Community Development, Economic Development, or Community Economic Development?

Concepts, Tools and Practices

Location Theory: A Brief Overview Part III

UW Extension
Cooperative Extension

Location Theory:
A Brief Overview
Neoclassical Location Theory

One of the key assumptions of central place theory is an even distribution of homogenous people across the economic plane.

Clearly this assumption does not hold in the real world and lifting the assumption greatly complicates our notion of central places, but it does not destroy it.

People cluster together into cities and villages fundamentally altering the shape of our Löschian demand cones.

Location Theory:
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Neoclassical Location Theory

- **Likewise, external economies of size vary with each community's social and economic characteristics.**
- **This community influence is often expressed as external economies or economies of agglomeration that shift the firm's average cost curve.**
- **By allowing for something other than a homogenous economic plane the rather sterile view of central places becomes much more reflective of the real world.**
- **The idea of multi-purpose shopping trips, business clustering such as shopping malls and market segmentation such as entertainment districts as opposed to office buildings begin to make sense.**

Location Theory:
A Brief Overview

Summary and critique of classical location theory

- **Classical location theory conceives the location decision being made by a profit-maximizing firm located on a homogenous economic plane.**
- **Firms and customers have perfect information and can fully process that information. In addition, firms are perfectly mobile and able to enter and exit spatial markets with no costs.**
- **The approach, while abstract, provides a rigorous framework to begin to think about space in a community economics setting.**
- **As a deductive theory of location it provides an excellent foundation for more in-depth analysis.**

Location Theory:
A Brief Overview

Summary and critique of classical location theory

The classical profit maximization approach yields models with <u>relatively low predictive powers</u>, thus preventing its ready adoption. There are several reasons for this low predictive ability.

- ***First*, the model does not handle personal <u>preferences and psychic incomes/costs</u> related to location decisions. These personal considerations cause the decision maker to maximize total (money and psychic) satisfaction rather than just monetary profit.**

Location Theory:
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Summary and critique of classical location theory

***Second*, it assumes that the individual making a location decision has <u>perfect knowledge</u> about the future, which is, of course, not possible.**

- **Differences in <u>opinions about risk</u> and profit potential associated with various locations leads to different location decisions.**

- **A risk-averse owner or firm with limited financial resources may choose a site with less potential profit but less risk of loss.**

Summary and critique of classical location theory

***Third*, location decisions are typically made infrequently during the career of a business owner/manager. This infrequency, coupled with imperfect knowledge, often yields site selection criteria such as long-run sales growth with reasonable profits or space for expansion.**

The cost of acquiring additional information about alternative sites deters the business from further inquiry. The result is the selection of a satisficing rather than a profit-maximizing site.

Location Theory:
A Brief Overview

There are a range of potential theoretical ways to think about these questions including:

- **Neoclassical Firm Location Theory**
  - **Growth Pole/Center Theory**
  - **Central Place Theory**
- ***Behavioral Approach***
- **Institutional Approach**
- **Agglomeration Theory (ala Michael Porter Cluster Theory)**

behavioral approach to location theory

The behavioral approach proposes a significant relaxation of these assumptions. It allows for personal goals other than profit maximization; inadequate and inappropriately used information; and uncertainty about current and future conditions of markets, rivals, and inputs.

- **The approach uses game theory and the concept of bounded rationality to analyze location decisions.**
- **The behavioral approach attempts to explain why the selection of certain sites appears to be irrational from a neoclassical approach.**

Location Theory:
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behavioral approach to location theory

Objective functions

The behavioral approach explicitly permits the decision-maker to seek some objective other than profit maximization in making location decisions.

Uncertainty

Relaxing the assumption of complete geographical and temporal knowledge by the firm permits uncertainty in the location decision.

Information

The behavioral approach argues that the firm does not have full and complete information even without uncertainty. Bounded rationality says the human limitations of the decision-maker within the firm prevent absorbing all the information available.

