Economies of Size Considerations for Hiawatha Fund

See the companion technical report,
"Historical Review of Research Covering Economies of Size"

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Executive Summary

Small firms form the backbone of the Southeast Minnesota economy, despite extensive consolidation in many industries. Ninety percent of the businesses in the region hire fewer than 20 employees. This has been true for at least fifteen years.

Interviews with local firms show that some have thrived in small-town settings, serving loyal customers worldwide, offering livable wages, and investing in their communities. Others face immense obstacles, due to the lack of supportive networks.

Economies of size have been analyzed at some depth by prior academic researchers. The essential finding is that farms, rural businesses and food processors have all become larger than economies of size would dictate. Where economies of size (ES) exist, they have been shaped by social policies. Further, firms have expanded beyond their most "efficient" size due to a wealth of other economic factors.

The academic literature shows that firms have become larger not because of economic efficiency, but rather due to a cluster of more important influences: (a) access to capital; (b) federal taxes, incentives and subsidies; (c) advertising presence; (d) accumulation of power by larger firms; (e) artificially low energy costs; and (f) economic infrastructure that fosters expansion. Underlying all of these is the assumption that larger is more efficient. However, that assumption is more robust than the economic reality.

Consolidation of farms, food processors, rural firms and public services appears to have occurred irrespective of economies of size. Expansion seems to be the result of artificial constructs, created by human choice rather than by economic law. This means alternative outcomes can be created by human action.

Further, larger firms may create problems for communities. Concentrated power creates barriers to entry for smaller businesses, and tends to create social relations of dominance and dependency, extractive economic relationships, and externalized costs. While any given firm may tally these as positives for the firm, all are negatives for both rural communities and the broader society.

Often, the self-interest of any given community may differ from the self-interest of the firms that do business there. The literature cites several examples of business that were considered by researchers "more efficient" since they had reduced costs in ways that displaced harm onto others—for example by forcing out union workers in favor of lower-paid staff. These firms may have become more successful in the marketplace. Yet from the standpoint of the communities in which they operate(d)—who were left to deal with higher welfare costs, personal dislocation, or environmental degradation—these lower operating costs (or even higher profit margins) are not at all desirable.

Corporations may simply pull up stakes and move away, while communities must address the needs of residents. Negative impacts may inflict consequences for a very long time that linger long after the balance sheet is audited. Rural communities will need to develop their own methods of accounting costs and benefits.[1] These new methods should examine economic activity *from the standpoint of rural community*, rather than merely considering a given firm or industry.

This paper sketches several examples of industries in which very large firms do exist, but small competitors nevertheless flourish. These examples suggest that even in a highly concentrated industry, smaller firms can build profitable niches.

Southeast Minnesota, since it is taking the long-term view, will not want to lock itself into specific calculations of economies of size for any particular firm. This is because in the long term, all costs are variable costs. Relative costs of production factors will change over time. Economies of size will change.

Our research suggests that Hiawatha Fund can find excellent, small-scale investment opportunities. Some of the region's small firms are among the most efficient firms in the nation. In many cases, small firms hold an advantage over larger firms. Even in sectors where large firms appear to be dominant, there are opportunities for small firms to build a niche. In some cases, large firms look to very small companies to supply them with valuable inputs. In some cases, small firms can carve out distinctive niches that larger firms are not able to fill.

Several regions globally have become successful by networking the large and the small. This allows those firms that do achieve true economies of size to spread the benefits of those economies of size to their neighbors. In Italy's Emiglia-Romana, for example, large clothing factories selling to global markets contract with individual households to produce essential, high-quality components. An export-based gourmet food industry has leveraged the advantages of small-scale farming and processing.

Regional efficiencies, thus, may be created by building strong social connections among local residents, and forging strong links among businesses and organizations. A long-term approach will emphasize *retaining options* for local residents, and will ensure *flexibility* in the face of changing conditions. Key to this are: building trust, having command over the region's resources, and maintaining a commitment to protect the environment.

A note on definitions

As we consider this issue, it will be important to define our terms. Economists distinguish between economies of *size*, economies of *scale,* and economies of *scope*. An *economy of size* occurs when a firm becomes more efficient by getting larger. An *economy of scale* is a special case of this, in which a firm gets larger by increasing the relative proportion of all inputs in the same proportions. Such an expansion would mean that a larger firm is essentially using the same mix of inputs and technology in the same proportions as it did at a smaller scale. Finally, *economies of scope* cover a firm's output. If a firm can sell more than one product from the same set of inputs, it may gain marketing efficiencies by using the same marketing materials to sell a number of products at once.[2]

Economies of Size Considerations in Southeast Minnesota

Introduction
The Southeast Minnesota Sustainable Finance Initiative, understanding the need for local credit and investment dollars that are responsive to the region's needs, has launched a regional investment fund named Hiawatha Fund (HF). The fund is designed to engage local residents in "investments you can drive by"—that is, those that help weave mutually beneficial social and economic connections among investors, residents and firms.

Hiawatha Fund commissioned this research to help it determine which smaller firms are likely to be the most viable opportunities for its investments in the region. While that question cannot be fully answered here, some useful tools hopefully are presented to the Fund.

As an initial step, Hiawatha Fund will offer "Citizen Notes," low-return loan notes, to local investors. These contributions will be pooled by HF into a small fund of less than $5 million in assets that will make equity-like investments into local businesses. HF also hopes to use finance as a community organizing tool, animating extensive local activity in support of local producers, local businesses, and local investment through investment clubs.

In the longer term, Hiawatha Fund intends to create a regional mutual fund, and to use this fund as the centerpiece of community organizing, outreach and education efforts that encourage the region's residents to play a stronger role in strengthening the region's capacity to build wealth for local residents.

Among the goals that motivate this work are the following:

- To build sustainable communities in the region.
- To build wealth that stays in the communities of the region.
- To ensure that the capacities of the region to produce its own life essentials, to foster a culture of productive skills, and to reward productive labor, are strengthened.
- To strengthen local businesses that are locally owned and responsive to local needs.

- To create a cluster of new businesses that are compatible with, and that foster the persistence of, these existing local firms.
- To retain local ownership of existing businesses.
- To ensure that local youth are inspired to take part in the local economy, have entry points to do so, and have the option of building sustainable livelihoods in their home towns.
- To form a group of people who act as "vision center" for the region, both by defining a local vision for sustainable development, and by holding power to help implement that vision.

