INTRODUCTIONS

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Center for Regional Food Systems

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Principal  
New Growth Associates

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Director  
Michigan State University  
Upper Peninsula Research and Extension Center
POLL 1

Please indicate which category best describes your job or personal affiliation.

1. Community educator, extension agent
2. Community member, advocate
3. Food system practitioner – grow, process, sell or prepare food
4. Funder
5. Non-profit professional
6. Policy maker, state or local government employee
7. Researcher, university faculty
8. Student
9. Other
POLL 2

What is your level of experience with economic impact assessments?

1. Very familiar
2. Somewhat familiar
3. Not familiar
SHARED MEASUREMENT

Michigan Good Food Charter → Collective Impact → Shared Measurement

Writings of John Kania and Mark Kramer

Develop common measures

Democratize knowledge

BUILDING CAPACITY TO UNDERSTAND ECONOMIC IMPACTS

USDA Toolkit: The Economics of Local Food Systems

- Planning and designing an economic impact assessment
- Technical guidance for conducting an economic impact assessment in IMPLAN
- Case studies, webinars and other resources

Overview webinar:
http://foodsystems.msu.edu/resources/evaluating_economic_impacts_of_local_and_regional_food_systems
NEW GUIDE → TODAY’S WEBINAR

- Introduces concept of economic impact
- Summarizes range of tools available
- Standard commercial models
- Community-based approaches
- Example studies

- http://foodsystems.msu.edu/resources

Today’s Webinar → What is an EIA?
Tools available
Example EIA
WHAT IS AN EIA?
Considerations for Food Systems Practitioners

Megan Phillips Goldenberg
New Growth Associates
WHAT IS AN EIA?

• Economic
• Impact
• Analysis

A quantitative approach to evaluating a change in the economy.
Without a change, there is no impact to assess

Change can be real or hypothetical

- Increase consumer spending on locally produced foods by 10%
- Argus Farm Stop grossed $1 million in sales and created 16 jobs in 2014

Industry experts refer to this as a “shock”

Ann Arbor Food System + Argus Farm Stop = Increased local food sales
EIAs QUANTIFY:

ECONOMIC GROWTH- an increase in output

- Jobs
- Income
- $$$

**NOT** ECONOMIC DEVELOPMENT...
EIAs DON’T QUANTIFY:

ECONOMIC DEVELOPMENT - an increase in quality of life indicators

- Increased sales of healthy foods in low-income, low-access neighborhoods
- Jobs with living wages
- Community connectivity and social capital
- Increased school attendance and behavioral outcomes
WAIT, WHAT?!

Local food systems work is often motivated by a set of values and goals – increasing access to healthy foods, preserving farmland, creating artisanal entrepreneurial opportunities, connecting kids with food – that are more in line with economic development strategies, not economic growth.

BUT...
DOLLARS AND CENTS ARE A COMMON LANGUAGE (and values are not)
## EIAs ARE...

<table>
<thead>
<tr>
<th>USEFUL FOR</th>
<th>NOT USEFUL FOR</th>
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<tbody>
<tr>
<td>• Quantifying economic growth – dollars and jobs</td>
<td>• Feasibility studies</td>
</tr>
<tr>
<td>• Comparing investment scenarios</td>
<td>• Business planning</td>
</tr>
<tr>
<td>• Evaluating ripple and spillover effects</td>
<td>• Market demand</td>
</tr>
<tr>
<td></td>
<td>• Health, environmental, social impacts</td>
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<td></td>
<td>• Longitudinal inquiries</td>
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<td></td>
<td>• Total economic value</td>
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LET'S DIVE IN
## TWO CLASSIFICATIONS OF ANALYSIS

<table>
<thead>
<tr>
<th>COMMERCIAL</th>
<th>COMMUNITY BASED</th>
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<tbody>
<tr>
<td>RIMS II</td>
<td>LM3</td>
</tr>
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<td>SNA</td>
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<tr>
<td>REMI</td>
<td>FFFC</td>
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COMMERCIAL COMMONALITIES

All based on **INPUT – OUTPUT** (IO) modeling
   All sectors of an economy are linked – the outputs of one sector are inputs to another sector

Almost all are **BACKWARD LINKING**
   They only capture the impacts AFTER a change in the supply chain, aka the upstream effects of a shock

Almost all at least track **DIRECT, INDIRECT, and INDUCED** effects

All based on **SECONDARY DATA**
INPUT – OUTPUT

Carrots grown on the farm → Carrots washed, peeled, cut, and bagged at food hub → Carrots served at school lunch
BACKWARD LINKING
from “School buys local food”

Carrots grown on the farm → Carrots washed, peeled, cut, and bagged at food hub → Carrots served at school lunch

COMMERCIAL ANALYSIS COMMONALITIES
Carrots grown on the farm → Carrots washed, peeled, cut, and bagged at food hub → Carrots served at school lunch

DIRECT
School starts buying from Food Hub

INDIRECT
Food Hub buys more carrots → Farm hires more people → Farm workers buy more groceries, gas, medical supplies, etc.