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behavioral approach to location theory

	Little/Low Quality Information	Much/High Quality Information
Information Processed and Used Poorly	Likelihood of locating in a profit maximizing site is *low*	Likelihood of locating in a profit maximizing site is *indeterminate*
Information Processed and Used Well	Likelihood of locating in a profit maximizing site is *indeterminate*	Likelihood of locating in a profit maximizing site is *high*

Location Theory:
A Brief Overview

behavioral approach to location theory

The behavioral approach focuses community economic development on the information and objective functions.

- **There is little the community can do about uncertainty beyond providing a stable public-private environment. (note: is "public-private partnerships" the next wave of CED strategies?)**
- **The community performs an information role by helping the firm acquire and use information through management counseling and assistance.**
- **The community affects the objective function by recognizing the importance of <u>noneconomic factors in the location decision.</u> (i.e., QoL?)**

Location Theory:
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behavioral approach to location theory

- **The behavioral approach, however, is a deductive theory of the location problem. As such, while intuitively appealing, does not lend itself to rigorous testing.**

- **As Scott (2000) argues a major drawback to the behavioral approach is that it focuses too much on sociological, psychological and other *“soft”* variables often ignoring the economic foundation of the classical profit maximization approach.**

- **Advances in game theory, however, may make this approach more attractive from a purely theoretical perspective.**

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Location Theory:
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Institutional approach to location theory

- Much of the location decision-making process involves negotiations between businesses, owners of the land, labor unions and local governments for access to local infrastructure.

- The institutional approach focuses on the rules that set the parameters for negotiations and contract law as well as the negotiating power of the firm.

- Larger firms have greater negotiation leverage then smaller firms.

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Institutional approach to location theory

- **Indeed, the new <u>“war between the states”</u> have state economic development agencies effectively bidding against each other in attempts to influence firm location and expansion decisions.**

- **While the cost effectiveness of these state-level policies have been widely challenged larger firms can and do exert market power in negotiations.**

- **Does Molotch’s Growth Machine Theory come into play here?**

Institutional approach to location theory

- **This situation points out the asymmetry of information in the location decision process.**
- **The firm knows whether or not a subsidy is truly necessary to make the site either profitable or the site of first choice.**
- **The community does not know this information and thus, there is a constant danger that it will over subsidize the already profitable decision.**

Location Theory:
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Institutional approach to location theory

- **Smaller and medium size firms focus mostly on two types of institutions: local governments and real estate markets.**
- **Local governments can have significant impacts on the location decisions of firms.**
- **Local governments determine land use laws (or “rules” from the Shaffer Star) such as zoning regulations, building codes and in many cases the power to deny the necessary permits for the firm to move forward.**

Institutional approach to location theory

- **From a conceptual point of view, local governments can and do affect the structure of the isocosts discussed in the cost minimization approach.**

- **In the name of economic development local governments often will try to provide flexibility in zoning, access to public infrastructure and fiscal incentives.**

Institutional approach to location theory

- **The status of the local real estate market has a significant impact on firm location decisions.**
- **Smaller and medium size firms more often than not are looking for existing facilities that they can buy or rent on the open market.**
- **Again only the largest firms are in a position to build at every location.**
- **Therefore the spatial supply of the real estate market, such as office space, industrial sites and commercial floor space, are of prime importance for understanding the locational choice of smaller firms.**

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- ❑ **Behavioral Approach**
- ❑ **Institutional Approach**
- ❑ ***<u>Agglomeration Theory (ala Michael Porter Cluster Theory)</u>***

"Porter's" approach to location theory

- **In an attempt to better understand why some nations thrive and others struggle economically Michael Porter at Harvard offered up a theory of regional comparative advantage.**

- **What he ended up describing is what regional economist have been calling agglomeration economies for years…..**

- **But Porter has almost single handedly altered how states and regions go about promoting economic growth and development policy.**

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"Porter's" approach to location theory

