The Role of Qualitative Research in Agri-Food Systems

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The Research Challenge

- Agribusiness scholars live in a translational space between industry peers and academic peers.
- These two sets of peers have distinctly different demands.

<table>
<thead>
<tr>
<th>Industry Peers</th>
<th>Academic Peers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevant, actionable prescriptions for firm and market behavior</td>
<td>Elegant, quantitative, rigorous contributions to knowledge</td>
</tr>
<tr>
<td>Critical of “ivy tower” vocabulary and methods</td>
<td>Critical of agribusiness research as qualitative or subjective</td>
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<tr>
<td>We are to mimic their way of knowing.</td>
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</tr>
<tr>
<td>If we serve the academy, our industry peers continually question our relevance.</td>
<td>If we serve industry, our academic peers continually question our science.</td>
</tr>
</tbody>
</table>
Our Peers’ Epistemologies

- **Industry Peers**
  - Epistemology of **practical knowledge**
  - They know what they know because it works
  - Derived from action; learned through practice

- **Academic Peers**—Agricultural, food, etc. Economics
  - Epistemology of **positivistic knowledge (one type of science)**
  - They know what they know because of its objective derivation and statistical significance
  - Derived from theory/deduction; learned through empirical testing and application

- **Limitations for both our peers**
  - Practical knowledge limited by range of experience and radical changes in context
  - Positivistic knowledge limited by its abstraction from context which also limits its ability to deal with structural change.

Just use peers’ epistemologies?

- **To take on the epistemology of practical knowledge is to become wholly practitioners**
  - We leave the academy and science.

- **To take on the epistemology of positivistic knowledge is to fail to address research problems critically important to agri-food systems.**
  - **Positivism works when theory is strong, phenomena are quantifiable and separable from context, and structure is stable.**
  - Our most important agribusiness problems do **not** have these characteristics!
    * Strategy, sustainability, etc.*
A Third Way

- Epistemology of grounded theory knowledge
- We know what we know because it corresponds to practice and to theory
  - More inductive than deductive
  - More qualitative than quantitative
  - Context matters: contingent theory not general theory
- Derived from reflection on action; learned through working hypotheses
- Limited by the relevance, transferability and flexibility of the working hypotheses
- It is SCIENCE!

Comparative Characteristics Regarding Rigor

<table>
<thead>
<tr>
<th>Characteristic of Knowledge</th>
<th>Grounded Theory Knowledge</th>
<th>Positivistic Knowledge</th>
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</thead>
<tbody>
<tr>
<td>Researcher Goals</td>
<td>Focus on meanings</td>
<td>Focus on facts</td>
</tr>
<tr>
<td></td>
<td>Develop ideas inductively</td>
<td>Test hypotheses deductively</td>
</tr>
<tr>
<td>Applicable Research Settings</td>
<td>• Theory construction</td>
<td>• Theory confirmation</td>
</tr>
<tr>
<td></td>
<td>• Phenomena not quantifiable nor separable from context</td>
<td>• Quantifiable phenomena separable from context</td>
</tr>
<tr>
<td></td>
<td>• Unstable/unknown structure</td>
<td>• Stable underlying structure</td>
</tr>
<tr>
<td>Preferred Methods</td>
<td>Seek multiple views</td>
<td>Precise measurement</td>
</tr>
<tr>
<td></td>
<td>Small purposeful samples</td>
<td>Large random samples</td>
</tr>
<tr>
<td>Construct Validity</td>
<td>Capture full meaning of informants</td>
<td>Instrument measures what it is supposed to measure</td>
</tr>
<tr>
<td>Internal Validity</td>
<td>Uncover and lay bare the logic of phenomena</td>
<td>Proper deduction and testing of hypothesis</td>
</tr>
<tr>
<td>Reliability</td>
<td>Triangulation</td>
<td>Consistency of measure</td>
</tr>
<tr>
<td>External Validity</td>
<td>Transferability to new setting</td>
<td>Application to whole population</td>
</tr>
</tbody>
</table>
Case Study Research

- An example of the third way!
- A case study is the holistic story of a particular situation or phenomenon.
  - Captures the richness of context
  - Focuses on verifiable information
- Types of cases
  - Descriptive
  - Exploratory
  - Explanatory