INDUCED
Food Hub hires more people → Food hub workers buy more groceries, gas, medical supplies
COMMUNITY-BASED APPROACHES

Self directed and/or community led

Based on primary data

You are already doing this:

“Argus Farm Stop grossed $1 million in sales and created 16 jobs in 2014”
Where We’re Going

Prioritizing Food Access, Diversity, and Community

Our Ypsilanti Farmers Markets prioritize creating a diverse community space that satisfies food access needs of our lowest income and lowest access residents. We are so grateful for the opportunity to build community and create an accessible, inclusive and welcoming space in Downtown Ypsilanti. According to these indicators, we are doing something right!

- **83%** of customers rate our quality of products Very Good or Excellent
- **72%** of customers report having to travel less than 5 miles to get to our farmers markets
- **73%** of customers agree the farmers markets have increased their household’s access to fresh, healthy food
- **More than 77%** of customers are more likely to tell others good things about Ypsilanti as a result of the farmers market

- **More than 25%** of customers report walking or using a wheelchair to get to the farmers market

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**Total Food Assistance Sales ($)**

**2015 YFM Customers by Income**

- Less than $25,000: 29%
- $25,000 to $49,999: 43%
- $50,000 to $74,999: 6%
- $75,000 to $99,999: 6%
- $100,000 or more: 5%
- $25,000 to $49,999: 27%
LIMITATIONS AND CAVEATS

NONE of these approaches are perfect, or even accurate.

Food systems are particularly difficult to model.

The more accurate you want the data to be, the more money and time it will take.

My Hobby: Extrapolating

As you can see, by late next month you’ll have over four dozen husbands. Better get a bulk rate on wedding cake.
SPECIFIC MODELS
## ECONOMIC IMPACT TOOLS SUMMARY TABLE

<table>
<thead>
<tr>
<th>TOOL &amp; DESCRIPTION</th>
<th>MOST APPROPRIATE USES</th>
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</thead>
</table>
| **RIMS II (Regional Input-Output Model System)**  |  • Comparisons across regions, or comparing one industry to another  
| • Linear I-O (input-output) model  |  • Scenarios when no customization is needed  
| • Spreadsheet based  |  • Lends basic insights to relative industry strengths and connectivity  
| [bea.gov/regional/rims/rimsii/](bea.gov/regional/rims/rimsii/)  |  • Projects with limited resources  |
| **IMPLAN (Impact Analysis for Planning)**  |  • Large region or state level economic impacts at a single point in time  
| • Linear I-O (input-output) model  |  • Comparing one industry to another, one region to another, or one investment to another  
| • Web-based interface, exports to spreadsheets  |  • Evaluations of well-established industries  
| [implan.com](implan.com)  |  • Projects with moderate budgets and existing baseline data  
|  |  • Analyses by professional economic modelers  |
| **REMI (Regional Economic Models, Inc.)**  |  • Multi-factor scenarios with price changes, migration, investment, constraints on inputs, etc.  
| • ESM (economic simulation model)  |  • Tracking the effects of a shock over time  
| • Software based  |  • Projects with large budgets for evaluating the impacts of really large investments or infrastructure projects  
| [remi.com](remi.com)  |  • Analyses by professional economic modelers  |
# TWO CLASSIFICATIONS OF ANALYSIS

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RIMS II

Regional Input – Output Modeling System

- The **MOST BASIC** commercial model available
- Affordable, transparent
- Based on national benchmark data collected by US BEA
- Appropriate for “ball park” estimates
- Good at comparative analysis across geographies
- Not customizable
- No “black box” effect
IMPLAN

IMpact Analysis for PLANning

- The MOST COMMONLY used model
- Relatively affordable and straightforward
- Highly customizable
- Mix of national, regional, and local level data
- Updated data released regularly
- Can be a “black box”
- Extensive amount of resources available:
  https://localfoodeconomics.com/toolkit/resources/

