transmit <u>real-time price and supply information</u> from urban wholesale markets to farmers; - Prioritize the above investments for <u>2^a and 3^a cities</u>, to get it right at the start.
<u>Reverse flows and cross flows</u> of food from urban-to-rural, and rural-to-rural		<ul style="list-style-type: none"> - Invest in rural-rural roads; - Design local taxation policy to promote or at least not hinder growth of local agribusiness SMEs; - Promote renewable energy access (see above).
Major implications for <u>employment</u>		<ul style="list-style-type: none"> - Promote the competitiveness of SMEs through mechanisms discussed above. As long as they are sufficiently competitive in price with large-scale processors, this will multiply downstream employment by 3-4 times over a large-scale model.

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