Still, this plan involves a great deal of complexity. As the region launches the Hiawatha Fund, several key questions have emerged that will shape the investment choices the Fund makes:

1. How can the region best use its limited investment dollars to advance the goals stated above?
2. Which businesses are most successful at a small scale, and which opportunities are best left to larger firms?
3. Which businesses will be most stable in the region?
4. What are the most appropriate public interventions to advance the region's goals?

This paper intends to offer a first glimpse at these issues. Further research and analysis is needed to provide a more complete answer. In this paper, we will review some of the key issues that have surfaced during creation of the Fund. This analysis will be informed by (a) brief analysis of recent events in the region; (b) selected findings from the academic literature and (c) preliminary case analysis of specific firms and industries.[3]

Small businesses in Southeast Minnesota

Southeast Minnesota is a region of small businesses. The Department of Commerce "County Business Profile" for the eight counties that make up the region shows that for the past sixteen years, 90 percent of all firms in the region have employed fewer than 20 employees.[4] This is true despite national trends toward business expansion and corporate mergers, including the emergence of regional trading centers with big-box stores in rural areas.

Let's consider the experiences of some of those firms.

ABA Water Systems (Plainview, Minnesota)

Neil Weaver moved his water business to Plainview from the nearby metropolitan area of Rochester 30 years ago because he preferred the school system in the smaller town, and wanted to live closer to the natural environment. Now, as mayor of Plainview, and close to retirement from his business, he looks back on the expansion of his business with pride—and yet also with a certain amount of uncertainty. ABA Water Systems has become so successful it will be hard for any local buyer to take it over. It is simply worth too much. Yet Weaver continues to hope a local owner would surface.

ABA Water Systems is living proof that a local firm can have global scope. Offering water purification services to clients in 49 states, as well as Latin America, the Netherlands, Puerto Rico, China, and South Korea, the firm has created a solid niche by leading in environmental protection. One of it's competitive advantages is that it rejuvenates its water-purification resins, rather than burning them as others do. "We do a better job than any other business" in the field, Weaver boasts.[5]

He credits the region's farm heritage with ensuring he has access to a pool of capable workers, though he is concerned that in recent years, the community's work ethic may have diminished somewhat. All the firm's ten employees, he adds, make more than $40,000 per year. Plainview's low unemployment rate, and the proximity of good-paying jobs in Rochester, encourages Weaver to keep wages high.

Over time, Weaver says he realized substantial savings by moving out of the larger city. He pays about one-tenth as much for space in Plainview as he would in Rochester. Locating in a small town had few drawbacks for his particular firm. "Virtually everything I do is shipped out by common carriers like UPS." Shipping costs are identical from the two towns.

Weaver also benefited by taking advantage of the Southern Minnesota Initiative Fund's business loan programs. In 1987, ABA was the first firm to take out a loan from SMIF. It was also the first to completely repay a loan.

ABA's success shows that small-scale firms can succeed, but also points to one of the dilemmas of growth that the Hiawatha Fund aims to address. How can the region keep ownership of such successful firms local, so that wealth stays in the region?

Lorentz Meats (Cannon Falls)

Two brothers, Mike and Rob Lorentz, worked with their parents to diversify the family's butcher operation in Cannon Falls after the farm credit crisis of the mid-1980s decimated their customer base. The family had provided the town with quality meats since 1968 when it bought out the previous family owners. Yet as the crisis drove their neighbors out of farming, the family's custom processing business withered. The Lorentz brothers decided to expand the scope of the business. They built a new processing plant and added the marketing capacity to reach national retail stores. At the same time, they tried to strengthen their core business, by helping neighboring farmers reach new markets. Mike developed a training package to show producers how they could attract loyal customers who would pay fair prices. The processing plant would gain new business, but not by reducing the farmers' margins, as some larger firms had tried. Rather, the Lorentz' hoped to be one hub of a cluster of meat producers who would mutually depend upon each other. Success would not only mean providing customers with quality meats at prices that rewarded the work of farming and processing, it would also show up as a stronger community.[6]

In order to cover the costs of the new plant, the brothers also focused on larger markets. With the help of design and marketing experts, they created a new logo and shipped products to stores in the western and central states. The brothers' reputation for quality processing, and their access to urban supermarkets, attracted the interest of Organic Valley, which hired the Lorentz plant to grind organically raised ground beef under the coop's label. Specialty pork and elk growers turned to Lorentz Meats for custom work.

As this aspect of their business grew, the Lorentzes attracted the attention of larger brokers who offered to place their meats in wider markets. However, to do so would place the firm in an awkward position. They would need a small amount of new capital to expand their production. Yet even if they attracted sufficient capital to expand their production facilities, their projections showed that the more of this business they took on, the more money the firm would lose, because the expansion would create costs that would not be compensated in sales. Moreover, attracting the proper capital was complex. Venture capitalists were only to eager to invest in the firm—but wanted to invest 10 or 20 times more that the Lorentzes needed, and would only do so if they owned a larger share of the firm than the family was willing to release. For the time being, Mike and Rob are trying to grow at a small, steady rate under their own power. But that effort would be strengthened with small injections of patient capital.

Sno Pac Foods

The world's largest processor of frozen organic vegetables, now trading internationally, is a home-grown Caledonia firm that began as an outgrowth of a family lumber business. In 1900. J. P. Gengler started the lumber company, which eventually diversified by harvested ice off nearby lakes, and storing it for shipment to southern states in the summer months. As mechanical refrigeration became available, son Leonard built a locker plant where townspeople could rent freezer space to store their own food. Later Leonard purchased a farm and started raising fruits and vegetables organically. These were frozen and packaged at the plant. By 1943, the firm had become Sno Pac foods. Gradually it attracted other nearby growers to raise produce for them. Now, Sno Pac holds 15 percent of the global market for organic frozen vegetables, including specialized products for Japan and Canada. It has introduced *edamame* (soybeans in the pod) snacks to the American market, and also sells products to national labels like Amy's Kitchen, ShariAnn's Soups, and Gerber. Third generation owner Pete Gengler told Minnesota Countryside, that "the most exciting part of what he does is 'seeing it all come together. You start your crop planning and obtaining contracts during the winter. Then come the plantings and if we're lucky, the weather cooperates to yield enough crops to cover contracts and more. It's seeing all those details come together that gives me satisfaction.' "[7] You can feel Pete's devotion to the region as he retells the history of the business.

