Regions, Clusters, & Institutional Change: The Role of Universities

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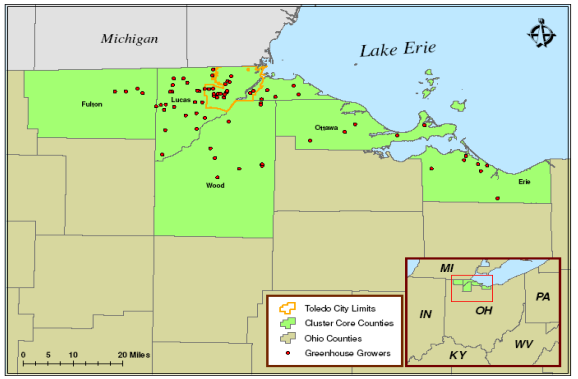
Presentation outline

- The challenge of change
- The role of universities
- Key concepts
- The project
- What has changed?

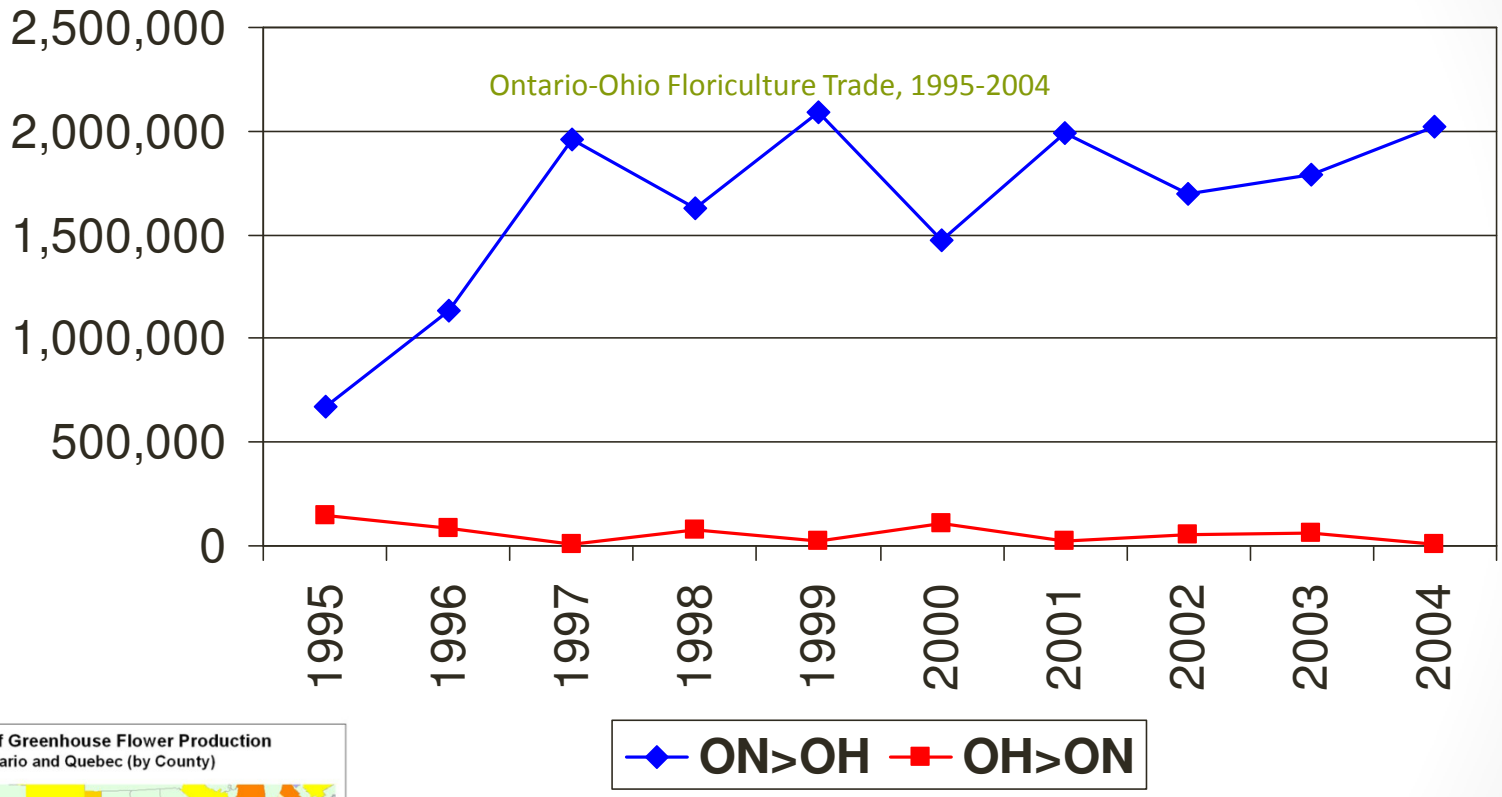
The challenge of change

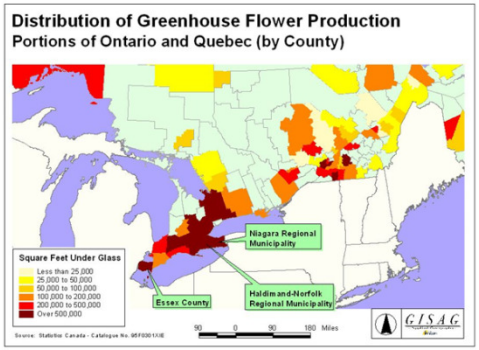
Background

- Project started in 2004
- Funded by U.S. Department of Agriculture
- Aim was to help the northwest Ohio greenhouse industry to identify ways that it could raise its level of economic competitiveness
- 80+ family-owned SMEs in a 6 county region
- Competitive challenges
  - International competition
  - Stagnant market
  - Ageing infrastructure and technology
  - High energy costs



The Canadians are Coming





"I still do a lot of things the old-time way. I don't have none of the fancy equipment…fill all my flats by hand …everything in the field is harvested by hand. … my newest tractor is a 1965."
Greenhouse Grower 1

"The biggest challenge is going to be adapting with the ever quickly changing business environment that we're now presented with, not just in our industry, but every industry."
Greenhouse Grower 2

The Challenge of change

- Very conservative industry
- Not used to larger scale collaborations
- Low stock of positive social capital
- Lack of trust with respect to university
- “process of negotiation between maintaining valued aspects of society, economy, and environment, and engendering new approaches to them (Lee et al., 2005).

LEE, J., ARNASON, A., NIGHTINGALE, A., SHUCKSMITH, M. (2005) Networking: social capital and identities in European rural development’, Sociologia Ruralis, 45, 4, 269–83.

The problem of lock-in and inertia

- The Problem
