The Changing Food Expenditure Patterns and Trends in Zambia: Implications on Agricultural Policies

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Outline

- Introduction
- Research Objectives
- Data and Methods
- Study Findings
- Conclusions
- Recommendations
A few facts about Zambia

- Population (2016): 16.6 Million
- Per capita GDP (2016): $1,622
- Agriculture’s contribution to GDP (2015): 8.1%
- Population employed in the agricultural sector (2012): 56%

Introduction

Demographic and economic transformation

• Population growth;
• Rapid urbanization; and
• Rising per capita income;
High population growth

Source: United Nations, Department of Economic and Social Affairs, Population Division, 2014
Rapid Urbanization

Source: United Nations, Department of Economic and Social Affairs, Population Division, 2014
Rising Per capita GDP

GDP per capita (constant 2010 US$)

Growth with inequality

Between 1996 and 2015:

- Real monthly per capita income increased in urban areas and dropped in rural areas of Zambia
- Rise in income inequality (Gini coeff.) especially in rural areas
- Poverty declined faster in urban (37 percentage) than rural (12 percentage)

Implications on the food system

- Changing consumption patterns;
- Food markets - high food demand;
- Rural development - rural urban linkages;
- Nutrition health status of the population.
Changing consumption patterns

Engel’s Law: The share of income spent on food falls as income rises

Bennet’s Law: The proportion of starchy staples in the diet decreases with increasing income

A combination of population growth, urbanization and per capita income growth leads to dynamic changes in consumption patterns

Cereals become less important and the share of high-value crops, such as fruits and vegetables, dairy and animal products, and fish, in the food expenditure basket increase
Implications on food systems

Disconnect between food policies and changing consumer preferences:

• Staple food policies that encourage consumption of one main staple e.g maize;
• Failure to diversify; and
• Poor nutrition.
Research Objectives

To determine how household food consumption patterns have changed over the years; and

To examine how food consumption patterns varies between rural and urban households and across different income groups.
Data and Methods

Data and sources

• Nationally representative survey data;
• Official source for national poverty statistics.

Methods

• Items categorized into 1) food groups 2) main commodities and 3) level of processing and perishability;
• Long term trends in household’s expenditure shares-proxy for consumption;
• Expenditure share for each food item or group out of total food expenditure expressed in percentage terms.
Changing consumption patterns—a Global Trend

Africa’s cities are adding inhabitants so fast—about 3% and 4.6% p.c. income

Higher rice consumption in sub-Saharan Africa (West Africa), rising wheat in Asia and falling wheat by Developed countries

Downstream (retail) transformations—supermarket revolution

https://www.economist.com/news/international/21718508-west-africans-are-eating-more-asians-asians-are-eating-more-americans-and
STUDY FINDINGS
Expenditure Patterns on the Main Food Groups

Source: Authors computation from CSO, 1996; CSO, 1998; CSO, 2010; CSO, 2015

- **Starch**
- **Pulses**
- **fruits & vegetables**
- **meat, milk, eggs & fish**
- **Beverages**
- **Prepared**
- **others**
Expenditure Patterns on the Main Food Groups by Rural and Urban

Source: Authors computation from CSO, 1996; CSO, 1998; CSO, 2010; CSO, 2015
Expenditure Patterns on the Main Food Groups by Income Groups

Source: Authors computation from CSO, 1996; CSO, 1998; CSO, 2010; CSO, 2015
## Household Expenditure Patterns on the main Commodities by Rural and Urban

<table>
<thead>
<tr>
<th></th>
<th>1996 (%)</th>
<th>2015 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rural</td>
<td>Urban</td>
</tr>
<tr>
<td>Rice</td>
<td>1.30</td>
<td>2.76</td>
</tr>
<tr>
<td>Maize</td>
<td>26.01</td>
<td>18.41</td>
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<tr>
<td>Wheat</td>
<td>1.60</td>
<td>8.03</td>
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<tr>
<td>Other Cereals</td>
<td>5.09</td>
<td>0.35</td>
</tr>
<tr>
<td>Cassava</td>
<td>7.49</td>
<td>0.59</td>
</tr>
<tr>
<td>Potatoes</td>
<td>0.30</td>
<td>0.97</td>
</tr>
<tr>
<td>Vegetables</td>
<td>10.32</td>
<td>12.53</td>
</tr>
<tr>
<td>Fruits</td>
<td>0.53</td>
<td>0.95</td>
</tr>
<tr>
<td>Beef</td>
<td>4.95</td>
<td>7.92</td>
</tr>
<tr>
<td>Other Meat</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Fish</td>
<td>11.51</td>
<td>11.39</td>
</tr>
<tr>
<td>Dairy Products</td>
<td>1.37</td>
<td>2.97</td>
</tr>
<tr>
<td>Poultry</td>
<td>4.85</td>
<td>4.22</td>
</tr>
<tr>
<td>Eggs</td>
<td>1.13</td>
<td>2.04</td>
</tr>
</tbody>
</table>