CLASSIFICATION: COMMERCIAL ANALYSIS
• Combines several economic modeling approaches
  I-O + CGE + Econometrics + Economic Geography
• Much more dynamic than other models
• Difficult to customize with primary data
• The blackest “black box”
• Expensive and only for experts
LM3
Local Multiplier 3

- Exclusively based on primary data collection
- Reflects Input-Output model principles
- Limited to community efforts, resources, and willingness
- Very transparent
- New Economics Foundation provides extremely affordable support materials
- Not widely used in the United States, but is used in the U.K.
Social Network Analysis

- A theoretical application of social capital principles to economic impact
- Based on the idea that economic impacts are greater as local businesses do business with each
  
  # of businesses and strength of those relationships = dollars
- Not a codified methodology
- Only model (referenced here) that also addresses economic development to some extent
Finding Food in Farm Country

- A variety of secondary data and primary data
- Not an economic impact analysis, but instead a summary of economic data
- More of a “snapshot” approach
- Customizable and transparent
WHAT MAKES A “GOOD” STUDY?

• One that *serves your purposes and your community*
• Historical and/or baseline primary data
• Being clear about your mission, goals, and expectations of the study
  - Who cares about your study? How will they use the information?
• Clear boundaries- timeline, resources, scope
• A representative steering committee
THANK YOU

Megan Phillips Goldenberg
New Growth Associates
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www.newgrowthassociates.com
Pure Brews
Determining the economic impact of the hop and barley industries in Michigan
Ashley McFarland
MSU Extension & AgBioResearch
Michigan Craft Beer

• Nearly 300 breweries

• $1.85 million dollar industry

• Consistent growth within Michigan and through distribution
Michigan Craft Beer

222 Craft Breweries
(RANKS 6TH)

3.1 Breweries per Capita*
(RANKS 15TH)
*per 100,000 21+ Adults

$1,852 Million Economic Impact
(RANKS 9TH)

260.03 Impact per Capita
(RANKS 20TH)

PRODUCTION

846,029 Barrels of Craft Beer
Produced per Year
(RANKS 11TH)

3.7 Gallons per 21+ Adult
(RANKS 14TH)

NUMBER OF BREWERIES PER YEAR

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<tbody>
<tr>
<td>Value</td>
<td>200</td>
<td>225</td>
<td>250</td>
<td>275</td>
<td>300</td>
<td>325</td>
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Michigan State Engagement

- History working with the hop (2007) and malting barley (2013) industries
- Collaboration with the Michigan Brewers Guild
- Annual Great Lakes Hop and Barley Conference
Rationale

- Enhanced competitiveness on the national market
- Improved opportunity for funding
- Relevancy and legitimacy within Michigan agriculture
Research Questions

• What is the current economic impact of Michigan-grown ingredients (hops, malting barley) in Michigan craft beer?

• What is the potential economic impact of Michigan-grown ingredients (hops, malting barley) in Michigan craft beer?

  • Assumption: IF 50% of Michigan craft beer used Michigan-grown ingredients
Challenges

• Tracking four industries; 2 raw ingredients, 2 value-added products
• Fitting non-traditional industries into “traditional” economic models
• Sourcing data
• Defining metrics
• Barley “lag”
Lessons learned

• Not necessarily wise to lump industries
• Too soon?
• Need to bridge the communication gap between economists and field practitioners
• Advisory groups are crucial
Redirecting efforts

- Separating industries
- Two reports; one with strict assumptions, the other more open
- Capturing exports as well
- Highlighting need for streamlined data collection
Partners

MICHIGAN STATE UNIVERSITY | AgBioResearch

MICHIGAN STATE UNIVERSITY | Extension

HOPYARDS OF KENT

New Growth Associates

MICHIGAN BARLEY ASSOCIATION

MACON CREEK MALT HOUSE
Thank You

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ashleymc@anr.msu.edu
(906) 439-5176
THANK YOU!

Questions? Comments?
eXtension CLRFS committee on local food economics: localfoodeconomics.com

• Support provided by USDA AMS Toolkit project

• 10/11 webinar on Evaluating the Economic Impacts of Farm to School

• Will be revising website – featuring related projects and case studies
  • Please contribute relevant work to the website!
GET IN TOUCH & LEARN MORE

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Tools for Assessing Economic Impact  
www.foodsystems.msu.edu/resources

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