Thornton Hardware (Thornton, Iowa)

South of the Minnesota border, the market for local meats has expanded in a very innovative manner. Several local farms have expanded their production of higher quality meats in recent years. Nearby slaughter capacity is adequate to process these meats. Yet few retail outlets allow their neighbors to buy local. An new opportunity to do so emerged in Thornton, Iowa, when the aging couple that had run the town's hardware store decided to call it quits in early 2003. Since the town's population is only 1,000, many believed the store would simply close for good. But local residents met at a local café to decide how to keep the store open. At one meeting, residents pledged $20,000 to a local entrepreneur who offered to take over. That money was never drawn upon because a potential buyer surfaced from outside the community. When this buyer eventually backed out, the initiative was left in the hands of Julie Carlson, a newer resident of a nearby town, who saw great potential in the store. Obtaining a tiny loan from the local bank, Carlson kept the hardware store open.

Carlson's husband works for a cluster of pork producers in the region who raise quality pork and process the meat into sausage, ham and other food products for a national market. She placed three freezers carrying this locally raised pork, and other local meats, at the back of the hardware store. In front of these freezers, she set up displays of locally made crafts and products. Now only half of the storefront is devoted to hardware. The other half features local products. Located just west of freeway I-35, the store is well-placed to serve travelers as well as locals. Although the hardware operation is affiliated with a national supply system, that network did little to help frame the response to declining hardware sales—while a small group of neighbors was able to exercise considerable power.[8]

Harbor View Café (Pepin, Wisconsin)

Another food-related business that has helped inspire local economic activity in Southeast Minnesota, as well as supporting area farmers, is the Harbor View Café, just across the Mississippi River in Pepin, Wisconsin. The Harbor View opened in the 1980s when two couples moved down from the Twin Cities, taking over a former bar located near the town marina. The four refurbished the building and added a second dining room. Quietly they opened the restaurant, relying upon word of mouth. Their location placed them in the center of weekend tourist traffic on one of the most beautiful stretches of the Mississippi River, a convenient 1.5-hour drive from the cities. The proximity of the marina allowed the restaurant to cater to boaters as well as drivers. The menu features custom-cooked gourmet specialties relying on quality meats and fresh seafood shipped in daily, augmented by seasonal organic vegetables grown nearby. In a matter of months, diners were waiting for as much as three hours to eat a meal at the Harbor View. The restaurant does not take reservations.

Harbor View has established itself as one of the better places to eat in the U.S. It is well enough regarded that the former King Hussein of Jordan would travel to Pepin to eat as his health allowed, during visits to Rochester's Mayo Clinic for medical treatment. Prices can be steep, but the Harbor View also offers simpler, reduced-price meals, drawing locals who eat there on a more regular basis. Not only do local farmers provide much of the produce, local residents work the kitchen and tables. Strong weekend traffic has also sparked new development in the town and beyond, including bed-and-breakfast rooms, a summer theatre, upgraded vacation homes, and gift shops.

Root River Market (Houston, Minnesota)

Residents of Houston launched the Root River Market as a cooperative food store in late 2000 after the town was left without a grocery store for more than two years. Nor did the 350 neighbors who formed the cooperative in this town of 1,000 miss the irony that a small town in the middle of a strong agricultural region, producing more than a billion dollars of food each year, could not attract a grocer. Townspeople were especially troubled since the town at one time supported five grocers.

Purchasing $100 shares and then attracting other investors, this initial group of residents accumulated an impressive $180,000 in working capital. This allowed them to open as an 8,000-square-foot market. The drive for opening the store open was fueled by the town's awareness that having a grocery store anchors their downtown area. "Everyone eats three times a day," said founding manager Tony Denstad. "The grocery store in most towns is the center of business community. If there is no grocery store it hurts all other businesses." Without such a store, residents would tend to head elsewhere to shop.

Further, residents realized that only a small-scale store would work. Several larger chains had considered locating in town, all concluding there was not enough money to be earned to justify opening a store in Houston. Nor would the larger chains offer services like delivering to seniors' homes, as Root River does. The store quickly set its sights on offering local produce and whole foods, neither of which would be priorities for a larger chain moving into a small town. A small store was more able to respond to a market that sought healthy local foods.[9]

Jacobsen's (Northfield, Minnesota)

One firm once located just outside the Southeast Minnesota region, but telling an important story about economies of size, is Jacobsen's store, a classic general store which once flourished on Division Street, the main business district of Northfield, Minnesota. Jacobsen's had been in business more than 80 years but closed in 2003. Offering a diverse mix of essentials from work clothes to dress clothes to flour-sack dishtowels, Jacobsen's held many natural advantages as a small store. The same family had run the business for decades. The building was presumably long paid for. A recognized presence in the Northfield business community, the family had loyal customers in town and devoted shoppers who would drive from the Twin Cities to get specialty items not carried by urban stores. Yet, Jacobsen's failed. Why? The family said they were comfortable with the money they were making. A younger generation had taken over the business and had adapted the store well to changing retail climate. The store had weathered the opening of a nearby discount department store. What their decision came down to, the Jacobsen's told the Minneapolis *Star Tribune*, was that their suppliers no longer would sell them goods in small enough quantities. Suppliers would sell entire truckloads to the larger stores, but did not want to ship partial loads. According to the family, the store died not from lack of profitability or efficiency, but because the prevailing infrastructure had failed them. In this case, the inflexibility of larger firms eventually choked off the existence of a small firm that had established a strong local niche.

Lake City, Minnesota

Executive director Ron Ziegler of the Lake City Economic Development Authority, says Lake City has long held a strong industrial base. However, he cautions, the "parent companies are no longer local." Local firms have succeeded well enough that they attracted the interest of outside buyers. Now, he adds, "some of our biggest employers are firms that started as home start-ups."

Wild Wings, selling original wildlife paintings, began as a home painter's gallery in nearby Frontenac. Now, it is owned by Cabela's sporting goods store. Two brothers founded Hearth and Home household products in their garage, and recently were bought out by a national firm.[10]

Root River Trail (Preston to Rushford, Minnesota)

A development often viewed as one inspiration for the early economic renewal of the Southeast region is not a business, but an action taken by the state government—the Root River Trail. The logic behind this trail was that by slowing visitors down to the speed of walking and biking, the region could create a tourist industry that encouraged visitors to stay and relax, rather than merely drive through. Enjoying the region's stunning physical beauty, tourists would also spend money on accommodation, food, and gifts.