  - Groups of actors closed to outsiders and impervious to new ideas, who fail to respond to change and are vulnerable to external shocks
- The Governance Issue
  - High stable arrangements that are also very fragile and unable to deal with new kinds of demands, or new paradigms or discourses for production or policy
- The University Contribution
  - Provides an inflow of new ideas which help to challenge old expectations and discourses
  - Is a big globally focused actor making demands for new kinds of planning arrangements
  - Acts as a hub with key innovation actors

BENNEWORTH, P. and HOSPERS, G-J. (2007) Urban competitiveness in the knowledge economy: universities as new planning animateurs, Progress in Planning, 67, 105-197.

The role of universities

The role of universities

Generative Role (Triple Helix)

- Generate growth opportunities through knowledge capitalization activities
  - Spin-off companies
- Play leading role in organizing networks for the development of a regional innovation strategy
  - Perform quasi-government roles in regions that lack state capacity or have gaps in their purview
- Make new kinds of economic activity possible
- Focused on knowledge driven economic development

Developmental Role (OECD)

- Shape the development of regional institutional and social capacities
  - Fostering social networking within a region
  - Staff participation in regional development organizations
  - Provide information and analysis to support regional decision-makers
  - Broker networks that connect local actors to national and international contacts
- Not centered directly on the leadership or coordination of purely economic outcomes
- Feed into ongoing economic activities
- Focused on capacity building

GUNASEKARA, C. 2006. Reframing the Role of Universities in the Development of Regional Innovation Systems, Journal of Technology Transfer, 31, 101-113.