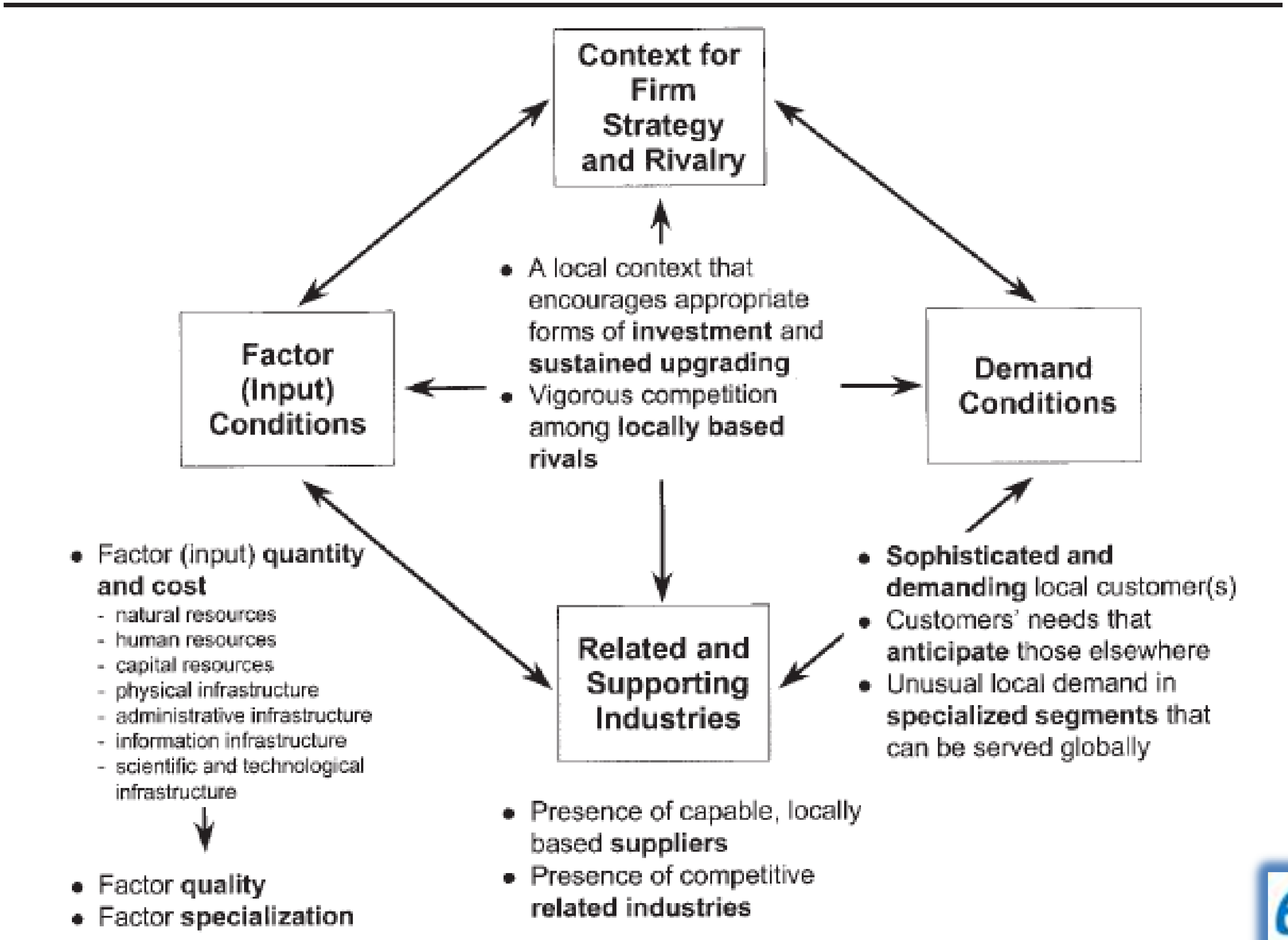