Thus, a public investment in the bike trail spawned a cluster of related small-scale businesses. Bed-and-Breakfast operations renovated rusting homes and store fronts. One trailside café offered home-baked pies. Several quality restaurants and food businesses flourished. Gift and antique stores emerged. Tourist services—such as bike rental/service, canoe and inner-tube rentals—began to take root. Local residents and tourists alike treasured the physical exercise they won by embarking on the trail. Local birds and wildlife became more appreciated as a sense of place was restored to communities along the trail. This sense of place was built almost entirely on by creating more small-scale enterprise, catering to groups of tourists who came to enjoy the quieter pace of a small community. Large firms had very little to do with creating this transformation, except as suppliers of these small local retailers. Yet as the national economy weakened in the past few years, fewer visitors come to Lanesboro. Nearby towns have diverted some of the trade. Store fronts are once again unoccupied.[11]

Viterbo College (La Crosse, Wisconsin)

The nonprofit sector also plays a part in the local economy. One is Viterbo College in La Crosse, Wisconsin, which formed a prominent Midwestern drama program even as the town's industrial base declined in the 1970s and 1980s. A Catholic college, Viterbo had access to national philanthropic dollars that may not readily be available to other small schools. Still, the strength of Viterbo's vision was the imagination of an instructor, a nun, determined to make Viterbo a theatre center. Attracting a top-notch faculty committed to teaching, the drama program also realized it could establish a unique role in the Midwest. Located between two urban areas, Chicago and Minneapolis, with strong national theatre markets, the college worked to attract national theatre companies to La Crosse by building a large performance hall with enough backstage area to mount a touring show. Companies that were driving past La Crosse anyway on their way from one city to the other might as well stop in La Crosse midweek, mounting a performance for an appreciative rural audience, rather than simply driving through, only to wait in the next town until their weekend performance schedule began. A nationally prominent architect designed a new, suitable theatre. These national touring companies, in turn, now help the college attract some of the better acting students from Midwestern high schools. Touring actors gain from their contact with the students, and from the visibility they gain by reaching new audiences. In this case, Viterbo took advantage of its small size and location, along with its access to national funding sources and national theatre companies, to create a very strong niche that plays to local strengths.

The stories above are only a few of the many possible accounts. Many others have attained both success or encountered dead ends. These do illustrate themes that emerge in our review of the academic literature, found in the following pages.

Findings in the research literature covering economies of size

Economies of size have been analyzed at considerable depth by prior researchers. Most scholars have determined that economies of size are not critically important in making rural firms larger. Farms, rural businesses and food processors have all become larger than economies of size would dictate, due to a wealth of other economic factors. Where economies of size do exist, they have been shaped by social policies.

The academic literature shows that firms have become larger not because of economic efficiency, but rather due to a cluster of more important influences: (a) access to capital; (b) federal taxes, incentives and subsidies; (c) advertising presence; (d) accumulation of power by larger firms; (e) artificially low energy costs; and (f) economic infrastructure that fosters expansion. Underlying all of these is the assumption that larger is more efficient. However, that assumption is more robust than the economic reality.[12]

Evidence shows that small firms are more efficient than is generally assumed, especially when long-term cost considerations are taken into account. Certainly some economies of size do exist for certain firms that would suggest expansion is good. But there is no reason to assume that such economies of size determine the structure of the rural economy.

Nor is there firm evidence that economies of size can be reasonably calculated for anything larger than a single firm. Considerable caution is raised, especially in the farm sector, about analyzing economies of size for a group of firms, or for a sector, since different firms have different resources and opportunity costs.

Research also suggests that there is little logic in scrutinizing economies of size for given firms without also examining the context in which they operate. The price of oil, for example, affects the price of capital equipment, the price of transportation, and cost of processing. Decades of public subsidy to the oil industry have created artificially low prices for fuel—as has public policy that allows the costs of environmental damage, and the military costs shouldered to assure access, to be excluded from the price of the oil itself.

The importance of public policy in setting economies of size means they are in part social constructs. They reflect, for example, society's decisions to create tax incentives, to build a given system of infrastructure, or to accept a certain wage level for a certain line of work. Those who generate economies of size do not necessarily "own" them, nor are they necessarily the ones who benefit from them.

There is no reason Southeast Minnesota should exclude small firms from its vision for the future, and there is every reason to believe small farms will continue to be the backbone of the region's economy. Some of the region's small firms are among the most efficient firms in the nation. Where economies of size do exist, it is more sensible to measure this for a specific firm, rather than assuming a reliable measure can be found for an entire industry or sector.

Even where large firms are efficient, there may still be an important—if not essential—niche for smaller firms. Some large firms are now trying to emulate the small, breaking themselves into smaller subunits in order to provide efficiency and accountability.

Many prosperous regions globally have become successful by networking the large and the small. This allows those firms that do achieve true economies of size to spread the benefits of those economies of size to their neighbors. Even more importantly, this coordination allows the *region itself to create economies of size* by building strong networks of trust.

In Italy's Emiglia-Romana, for example, large clothing factories trading in global markets contract with individual households to produce essential, high-quality components. Simultaneously, an export-based gourmet food industry has leveraged the advantages of small-scale farming and processing, creating globally respected regional labeled foods.

Southeast Minnesota should recast its consideration of size, focusing on taking advantage of the strengths of both smaller and larger firms that belong to or interact with the region. Businesses at any particular size may play a key role. The region's survival is based more upon how well its small and large firms cooperate to make the region strong, not upon raw economies of size. Infrastructure that supports the large will create large firms. Networks that support the small will foster the survival of small firms.

A thorough historical review of this research literature can be found in a companion report, titled, "Historical Review of Research Covering Economies of Size."[13]

What are the advantages and disadvantages of larger size?

In a technical sense, economies of size occur when the marginal cost of expanding output decreases with each new unit of output. That is, as each new dollar is spent to increase output, the cost of producing that next unit diminishes. For example, a cable TV network, endures significant front end costs investing in the cameras, studios and distribution networks that allow it to produce and distribute shows. Once this is in place, the cost of adding each new subscriber is very small. Under these conditions, from the perspective of the cable firm, there is strong incentive to increase the number of subscribers, because each new customer brings in added revenue with little new cost. From the perspective of the consumer, size may also be an advantage. A larger firm may be able to offer a broader variety of programs. On the other hand, size may be a disadvantage to a customer who seeks local programming, or one who wants to broadcast an original production so his immediate neighbors can view it.

Generally, manufacturing firms that require a high level of capital investment, with large R & D costs, and steep equipment costs, but relatively smaller marketing costs, will want to become large. Limits to their size may be determined by the availability of labor or capital, competitive pressures, perceived self-interest, or the costs of management or distribution.