Key concepts

Joint action and collective efficiency

Social capital

Local buzz and global pipelines

Absorptive capacity

Joint action and collective efficiency

"the mere co-location of companies, suppliers, and institutions creates the potential for economic value; it does not necessarily ensure its realization" (Porter 1988, 88)

"external economies are important to growth but are not sufficient to ride out major changes in product or factor markets; this requires joint action" (Schmitz, 1999, 1628)

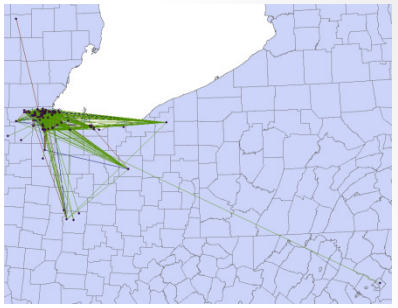
A number of case studies have highlighted the positive role that joint action can play in raising the economic competitiveness of SMEs within an industrial cluster (Meyer-Stamer, 1998;, Knorringa, 1999; Nadvi, 1999; Rebellotti, 1999; Schmitz, 1999, 2000)

Economies of scale + joint action = collective efficiency (Schmitz, 1995)

Social capital

"the stock of active connections among people: the trust, mutual understanding, and shared values and behaviors that bind the members of human networks and communities and make cooperative action possible" (Cohen and Prusak, 2001)

Local Buzz and Global Pipelines



Local Buzz

- The information and communication ecology created by face-to-face contacts, co-presence and co-location of people and firms within the same industry and place or region (Bathelt et al 1994).
- "Overembeddedness" (Uzzi 1997)
- "the dangers of local networks that are too close, too exclusive and too rigid." (Bathelt et al. 1994)

Global Pipelines

- Links to new ideas from outside the group
- A conscious attempt to overcome identified shortcomings in the local knowledge base (Bathelt et al. 2004)
- A decisive question then is how to properly select potential partners for the establishment of global pipelines (Bathelt at al, 1994)
- Importance of those actors which are able to make connections between otherwise remote networks (Burt 1992)