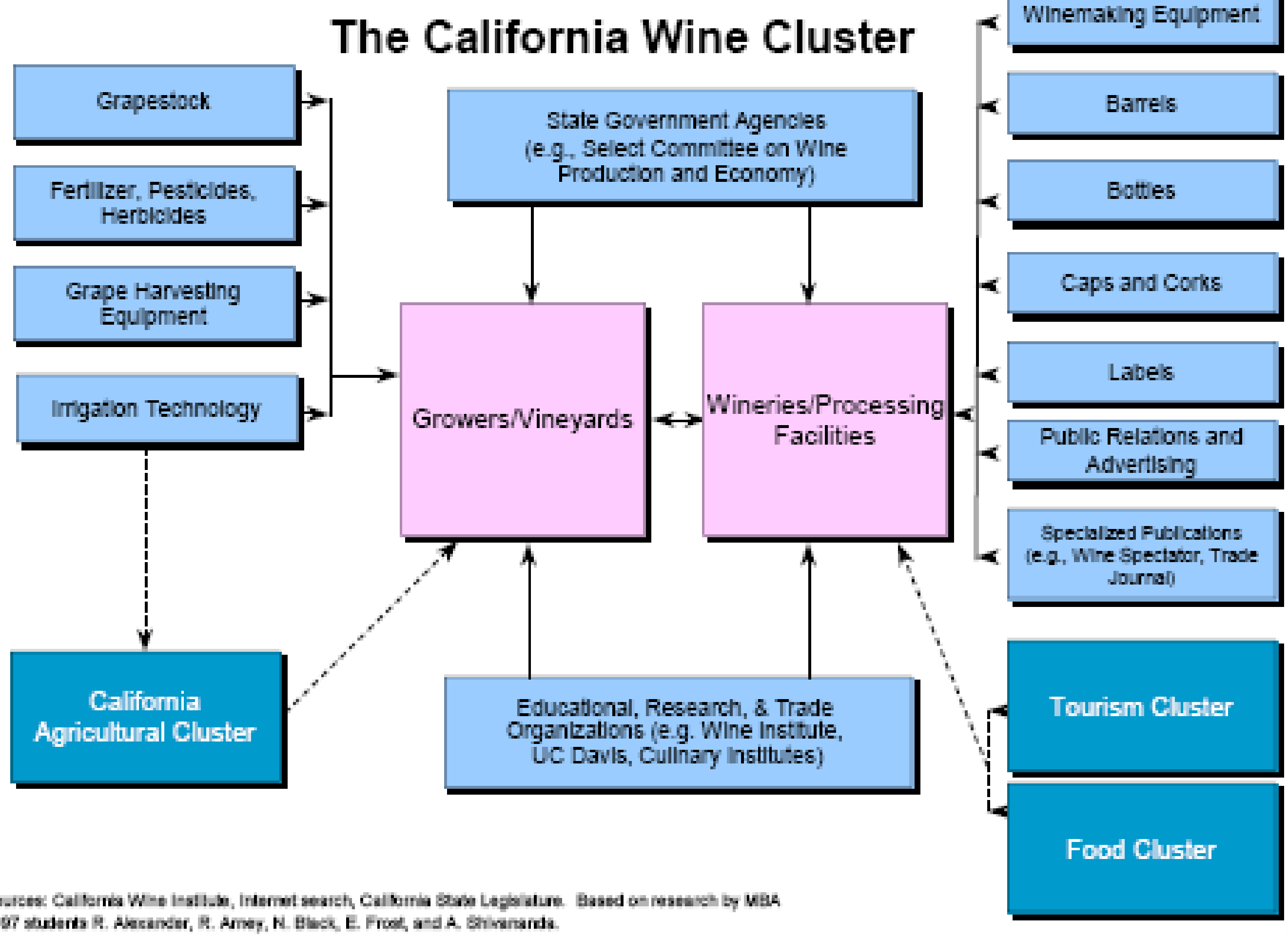