On the other hand, large size may also result in inefficiencies, especially as distance is created between decision-makers and community context. The larger the number of employees, or the extent of geographic dispersion, the larger the potential difficulty in coordinating the operation. As power becomes increasingly remote from the day-to-day reality of workers and customers, corporations are increasingly required to either decentralize decision-making (in some cases in an effort "to emulate the social bonds of small-town life") or to adopt command-and-control strategies that limit the options of people who work in the field.

These command-and-control strategies include elimination of worker or consumer choice, standardization of product and process, a withdrawal of information and a general lack of transparency in operation. Any of these can lead to inefficiencies. Such strategies may produce apparent cost reductions in the short term, but often in the long run merely displace costs onto others. The firm is eager to externalize such costs. The community cannot, since it cannot relocate. Relations of domination and dependence set in, as decision making, capital and opportunity are increasingly removed from the community itself.

Among these mechanisms of control in the food industry, for example, are alterations of the food itself so it becomes more of a commodity, and less of a live entity. In order to promote longer shelf life and transportability, food products are increasingly made more inert and more standardized. This transformation of food may create efficiencies for larger firms, but, some evidence suggests, may play a role in fostering malnutrition, disease and disconnection. Thus, the region now has agricultural communities in which a child may grow up knowing very little about the food she eats. Skills in food safety, food preparation and proper nutrition have been lost. These dynamics may be compounded in urban communities.

Large firms may also displace more environmental costs onto communities in the long term. Large feedlots create larger pollution streams, for instance. The political clout held by major firms has at times also allowed environmental degradation to be overlooked. On the other hand, larger firms may be better placed to resolve pollution issues, since they may have greater access to capital.

Further, large firms may create barriers to entry for smaller firms. The need for capital, the need for instant market presence, or an investor's requirement that large sales volumes quickly be attained all make it difficult for the new entrepreneur to start. Small producers tend to be more responsive to market demand—if they have access to the resources that allow them to meet that demand. Existing large-scale infrastructure requires that small producers join large-scale distribution networks that move a large volume of product in order to establish market presence. Currently, small firms are offered no certainty of sufficient return—just the certainty that when this stream of product is available, larger firms will hold more market power due to their commanding presence.

Large firms also engender hidden costs. Thus, a farmer who earns 3 cents for the wheat he raised for each dollar's worth of bread is subsidizing the cost of large scale intermediaries who come between producer and consumer. The consumer who spends $3.49 or more for a loaf of bread in an urban market is making substantial investments in the real estate, transportation, and energy needed to keep an urban store open, and to process and distribute raw commodities into that product. The greater the share of these intermediary costs, the more realm there is for inefficiencies that interfere in the relationship between producer and consumer.

Larger firms also create a lack of transparency that tends to undermine the possibility of democratic governance over the economy. Iowa Agricultural Statistics reports now note that information on the hog industry can no longer be reported by county, since this information is privately held by concentrated producers. This may give relative advantage to the large firms who hold privileged data, without creating any efficiencies. From the standpoint of the community, rather than the firm, this represents a critical inefficiency.

What are the advantages and disadvantages of smaller size?

Potential advantages accrue to smaller firms that can more rapidly respond to changing consumer demand, or who are able to differentiate their product or service by offering close personal attention to their customers. Inherently, smaller firms may also generally endure fewer management inefficiencies, because employees are less dispersed from decision-makers.

One lender who has worked extensively with farms and rural businesses concludes that his lending reviews of dairy farms showed that the best of the small farms exceeded the efficiencies of the average large farm.[14] Yet this is not to say that all small farms (or businesses) are more efficient simply because they are small. This is to argue that small farms are capable of efficiencies that rival those of larger farms.

On the other hand, not all small firms attract quality managers, and some small firms are highly vulnerable to changing conditions due to a lack of reserve resources. Smaller firms may suffer from a lack of knowledge about external markets, or broader social forces that impinge on those markets. They may lack access to capital that would allow them to respond to changing consumer demand, or they may fall into too comfortable routine that prevents them from acting on changes that can be foreseen. Small firms may lack the market power to shift consumer spending, may lack the means to adequately advertise, and may not support a comfortable livelihood.

Yet the import of the research reviewed is that small firms that are networked with other large and small firms stand a better chance of surviving through cooperation. Even efficient large firms may require the presence of efficient small firms to supply essential goods and services. The focus of the region should be placed on the quality of local social and economic networks, and less upon whether individual firms are small.

In sum, rural regions are tightly constrained by conditions imposed by larger firms, typically based in, or financially linked to, urban metropolitan centers. These powerful firms have been able to create lasting economic infrastructure that promotes their own interests. As a result, many smaller firms have either closed or have been merged into larger firms. This has created the appearance that small is inefficient. Despite 37 years of academic research that has failed to clearly prove that economies of size exist for crop farms—and in fact has raised serious questions about their existence—policies that promoted further concentration have flourished. These policies were created on the *assumption* that bigger is better.

Inside an Extractive Economy

At this point, the region's own study of the farm and food economy may be illuminating. That study (authored by this writer) found that the region's farmers—farms that increased in size due to alleged efficiencies—lost $80 million in producing commodity crops in 1997.[15] That loss had escalated to $120 million by 2001.[16] Farm subsidies only partially compensated them for these losses. The rest was made up as farm operators earned farm-related income, or held off-farm jobs, to help them pay the costs of farming.

Also troubling to the region, farmers spent about $400 million each year purchasing inputs from vendors outside the region. And while farms lost money, the region's consumers spent $506 million buying food, primarily from outside the region. Assuming $400 million of this flows directly to food suppliers outside the region, the region spent a total of at least $800 million externally in 1997 alone. None of these purchases builds wealth for the region's residents. In 2001 the loss was even greater—$1 billion.

Nationally, the current U.S. food economy shows great imbalances in supply and demand. Although this country is the largest and most efficient producer of food commodities in the world, 35 million Americans (11% of all households) are uncertain where their next meal will come from at some point during each year.[17] At the same time, more than half of all Americans are overweight.[18]

Supply and demand fail to balance in part because of the separation of food producers from consumers. Concentration of the food industry seems to play a key role in creating this distance.

Nationally, local food systems are emerging to reduce this separation. Immense consumer demand is emerging for healthier, sustainably raised food from farms known to the consumer.[19]

Yet the very size of food distribution firms places great obstacles to meeting this demand—since a considerable volume of standardized food products must be available before large distributors can afford to carry a given product. This means the burden of risk for introducing new crops, healthier food products and more sustainable practices has been borne by smaller growers, food networks, and stores. Often their efforts are undermined by larger systems that muscle out the small once a market has been identified by the initial entrepreneurs.

