Economic Contributions of Agricultural and Rural Electric Cooperatives in New York State Economy
Economic Contributions of Agricultural and Rural Electric Cooperatives In New York State

Todd Schmit, Associate Professor, PI,
Fred Tamarkin, Hunter Rawlings, III Research Fellow
Roberta Severson, Extension Associate

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“With over three-quarters of agricultural output in NYS marketed through farmer-owned cooperatives, it is evident that cooperatives play an important, and arguably undervalued, role in agricultural markets. In addition, to their direct contributions, their activities support other industries backward-linked in the agricultural supply chain.”

Todd Schmit, Associate Professor, Cornell University
Data Sources

• USDA Rural Development Cooperative Business
  • Directory of Farmer Cooperatives
  • Cooperative business volumes
• Survey of cooperatives
• Cooperative annual reports
• Form 7, USDA Rural Utilities Service
• Institutional knowledge of authors

N = 62 cooperatives, 2 Farm Credit Associations, and 4 rural electric cooperatives
Input-Output analysis is a spreadsheet of a local economy.

**Approach**

Representative local production functions were created for agricultural marketing, service, and supply cooperative sectors, as well as production functions for two Farm Credit System cooperatives operating in New York State and all four electric cooperatives.

The production functions were inputted into a customized Input-Output model using IMPLAN software.

Supplemental analyses conducted to compare the relative contributions of similar industries but for non-cooperative business structures.

*In the spreadsheet, columns are the demand or buying agents and rows are supply or selling agents. (Assumption is that supply equals demand.)*
Definitions

**Direct effects**
Direct effects are the industry sector itself, the business conducted by agricultural and rural electric cooperatives. (e.g. purchase and processing of milk, fruit, electricity)

**Indirect effects**
Indirect effects are changes in inter-industry transactions when supplying industries respond to change in demand of the directly affected cooperative. (e.g. farmer purchases additional crop inputs to support production of milk sold to the cooperative)

**Induced effects**
Induced effects are changes in local spending resulting in changes from direct or indirectly affected industry sectors. (e.g. impacts of wage or household expenditures).
Economic contributions of agricultural and rural electric cooperatives

Direct effects
• $3.8 billion in total output
• 5,745 jobs
• $688 million in gross domestic product to the New York State economy

NYS Agricultural Cooperative Employment
Economic contributions of agricultural and rural electric cooperatives

**Indirect effects (backward linkages in supply chain)**
- $8.1 billion
- 25,751 jobs
- $688 million in gross domestic product to the New York State economy

**Induced effects (household spending out of labor income)**
- $3.1 billion in total output

**Total Economic Contribution of NYS Agricultural Cooperatives: NYS Jobs**
Multiplier effects

**Multipliers**

- Every $1.00 of direct input generates an additional $2.11 in backward-linked industry output.
- Every direct job generates an additional 4.5 jobs from related business activity in the state.
- Every $1.00 of direct GDP generates an additional $4.48 in GDP from related business activity in the state.

The cooperative business structure itself, whereby profits are redistributed to local members based on patronage, resulted in an additional $93 million in labor income and 455 jobs in NYS relative to an identical level of economic activity incurred by traditional investor-owned firms.
### 2016 Agricultural cooperative business activity only N=62 co-ops, 7,337 members

<table>
<thead>
<tr>
<th>Product</th>
<th>Business volume ($1 million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits and vegetables</td>
<td>199.03</td>
</tr>
<tr>
<td>Milk</td>
<td>2,858.07</td>
</tr>
<tr>
<td>Other marketing</td>
<td>41.38</td>
</tr>
<tr>
<td>TOTAL MARKETING</td>
<td>3,098.48</td>
</tr>
<tr>
<td>Crop inputs</td>
<td>82.41</td>
</tr>
<tr>
<td>Petroleum &amp; other supplies</td>
<td>54.75</td>
</tr>
<tr>
<td>TOTAL FARM SUPPLIES</td>
<td>279.53</td>
</tr>
<tr>
<td>TOTAL MARKETING &amp; SUPPLIES</td>
<td>3,378.00</td>
</tr>
<tr>
<td>Service receipts &amp; other income</td>
<td>10.53</td>
</tr>
<tr>
<td>GROSS BUSINESS VOLUME</td>
<td>3,388.54</td>
</tr>
<tr>
<td>Business between cooperatives</td>
<td>(141.39)</td>
</tr>
<tr>
<td>NET BUSINESS VOLUME</td>
<td>3,247.15</td>
</tr>
</tbody>
</table>

Source: USDA Rural Development, Cooperative Services, James Wadsworth, et. al.
Contact:

Todd Schmit – Associate Professor & Faculty Director
Warren Hall
137 Reservoir Rd., Ithaca, NY 14853
Email: tms1@cornell.edu
Phone: 607.255.3015

Roberta M. Severson – Extension Associate & Program Director
Warren Hall
137 Reservoir Rd., Ithaca, NY 14853
Email: rmh27@cornell.edu
Phone: 607.255.1987