Figure 2: Sources of Locational Competitive Advantage

Location Theory:
A Brief Overview

"Porter's" approach to location theory

FIGURE 25



Sources: California Wine Institute, Internet search, California State Legislature. Based on research by MBA 1997 students R. Alexander, R. Arney, N. Black, E. Frost, and A. Shivananda.

Notions of a CLUSTER……

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"Porter's" approach to location theory

Porter (2000, p254) "A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementaries."

Rosenfeld (1997, p4) "A cluster is very simply used to represent concentration of firms that are able to produce synergy because of their geographic proximity and interdependence, even though their scale of employment may not be pronounced or prominent."

Feser (1998, p20) "Economic clusters are not just related and supporting industries and institutions, but rather related and supporting institutions that are more competitive by virtue of their relationships."

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"Porter's" approach to location theory

Roelandt and Den Hertog (1999, p9) "Clusters can be characterized as networks of producers of strongly independent firms (including specialized suppliers), linked to each other in a value-adding production chain."

Enright (1996, p191) "A regional cluster is an industrial cluster in which member firms are in close proximity to each other."

Lundvall and Borras (1997, p39) "The region is increasingly the level at which innovation is produced through regional networks of innovators, local clusters and the cross-fertilizing effects of research institutions."

Maskell and Kebir (2006, p30) "Clusters may be defined as non-random geographical agglomeration of firms with similar or closely related complementary capabilities."

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“Porter’s” approach to location theory