Inside an economy that is so extractive, a careful regional analyst has to question whether profitability for a given firm is always a positive attribute—at least from the standpoint of a region that is defining a vision for long-term sustainability. If the region's infrastructure is extractive, then more profits by firms owned outside the region is likely to mean more extraction. To head toward sustainability, the region will want to think more about true efficiencies, cover the costs of externalities, and build in precautions that help cover the uncertainties of the future. Such a region is likely to focus more on the creation of wealth that is held more generally by community members, and less on the profitability of individual firms. It may look more closely at the actual economies of size—which seem to favor the small producer in uncertain times. It will want to mesh its economic networks with natural realities.

Rural communities literally need to develop their own methods of cost and benefit accounting. These new methods should center on examining economic activity *from the standpoint of a given rural community*, rather than merely from the standpoint of a given firm, commodity or industry.

Moreover, Southeast Minnesota, since it is taking the long-term view, will not want to lock itself into specific calculations of economies of size. This is because in the long term, all costs are variable costs. Relative costs of production factors will change over time, which means economies of size will change.

A more reliable strategy for the region would be to build strong social connections among local residents, and to forge strong links among businesses and organizations. A long-term approach will emphasize *retaining options* for local residents, and will ensure *flexibility* in the face of changing conditions. Key to this is building trust, having command over the region's resources, and a commitment to protect the environment.

Ultimately, this reflects elements of the strategies favored by larger corporations. Efficiency is not the sole criteria by which a large firm evaluates its own accomplishments. Market power is frequently considered more important, as is political power. Profitability may be considered more central—yet even here, a firm may temporarily operate at a loss in order to increase market share. Investors may stick with a firm that is losing money due to the hopes that the situation will turn around. Efficiency is only one of an "ecology" of complex issues that guide corporate decision-making. Flexibility is highly valued.

A rural region will have different priorities than a corporation, if only because a community cannot relocate, and must address issues of climate change, environmental deterioration, and special human needs that the corporation may wish to ask others to resolve. Thus, although Southeast Minnesota may decide to strive toward a number of goals, only one of which is relative efficiency, its balance of competing goals will differ from the list of corporate aims given above. Still, the principle of keeping options open will apply to both a given firm and to the region.

Hiawatha Fund itself is likely to be the pioneer in creating such accounting paradigms and practices. It may also see itself as producing a *new definition of fiduciary responsibility*—one that pays attention to the needs of, and the return to, the community as a whole, rather than one that focuses on specific businesses and industries.

Ultimately, as William Cronon points out, extractive economic relationships undermine the very foundation of prosperity.[20] This also fosters a cultural amnesia, as basic connections to nature are obscured. A sustainable Southeast Minnesota will cultivate *memory* and *place* as well as food. Maintaining strong bonds of respect among residents will be as important as growing firms. The region will value community health and wealth over calculations of efficiency. Assuring that a diversity of viewpoints flourish, and ensuring that a diversity of economic paths are solid, will be a key goal.

Ultimately, there is a difference between businesses whose goal is to stay in business to serve the region, and those that primarily seek to build enough value to be sold to the highest bidder. As three panelists at the Southern Minnesota Initiative Fund's economic development workshop in May 27, 2004, pointed out, successful entrepreneurship involves working to fulfill one's personal passion.[21]

Similarly, writer Gary Holthaus' interviews with Southeast Minnesota farmers recounted stories of farmers who raised crops because they liked the crops they raised, and wanted to stay on their land, living close to their neighbors.[22] Others, who run industries or raise foods out of a more basic desire to earn money, or to sell their business, are more susceptible to external pressures.

Infrastructure, networks and size

There may be no way to answer the general question—what size businesses are most appropriate for the Southeast Minnesota region? Overall, our review of the academic literature strongly suggests that economies of size may not play a major role in determining the actual size of farms or rural businesses. Further, the only appropriate measure of economies of size may be to examine specific costs of one particular firm in a given economic and social context—not a sector as a whole.

In fact, the literature reviewed suggests that the *economic context itself* may be the best place to direct further attention. Southeast Minnesota will want to weave a more cohesive set of networks that support local firms. Tax structures, public incentives, factor costs, and infrastructure all play a role. The assumptions that consumers and policy makers make will shape how money flows, and thus size decisions. Firms that can offer more than one product or service may be more adaptable. Firms that build connections with centers of power may survive longer. These centers of power may be clusters of other firms in their own locale, who integrate their operations out of a sense of regional loyalty, industry solidarity, or efficiency. Vertical integration may create niches for the small, and stability for an entire system of production and consumption.

If the prevailing economic infrastructure encourages firms to get larger for reasons other than efficiency, Southeast Minnesota faces an immense challenge: how to create economic space for the small in the midst of merging corporations? Yet our research shows that small niches exist.

Even when a larger firm is more efficient, this still does not mean that all the suppliers of that firm are large. Such a firm may depend dearly on smaller firms to supply essential goods and services. Or it may purchase key goods or services from a pool of smaller suppliers. If efficiencies of size do exist, there are certainly also examples of business clusters or cooperative structures that allow individual producers to remain small, even as they cooperate to gain market clout. Even in an economy dominated by large players, small firms may find highly profitable niches—especially if regions build mutual dependency among the large and the small.

Flexibility will be especially needed in the face of emerging computer and technological capacities. In certain cases, technical tools and networks have made it more possible for the small to survive. A home-based researcher, for instance, can draw upon global sources and serve a global market. Yet computers have also fueled the expansion of business. Depending upon local conditions and capacities, timing, and local goals for sustainability, the region will need to perform careful research and determine what is an appropriate scale on an opportunity-by-opportunity basis. It will also wish to forge links among local firms who make conscious efforts to create a stronger networks of trust so the region can better adapt to changing conditions and external influences.

As a way of considering such issues, we examine a few examples of contemporary industries in which large and small firms co-exist. In some, there is a great deal of mutual connection among them. In others, it is as if the small and the large exist in totally different economies.

Coffee shops:

One business that has emerged in the past two decades, starting in urban centers and gradually taking root in smaller towns, is the coffee shop. In this industry there appears to be a balance to be drawn between small firms that are able to build personal connections with producers, suppliers and consumers, and those that enjoy scale advantages through branding.