Source: Authors computation from CSO, 1996; CSO, 1998; CSO, 2010; CSO, 2015

Indaba Agricultural Policy Research Institute
### Household Expenditure Patterns on the main Commodities by income groups

<table>
<thead>
<tr>
<th></th>
<th>1996</th>
<th>2015</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bottom 25%</td>
<td>Top 25%</td>
<td>Bottom 25%</td>
<td>Top 25%</td>
</tr>
<tr>
<td>Rice</td>
<td>0.97</td>
<td>2.97</td>
<td>0.75</td>
<td>3.63</td>
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<tr>
<td>Maize</td>
<td>30.52</td>
<td>14.63</td>
<td>16.60</td>
<td>8.50</td>
</tr>
<tr>
<td>Wheat</td>
<td>0.80</td>
<td>9.04</td>
<td>2.89</td>
<td>9.62</td>
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<tr>
<td>Cassava</td>
<td>8.32</td>
<td>0.86</td>
<td>4.94</td>
<td>0.46</td>
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<tr>
<td>Potatoes</td>
<td>0.24</td>
<td>1.14</td>
<td>0.39</td>
<td>1.89</td>
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<tr>
<td>Other Tubers</td>
<td>2.54</td>
<td>2.09</td>
<td>2.19</td>
<td>0.98</td>
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<tr>
<td>Vegetables</td>
<td>12.28</td>
<td>9.75</td>
<td>26.42</td>
<td>11.50</td>
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<tr>
<td>Fruits</td>
<td>0.38</td>
<td>1.34</td>
<td>0.56</td>
<td>2.95</td>
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<tr>
<td>Beef</td>
<td>4.11</td>
<td>9.51</td>
<td>1.56</td>
<td>5.77</td>
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<tr>
<td>Other Meat</td>
<td>0.00</td>
<td>0.00</td>
<td>2.28</td>
<td>2.21</td>
</tr>
<tr>
<td>Fish</td>
<td>10.78</td>
<td>10.10</td>
<td>13.94</td>
<td>11.64</td>
</tr>
<tr>
<td>Dairy Products</td>
<td>1.07</td>
<td>3.94</td>
<td>0.62</td>
<td>2.88</td>
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<tr>
<td>Poultry</td>
<td>3.72</td>
<td>6.25</td>
<td>5.40</td>
<td>9.35</td>
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<tr>
<td>Eggs</td>
<td>0.88</td>
<td>2.38</td>
<td>1.31</td>
<td>2.89</td>
</tr>
</tbody>
</table>

Source: Authors computation from CSO, 1996; CSO, 1998; CSO, 2010; CSO, 2015
Household Food Expenditure Patterns by Level of Processing

Source: Authors computation from CSO, 1996; CSO, 1998; CSO, 2010; CSO, 2015
Conclusions

- Zambia’s population growth, rapid urbanization and rising per capita growth corresponds with changing expenditure patterns
  - Disparities between rural, urban and low and high income groups reflects growth with inequality
- Maize remains dominant especially for the poor, mostly in rural areas;
- Changing staple expenditure patterns: Urban and wealthier households substituting maize with wheat, rice and Irish potatoes and a larger share on animal proteins compared to rural and poorer households;
  - This could contribute to the double-burden nutrition problem
- Government policies in Zambia (input subsidies & market interventions) have been focusing on maize
...Conclusions

- However, demand patterns have changed and so should the policies.
- Huge government expenditure ends up on maize:
  - Yet, consumption of other commodities such as fish, rice, Irish potatoes and vegetables constitute a huge import bill for the country.
- Both rural and urban households -increased expenditure shares of processed foods-huge opportunity for growth in the agro-processing, rural-urban linkages.
Recommendations

Government needs to reduce its excessive focus on maize and encourage diversification in food production systems in line with changing demand patterns;
- Smart subsidies such flexible electronic voucher system should be continued

There is need for local production systems that are responsive to changing demand, urban-rural linkages by resolving the marketing constraints

Transformation of the food systems to be more nutrition-sensitive:
- Nutrition sensitization for both rural/urban and low/income households
- Assisting poorest households through social protection programs
Acknowledgements

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End