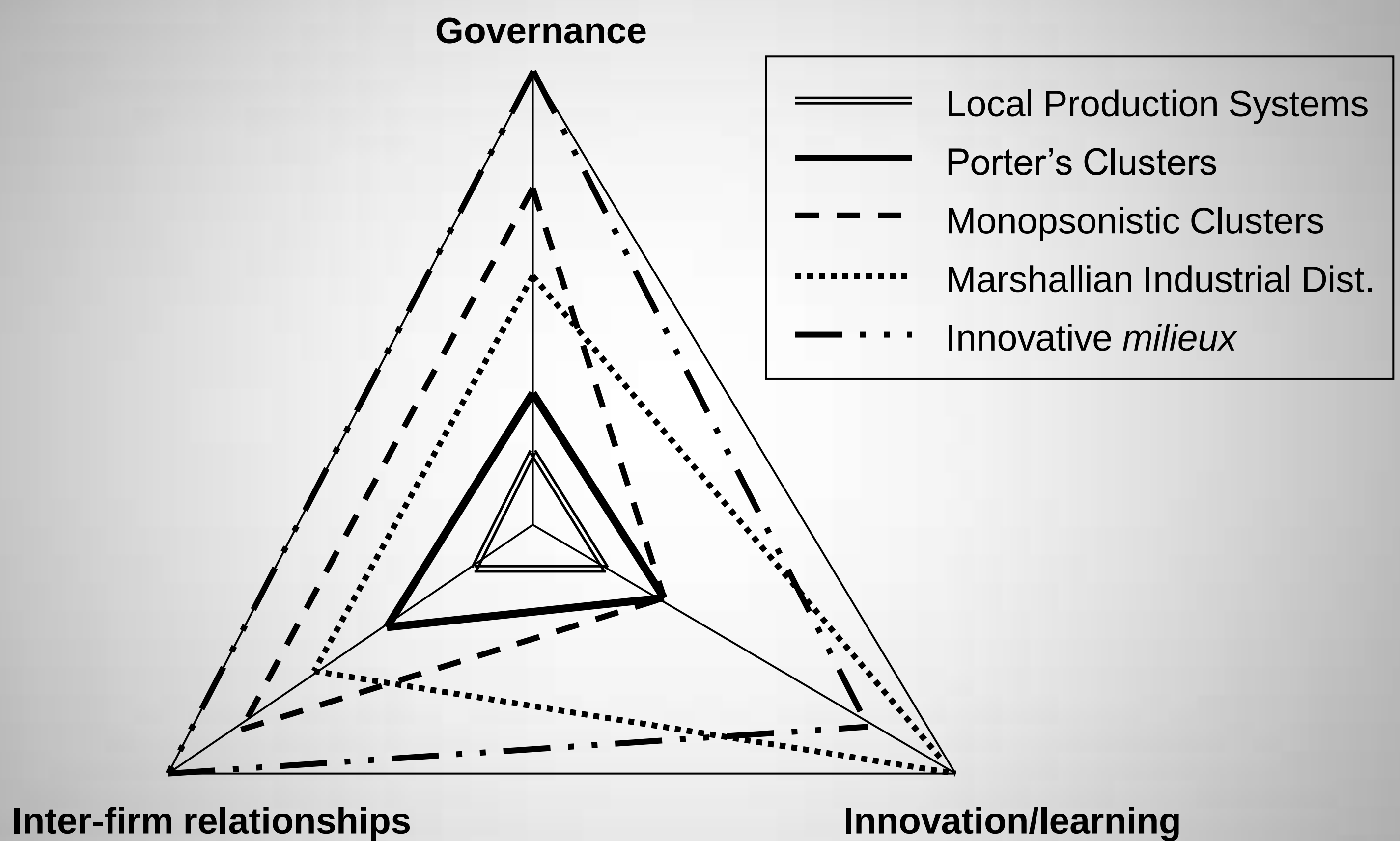

Figure X. Differences in Forms of Agglomeration (De Propris and Driffield 2006)

Location Theory:
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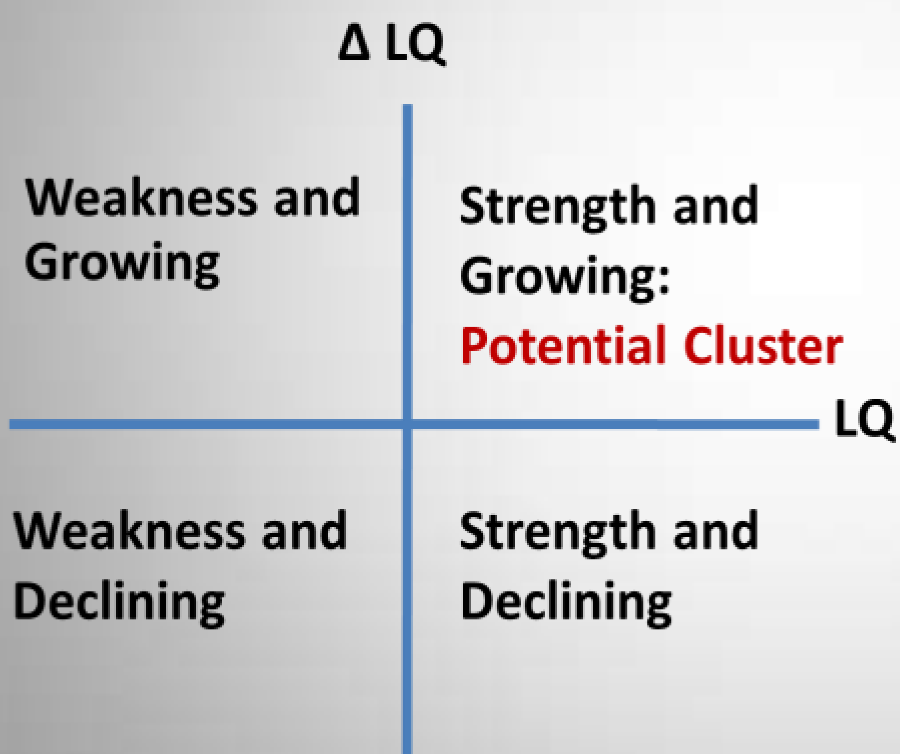
"Porter's" approach to location theory