The largest chain of coffee shops in the U.S. is Starbucks, which has built such a powerful presence that one urban intersection in Washington, DC, boasts three separate storefronts with this same brand name. The firm often epitomizes an urban professional lifestyle. The format of the stores is relatively standardized, with predictable products at each store. The sameness of the product at each location is the selling point more than the actual flavor of the coffee. This predictability both differentiates the brand name, and also reduces the marginal costs of sales. Yet a Starbucks would be an unusual store to find in a smaller town, where this lifestyle and branding would seem foreign.

A middling-sized firm that competes with Starbucks in certain markets is the Minnesota firm, Caribou. Though quite standardized, Caribou indulges in more spontaneous architectural design, and a more informal branding. It indulges a touch of quirkiness that partially offsets its predictable product mix. Garnering loyalty to brand, Caribou also appeals to a Midwestern sense of individuality, and promises to compete with Starbucks by remaining on this personalized edge.

Despite the competition between these two firms, a still smaller firm has thrived in the Twin Cities area, with a limited number of franchises and a loyal following built on very different terms. Dunn Brothers coffee houses differentiate themselves by fresh-roasting their coffee right in the shop, creating an appearance that their coffee is less bitter, more flavorful, and less standardized. Each store has a unique design, often emerging out of the renovation of an older building with a unique character. Certain marginal costs are lower since the firm is smaller.

At a smaller scale still are coffee shops that have sprung up in country towns. Often in such smaller venues, fresh roasting does not seem economical, but many of these coffee houses purchase roasts from rural roasters rather than from the prevailing urban firms. Store design is often fairly simple, requiring minimal investment but often renewing a main street storefront. Emphasis is often more on the coffee shop as a place for the community to gather, and to provide an alternative to the main street café, and less on branding or the freshest possible roast. Many of these are quite successful in the niche they fill—and are far more suited to small towns than, say, a Starbucks.

All four types of stores relied upon small nonprofit partners to establish networks that carried, in succession, organic coffee, fair trade coffee, and shade-grown coffee. Caribou was perhaps first to follow this lead by committing itself to purchasing directly from fair-trade vendors. Dunn Brothers adopted this idea quickly as well. Starbucks only succumbed once substantial political pressure was placed on them. Now the volume of their purchases brings stability to more coffee growers than the humble purchases of those pioneering nonprofits. These fair trade contracts often allow growers to remain on small private holdings, yet sell their product through global marketing channels at a fair price.

It seems that Starbucks is unlikely to become the sole owner of coffee shops. Its position has been strengthened due to its partnerships with small nonprofits and small growers. Small specialty stores in urban neighborhoods and small towns occupy niches that may not prove profitable for the national leader.

Health care:

Health care providers provide a different set of tensions around size. While smaller clinics offer more personal knowledge and greater consumer responsiveness, larger providers play an important role because of their access to capital and technology.

Larger, typically urban hospitals are more likely to invest in expensive equipment that may offer a competitive edge. Their medical staff is more likely to include highly specialized doctors whose talents require frequent practice, as is the case with specific surgical skills. Teaching hospitals, especially, may be centers of medical innovation, due to their connection to universities. The large hospital emergency room may be better suited to handle unusual or complex traumas. For these reasons, some middle-level hospitals have stopped trying to compete on size, and have decided to helicopter certain patients to larger urban hospitals where better care can be found.

Yet this trend has not made medium-sized providers irrelevant. Outpatient surgical care, for example, may be well-suited to a smaller hospital, due to its proximity to its customer base and thus, reduced transportation time. The smaller level of required investment may yield certain efficiencies of their own at a lower level of overhead.

Still smaller providers also find a suitable niche. In this category are family practices, community clinics, preventive care centers, and culturally based health providers who may offer complementary treatments such as acupuncture and herbal medicines. These providers may have an even greater advantage in knowing their customers. They may use still simpler technology. While they may face severe limits in responding to certain conditions and crises, many small providers fill a valuable role.

In this case, the more seamless the system of choices runs between large and small providers, the more options and flexibility that can be enjoyed by health consumers. A person who trusts her Hmong healer on Main Street may still need access to the larger regional center 50 miles away, or to specialized skills found only in the city hospitals. Cooperative, consumer-friendly system building can make such arrangements easy for the customer to negotiate. Cooperative purchasing agreements have enabled some smaller clinics to take advantage of group purchasing power that would be beyond their individual reach.

Software Industry

In similar fashion, the global software industry has created niches at all levels. While the behemoth Microsoft clearly has captured the lion's share of revenue, this is not to say it offers the highest quality product, nor is it to argue that this product is the most efficiently produced.

A strong argument can be made that Microsoft's initial capital investment in creating its operating system gave it great market clout. As a monopoly, Microsoft enjoys the advantage of full compatibility with the vast majority of computers, also using its own operating system. This predictability, once again, has caused thousands of institutional buyers to stay loyal to the firm.

The downside of this immense scale is that the firm has often shipped products that contained bugs that are highly vulnerable to viruses, and that had to be addressed with software patches. Many users complain of the instability of the operating system compared to others that are available. And cross-platform compatibility can also be built around cooperative code-sharing agreements such as the one that Apple and Microsoft signed—they need not depend on size alone.

Despite its successes, more than market efficiency is at work. Otherwise, Microsoft would not have needed to rely upon questionable business practices (such as the improper bundling of software that has successfully been challenged by the EU) to gain its size. This suggests economies of size are not as great as it may appear.[23]

Institutional consumer purchasing preferences may not be based on economic efficiency, but on other factors, such as: (a) a tendency to buy from the biggest firm with the most often-cited name; (b) a proclivity to buy from the source that seems safest to justify to a superior; or (c) to personal loyalties. At a major research university where I once worked, for example, a decision had been made by the institution to purchase only Microsoft operating systems, for certain of the reasons stated above. All of the school's computer staff, however, used a competing operating system on their home computers, since each felt it was a superior product.

Apple, of course, is arguably the best and most stable of the commercially prominent operating systems made in the U.S. As a pioneer in creating the graphics-based, user-friendly operating system, Apple is a middle-sized firm that has not garnered the sales revenue commensurate with its technical prowess. Some analysts blame management lapses, and others find greater fault with monopolistic practices elsewhere in the industry. Both Apple and Microsoft offer products that require immense capital investment up front, with potentially declining marginal costs for adding new customers once a given product is on the shelves. So each can claim certain economies of size. Apple might have claimed a competitive edge by being first out of the gate, but their higher prices, perceived compatibility issues, and relative smallness caused them to fall out of favor with institutional buyers.