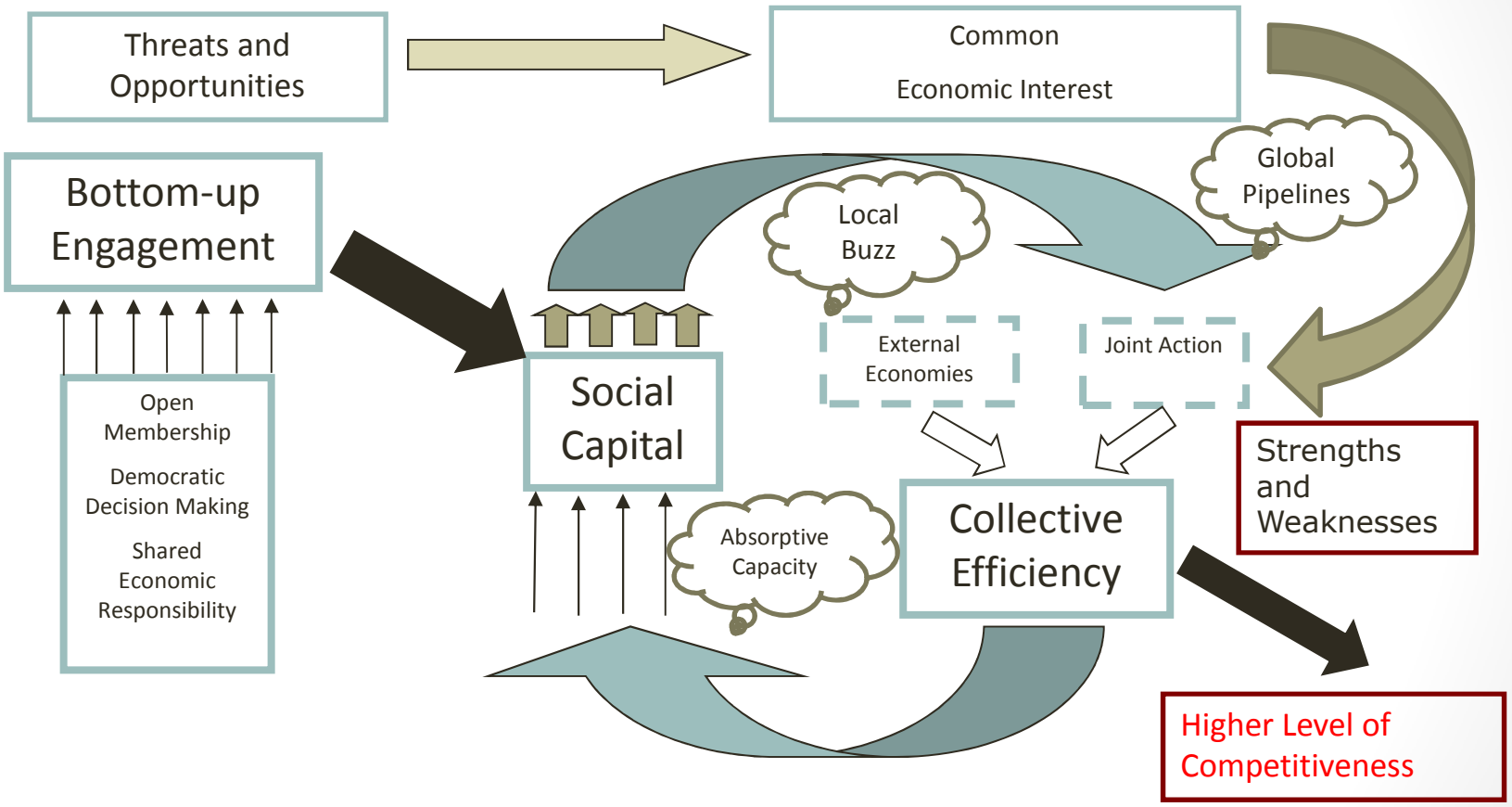
Absorptive capacity

- Absorptive capacity - the ability to assimilate the information arriving through pipelines and to apply it successfully towards commercial ends (Cohen and Levinthal, 1990)

- Information that one cluster firm can acquire through its pipelines will spillover to other firms in the cluster through local buzz (Bathelt et al., 1994)



Cluster-based Economic Development



The project

The Infrastructure

- Monthly meetings with growers and other stakeholders
- Full-time project manager and half-time champion
- University faculty guiding the process and the discussions

The First Project

"small risks are followed by larger ones and commitments progressively increase" (Lorenz 1999)

- Demonstrate value of collaboration
- Have a high probability of success
- Be non-threatening to growers
- Had to enhance stock of positive social capital

Branding and marketing (2005-)

Utilized expertise of local branding and marketing firm, Thread Inc., to develop brand identity and subsequent marketing strategy and campaign

MVG brand launched in November 2005

MAUMEE VALLEY GROWERS
Choose the Very Best.

Reducing uncertainty in energy costs (2006-)

- Natural gas costs in northwest Ohio were high
- Prices fluctuate
- Purchased on the spot market
- Worked with local energy consultant, Palmer Energy Inc., to acquire bulk purchase of natural gas for growers
- Very slow to get off the ground
- Growers hesitant to forego their independence in decision making
- First group purchase made in November 2005
- Within 12 months of launch of program it went statewide

Establishing global pipelines

> "successful clusters are ones that are the ones that are able to build and maintain a variety of channels for low-cost exchange of knowledge with relevant hot-spots from around the globe" (Bathelt et al.,2004, 33)

Local ARS scientist suggested the Flanders region of Belgium as one from which local growers could learn

Study tours in 2010 and 2011 that included 7 growers, university faculty, project manager, and project champion

The Flanders greenhouse industry

Characteristic	Flanders
Major products	Fresh produce
Supporting institutions	Mechelen Auctions (1950s)
Research support	Proof station, local universities, industrial research labs
Technology use	Biocontrols, energized plant media, new structures, custom-designed collection systems
Sustainability	Water conservation, cogeneration, reuse of carbon dioxide
Quality control	Products evaluated before auction sales, Flandria brand
Funding/Staffing	2.6% commission charged, 15-20 full-time staff
Marketing and sales	Strictly to auctions
Communications	Facilitated by Mechelen Auctions
Number of participants	800+
Primary facility	43,000 square meter distribution center