Figure A1: Porter's Identification of Clusters



$$LQ_{ic} = {}^{s_{ic}}/_{s_{in}} \lesseqgtr 1$$

s_{ic} = share of activity in industry *i* for community *c*

s_{in} = share of activity in industry *i* for nation

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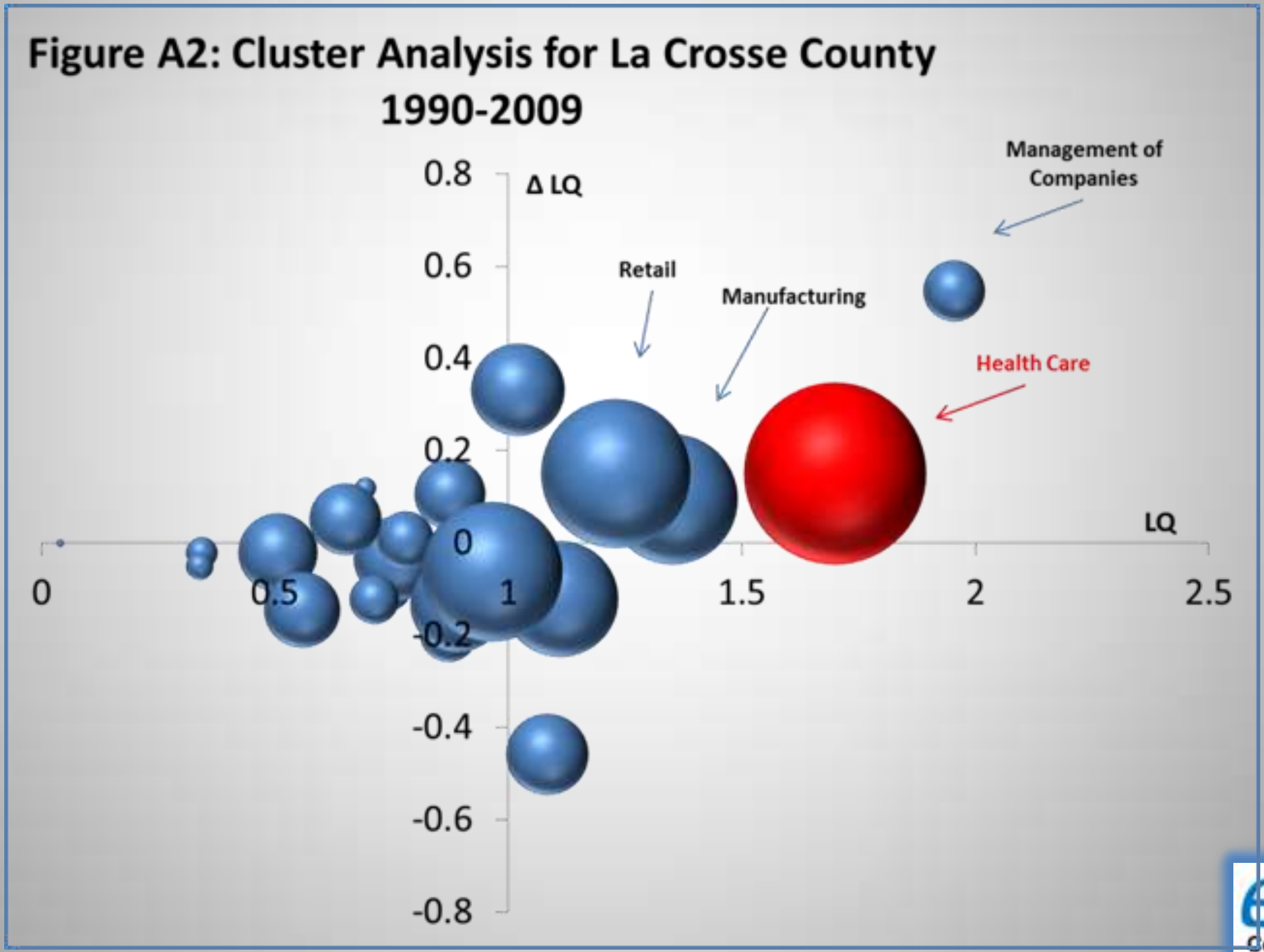
"Porter's" approach to location theory



