Agricultural Productivity & Rural Non-Farm Economy (RNFE) in Ethiopia: 
*Benign Neglect of the RNFE?*

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Overview

1. Ethiopia has experienced strong economic growth & a changing economic landscape
2. Reforms based on Agricultural Development-Led Industrialization (ADLI) strategy
3. RNFE important – employment & income – but neglected in policy circles
4. Neglect may be benign for the time being
# Structure & Growth of GDP

<table>
<thead>
<tr>
<th>2012 Share of...</th>
<th>GDP</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Agriculture</td>
<td>49</td>
<td>85</td>
</tr>
<tr>
<td>Services</td>
<td>41</td>
<td>10</td>
</tr>
<tr>
<td>Industry</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ann Growth of real GDP (2000-2012)</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>9.4</td>
</tr>
<tr>
<td>Agriculture</td>
<td>7.2</td>
</tr>
<tr>
<td>Services</td>
<td>12.2</td>
</tr>
<tr>
<td>Industry</td>
<td>10.1</td>
</tr>
</tbody>
</table>

Source: Central Statistics Agency
Structure & Growth of GDP

Poverty Incidence Curves, RURAL Ethiopia 2000-2010
Using Arndt & Simler Poverty Lines

Data source: HICE Surveys
Development Strategies (Reform)

• Since 1991...
  – Market oriented (*but... state control*)
  – Agricultural Development-Led Industrialization (ADLI)
    ➢ Broad-based growth of small-holder agriculture
    ➢ Spur industrialization through forward & backward linkages
Reform Experiences

• Focus on agricultural production
  o Production growth due to expansion of cultivated land *(Seyoum Taffesse et al., 2013; Dercon and Hill, 2009)*
  o Use of modern inputs remains low
  o But, some evidence of changes leading to productivity gains
    ➢ Expanded agricultural extension system *(Davis et al., 2010)*
    ➢ Evidence of increased modern input use
      • Seeds – maize *(Spielman et al., 2011)* and teff *(Minten et al., 2012)*
      • Fertilizer – doubled for cereals *(Rashid et al., 2014)*
Focus on agricultural productivity

Improved physical infrastructure

- Roads
  - Length of all-weather surfaced roads doubled in 15 years
  - Most regional capitals connected to one another
  - Less remoteness (% of population over 5 hours from a city)...  
    - 1997: 82%
    - 2007: 38% (Schmidt and Kedir, 2009)
Reform Experiences

• Focus on agricultural productivity
• Improved physical infrastructure
  o Roads
  o Electricity
    ➢ Hydroelectric dams – construction initiated prior to 2000
    ➢ Increase in generating capacity...
      • 2000: 7 watts/person
      • 2010: 21 watts/person
Reform Experiences

• Focus on agricultural productivity

• Improved physical infrastructure
  o Roads
  o Electricity
  o Telecommunications
    ➢ Fixed phone lines more than doubled (Dorosh & Schmidt, 2010)
    ➢ Mobile subscriptions...
      • 2003: 50,000
      • 2011: 10,000,000 (Ethionet, 2013)
Reform Experiences

• Focus on agricultural productivity
• Improved physical infrastructure
  o Roads
  o Electricity
  o Telecommunications
  o Consequences (Minten et al., 2014)
    ➢ Improved spatial integration of cereal markets
    ➢ 50% reduction in transportation costs between wholesale markets
    ➢ Lower marketing margins in cereal markets
Policy & RNFE

• Medium- and small-enterprises (MSE) important for rural development (*Growth & Transformation Plan*)

• But... implicitly treat agricultural development as a prerequisite for policy interventions in RNFE

• RNFE falls through the institutional gaps
  
  o  Min. of Commerce – MSE activities in urban areas
  
  o  Min. of Agric. & Rural Development – agric productivity
Characteristics of RNFE

• Important for rural employment... (2006/7 RICS)
  o 25% of households
  o 41% of female-headed households
  o 3% as sole source of income

• Important source of rural income...
  o 42% of average income for households with NFE
  o 17% of HH income of poorest quintile
  o 13% of HH income of richest quintile (1998 WMS)
Characteristics of RNFE

• Composition of RNFE
  o Trade: 51%
  o Manufacturing: 36%
  o Services: 13%

• Small-scale
  o 1.4 workers on average
  o 99% have 3 or fewer workers
# Characteristics of RNFE

## Reasons for NFE start-up

<table>
<thead>
<tr>
<th></th>
<th>Male-headed</th>
<th>Female-headed</th>
</tr>
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<tbody>
<tr>
<td><strong>Push</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No access to agr. land</td>
<td>9.3</td>
<td>13.4</td>
</tr>
<tr>
<td>Low/volatile agr. income</td>
<td>29.0</td>
<td>27.3</td>
</tr>
<tr>
<td><strong>Pull</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means to invest agr. income</td>
<td>50.3</td>
<td>43.6</td>
</tr>
<tr>
<td>Market opportunities</td>
<td>3.4</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Source: 2006/7 RICS, World Bank (2009)
1. *Local* agric production affects demand for NFE
   - NFE sales strongly positively correlated w/ neighboring agric performance
   - Fragmented markets
     - Local consumers & those at local markets – most important customers for 80% of NFE
RNFE & Agriculture

1. *Local* agric production affects demand for NFE
2. Farm income – source of NFE investment
3. NFE income – source for farm inputs
   - 0.39 elasticity of agric productivity wrt NF income through farm inputs (Woldehanna, 2000)
RNFE & Agriculture

1. *Local* agric production affects demand for NFE
2. Farm income – source of NFE investment
3. NFE income – source for farm inputs
4. NFE labor activity – seasonal & countercyclical w agric
   - Peak during slack agric labor demand periods
   - Low during planting & harvesting periods
   - NFE absorbs labor when opp costs of labor is low
     (World Bank, 2009)
RNFE & Agriculture

1. *Local* agric production affects demand for NFE
2. Farm income – source of NFE investment
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*RNFE & Agriculture are mutually reinforcing*
Constraints to Growth of RNFE

• Supply Side
  o Investment climate – high costs
    ➢ transportation, telecommunications, electricity, water, security, bribes, perceived subjective nature of taxes, etc.

• Demand Side
  o Limited local demand related to agriculture – fragmented markets
Political Economy Issues

• Government control of land & supply of agricultural inputs
  - Smallholders – state able to maintain its authority
    ➢ State can safely stimulate agricultural growth without worrying about “emergence of a class of large landholders who might translate economic power into political influence” (Lavers, 2012)
  - RNFE – state lacks similar mechanism to assert authority
    ➢ Mutual distrust – Government & traders

• Post-Meles uncertainty
Way Forward

1. Alleviate Demand Constraints *for now*
   - Efforts to address RNFE investment climate may not pay off when demand is the binding constraint (Loening et al., 2008)

2. Broad-based policies that benefit both ag & RNFE
   - finance, transport & infrastructure, education, technology dissemination

3. Small towns (Dercon & Hoddinott, 2005; World Bank, 2009)