Objectives of Case Research

- To conduct problem-solving research.
  - Plan B Master’s Papers
- To develop new theory
  - Examine an “archetypical” case
  - Examine an “outlier” case
- To test existing theory
  - analogous to an experiment in physical sciences
Appropriate Context for Use

- What is the research question?
  - “How” and/or “why”
- Control over contextual variables?
  - Control is not an option
- The time-frame of relevant events?
  - The “present” or contemporaneous time
- The applicability of existing theory?
  - Theory is not highly developed
  - “Structure” of reality is changing
- There are only “small” numbers related to the phenomenon of interest

Methods of data collection

- Sources of evidence
  - Documentation
  - Archival records
  - Interviews
  - Direct observation
  - Participant observation
  - Physical artifacts
- Principles of data collection
  - Triangulation: use multiple sources of evidence and look for convergence
  - Create a case study database
  - Maintain a chain of evidence
  - Do not “lead the witness”
  - Look for disconfirming information
Generalization of Case Findings

- Statistical generalization is not possible.
  - Case selection is not random.
  - Small numbers problem

- Kennedy
  - Limited generalization based on how representative the case is of a population
  - Archetypical cases and multi-case design

- Yin
  - Analytic generalization through contribution to theory
  - Theory/data/theory revision cycle

A Research Example

- Under what circumstances (i.e., why) do smaller agri-food firms export?
  - Theory and prior empirical work limited.
  - Exploratory case research

- A simple four factor model created:
  - Demand signals
  - Transformation advantage
  - Transaction advantage
  - Decision makers mental map

- Research Proposition
  - All four factors had to be positive for a firm to be, become, or remain an exporter.
Table 1. Comparisons of Case Studies: Classification of Firms by Firm-specific Status of Proposed Necessary Conditions for Globalization

<table>
<thead>
<tr>
<th>Necessary Conditions:</th>
<th>Experienced Active Exporter (n = 4)</th>
<th>New Entrant (n = 1)</th>
<th>Former Participant (n = 2)</th>
<th>Domestic Exit (n = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Demand</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Perceived Competitive Advantages:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In Transformation Costs</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>In Transaction Costs</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Motivated by Decision Rules</td>
<td></td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
</tbody>
</table>

“Natural Experiments” as Cases

- Natural experiments in change
  - Example A: Some form of major disturbance occurs in a system (war, disease, economic collapse, etc.) and economic actors must respond.
    - The Tsunami in Japan
    - Unit of analysis: the set of responses
  - Example B: “New” business strategy or public policy interventions are implemented.
    - Deregulation of bioelectricity market in Brazil
    - Unit of analysis: the intervention
  - Example C: Often a “B” case follows an “A” case
    - USDA Map program in Armenia as intervention to fall of Soviet Union

- Such cases follow a pattern
  - A set of conditions exist at Time 0
    - Performance and/or outcomes
    - “States” of the world: resources, strategies, etc.
  - An intervention is made or a major system disturbance occurs during the next time period
  - A new set of conditions is established at Time 1
“Natural Experiments” as Cases

- **Goal of case analysis:** Explain the change in conditions based on the disturbance or the intervention.

- **Case description:** Set up conditions at Time 0, report on disturbance/intervention, and end with conditions at Time 1.
  - A chronological description

- **Case analysis:** Based on existing theory or current research proposition, explain how the disturbance/intervention resulted in change of conditions.
  - Make compelling argues for target explanation
  - Make compelling argues against rival explanations
    - Null hypothesis: All factors are merely chance occurrences.
    - Something other than target disturbance/intervention is the “real” explanation

Recommendations for qualitative research in agri-food systems

- Pursue an epistemology of grounded theory when the theory is weak/unknown, context matters, structure is unstable.

- Be rigorous in using grounded theory and qualitative methods.

- Qualitative methods are not an easy way out.

- Use positivism and quantitative methods when appropriate.

- Reach out to both sets of peers—industry & academic
  - They need to understand the potential and limits of our knowledge as well as their own knowledge.
  - We need to remain relevant, scientific, and engaged