mechelse
veilingen


FLANDRIA

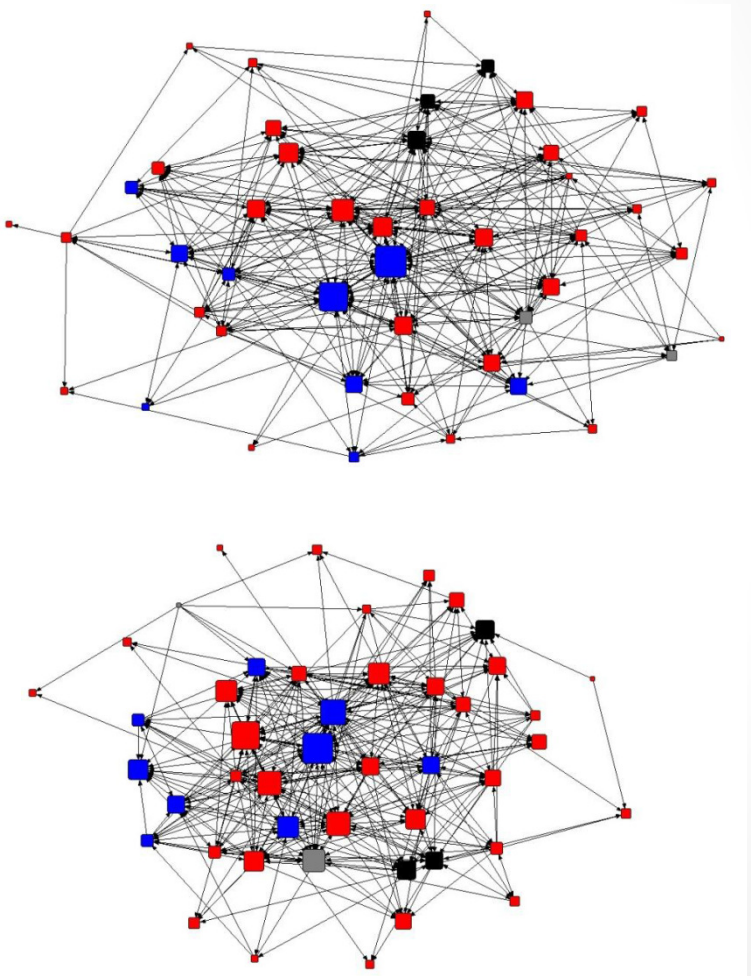
8 takeaways from Flanders

- (1) the acknowledgement that Flanders growers are at least twenty years ahead of northwest Ohio growers;
- (2) the emphasis on sustainable operations with the use of biocontrols and organic plant media was impressive;
- (3) the cluster is very strong, includes the entire value chain and has very good government support and understanding of the industry;
- (4) the industry in Belgium had adapted to and anticipates stringent environmental and food safety regulations;
- (5) individual growers focus on single crops or related crop monoculture;
- (6) growers in Belgium regularly construct new state-of-the-art greenhouses with government support;
- (7) the industry is highly technical and mechanized to reduce labor costs; and
- (8) energy costs are a major consideration in Belgium as they are in Ohio but most Belgian growers take advantage of cogeneration facilities.

What has changed?

What has changed?

- 55% of growers say that being involved in MVG has helped them better serve existing customers and attract new customers (2009 survey)
- Nearly 80% of growers say that they have more interaction with their peers as a result of participating in this project (2009 survey)
- Nearly 60% of growers say that they have enhanced access to university researchers as a result of participating in this project (2009 survey)
- Nearly 60% of growers are more optimistic about the future of their business as a result of participating in this project (2009 survey). Up from 27% in 2004.



What has changed?

- As a result of the Flanders trip several growers have
  - Expanded or moved into food production,
  - started experimenting with alternative lighting methods,
  - packaged plants more attractively to increase sales,
  - dedicated more effort to improve the look and taste of produce,
  - and used higher quality plant media for growing

Concluding thoughts

- University has played a key role in changing attitudes among growers in the region
  - Each other
  - The university
  - Their future

- Running collaborative projects with minimal university support

- Still resistant to big changes

Thank you

- Thanks to the USDA for providing multiple years of funding to support this project.

Modest Goals

- To slow down and reverse the gradual decline that has been evident in the industry for several decades
- University has played a facilitative role in bringing together growers to create an infrastructure that has enabled growers to come together and collaboratively address industry-wide challenges and problems
- Building social capital so as to provide foundation for ongoing collaboration
- Provided dedicated staffing to support these efforts
- Provided research on a variety of topics