Location Theory:
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"Porter's" approach to location theory

Table 1: Strengths and Weakness of Agriculture Broadly Defined

Industry	Share of Employment 2007	LQ 2007	LQ 2001	Change LQ 2001- 2007
Crop production	0.27%	0.57	0.55	0.02
Animal production	0.42%	2.15	1.63	0.52
Forestry and logging	0.03%	0.59	0.7	-0.11
Fishing, hunting and trapping	0.00%	0.45	0.51	-0.06
Agriculture and forestry support activities	0.10%	0.35	0.29	0.06
Food manufacturing	2.47%	1.91	1.94	-0.03
Beverage and tobacco product manufacturing	0.12%	0.68	0.61	0.07

Table 2A: Farming -- Strength and Growing

Industry	Share of Employment 2007	LQ 2007	LQ 2001	Change LQ 2001- 2007
Fur-bearing animal and rabbit production	0.01%	13.53	11.53	2.00
Dairy cattle and milk production	0.35%	4.80	3.97	0.83
Cattle ranching and farming	0.36%	3.21	2.46	0.75
Animal production	0.42%	2.15	1.63	0.52
Hunting and trapping	0.00%	1.20	0.85	0.35
Oilseed and grain farming	0.03%	1.05	0.85	0.20
Floriculture production	0.05%	1.09	0.90	0.19
Corn farming	0.02%	2.24	2.08	0.16
Support activities for animal production	0.06%	2.35	2.32	0.03

Location Theory:
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"Porter's" approach to location theory

Porter has:

1. **Re-invigorated state economic development efforts.**
2. **Has local communities thinking regionally.**
3. **Brought to the forefront the notion of private-public partnerships.**
4. **Spurred a resurgence in regional economic development thinking.**

Location Theory:
A Brief Overview

What does it all mean?

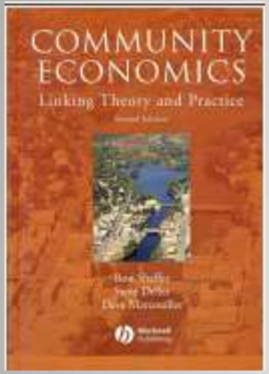
In order to better understand the local economy and how policies can affect the local economy it is important to have a basic understanding of location theory. Why do some firms locate here, but not over there? Why do people decide to live here but not there?

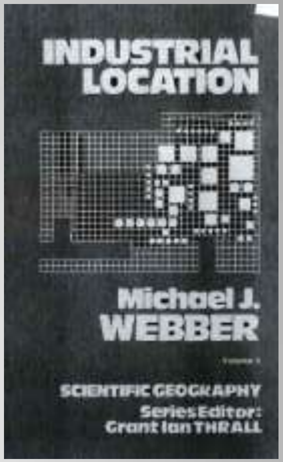
Communities cannot influence its geographic location.

It can influence a range of factors when firms are looking at specific locations. Factors influencing quality of life have been shown to matter. The community's attitude toward entrepreneurship and experimentation matters. At a minimum information matters: being prepared to provide basic information about the local economy is necessary, but not sufficient.

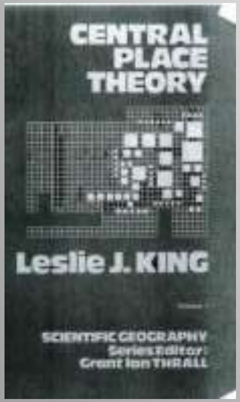
Recommended Readings

Shaffer, R., S.C. Deller and D.W. Marcouiller. (2004). Community Economics: Linking Theory and Practice. Blackwell: Oxford England.





http://rri.wvu.edu/wp-content/uploads/2011/05/3_IndustrialLocation.pdf



http://rri.wvu.edu/wp-content/uploads/2011/05/1_CentralPlaceTheory.pdf

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