With both of these powerhouses in the industry, it is somewhat surprising to see that the most stable operating system of all has been created by still smaller providers, such as the small dispersed code warriors, scattered globally, who created open source software like LINUX. Much of this development was done by volunteers who openly shared information with each other. Many were based at home working late hours after their day job. Some did it simply to challenge Microsoft's dominant power. There are terrific economies of scale to be found in a product that is given away with minimal distribution costs. Many consumers have built considerable loyalty to open source products, but many others do not have the time to learn about them. In this case, transparency and cooperative networks have trumped the large providers in technical and capacity-building terms. Financial rewards are more elusive—yet there is still a strong niche industry of open source products. Increasingly, there are signs this is a global market that may surpass the current monopoly system. Apple has now embraced a Linux-based operating system.

Lessons from Nature and Europe: Focus on Networks, not Firms

> "Value is produced by the system as a whole, not by the single firm (or species) that attracts the most attention."
>
> *Frank Ackerman and Lisa Heinzerling*[24]

> "The relevance of firm size and structure cannot be determined independently of industry structure because the causal factors are not unidirectional…The differences in firm efficiency may be more a reflection of commitment to perceived goals than the result of any underlying differences in technology or economic environment."
>
> *Arne Hallam*[25]

Ultimately, the focus of the region will best be placed, not on the efficiencies of a given firm or industry sector, but rather upon the supportive networks it creates that link firms and communities. In this, Southeast Minnesota could learn a great deal from Europe, where small producers have been forced by circumstance to build supportive networks. Impacted by U.S. competition in the past, Europeans have had to learn hard lessons in how to keep an economy strong without counting on international trade domination—a situation the U.S. may find itself in the near future, since studies now show the U.S. may become a net food importer by 2007.[26]

Like many others in Europe, citizens of the Emiglia-Romana region in Italy have invested detailed long-term attention to regional survival. A thorough review of this experience is beyond the scope of this paper, but a few key points will be made here. Readers who wish a more detailed understanding of the region may start by consulting Joshua Whitford's "Small Firms and Big Markets" as a starting point, which also references prior scholarship.[27]

The Emiglia-Romana strategy is to build networks of loyalty among clustered firms. For example, a clothing manufacturer that may sell clothing to global markets will subcontract work to smaller firms nearby. These supply firms range from the medium-sized factories to household-based cottage industries. A common recognition that cooperation will benefit the entire region allows firms of diverse sizes to consider at what scale of production a certain good or service is best produced, and to share in the costs and benefits of the region's access to market power.

Thus, the region builds networks of collaborative relationships that both build social connection and mutual loyalty, but also cycle dollars that may be earned from the global economy through the region down to the household level. Rather than favoring one size of factory, producers of all sizes collaborate to keep the region strong. This clustering strategy has proven quite flexible to changing conditions.

Of fundamental importance, the manufacturing clusters of Emiglia-Romana emerged out of the devolution of power from 700 large firms in 1951 to 9,500 small firms in 1976. Typically in this region, networks formed around a larger "hub" firm that subcontracted with specialized smaller firms.[28] A key element in the success of industry clusters is that suppliers and their consumers are able to work "face-to-face" with each other to build relationships of trust, and to shape production to suit the needs of several firms in the cluster.[29]

As local development specialist Michael Shuman points out, the region supports 1,800 cooperatives that hire 60,000 workers. It is also a region with a strong base of small industry, he adds. "Of the 90,000 manufacturing companies in the Emiglia-Romana region, 97 percent employ fewer than 50 employees. A network typically forms temporarily to create a specific product for a well-defined 'niche' market. Participating firms pool their resources and share the risk."[30]

Interestingly, although Emiglia-Romana is a highly industrialized area of Italy, it is also one of the primary food producing regions of the nation, as well, being the heart of strong local food production as well as export of products like balsamic vinegar from Modena. At the February, 2004 BioFach conference of organic and sustainable food sellers, held in Nuremberg, Emiglia-Romana firms had more display booths than any other region of Italy.[31]

Similar systems of networked producers can also be found in Spain, France, Japan, the Netherlands, Central America and elsewhere. Some elements of this cluster approach have already been implemented in the Southeast Minnesota region, as the Southeast Minnesota Farmers Network has brought together 50 producers and processors for collaborative marketing.

Precedents such as these respond to the fact that one of the bigger challenges of increasing economic size is to ensure that the benefits of flexibility, social connection, personal trust, and innovation that are more characteristic of small firms do not become priced out of a market as size increases. Crafting self-conscious networks that allow the large to cooperate with the small, and allow production to happen at the most appropriate level, seem to offer the most promise in creating a regional economy that can adapt to changing conditions and variable cost structures. Through such networks, trust may be built. Cooperation, rather than coercion, can hold such networks together. Like an ecosystem, such networks can assure that valuable functions can be maintained at *all* scales—not simply at the one scale most favored by transient cost structures.

One eloquent exposition of such a vision was created by the National Council for Agricultural Research in the Netherlands. This document frames a broad call for new economic systems, not reform of existing ones. The farm sector in Holland, the paper begins, faces a "double challenge." First, the "consumer market has come to display high levels of differentiation, uncertainty and volatility….Consequently, the agro-sector is currently faced with the need to cater to an environment characterized by complexity, continual change and speed….The agro-sector is forced to develop new forms of organization: responsive and flexible innovative networks instead of tightly organized chains.

"The second challenge," the paper continues, "is to strengthen interaction and cooperation with other sectors." Besides creating "vertical" networks that integrate production activity from producer to consumer, agribusiness should "create new horizontal networks: new coalitions between the agro-sector, industrial sector, and the service sector."[32]

Noting that it is often urban people who most treasure rural areas in Holland, the report continues by pointing out that resource use in the countryside will have to be determined by more than simply the needs of farms. Power will need to be shared, and new systems of innovation will need to be created. Reforming old systems will not be adequate, the report argues.[33]

Conclusion

It is no coincidence that a small nation like Holland, and an industrial region like Emiglia-Romana would serve as models for Southeast Minnesota. These two areas share a common approach with ours—as regions that wish to frame their own visions and develop on their own terms. Decades before Southeast Minnesota, these and other European regions have had to cope with intense global pressures, and have looked inward to create regional economies of size.

Both Holland and Emiglia-Romana have created new networks of support that lend internal stability to local firms and workers. Likewise, the future of Southeast Minnesota also seems to hinge on its capacity to form what Cornelia Flora calls "flexible networks" that allow a local region to create local efficiencies, and to disperse the benefits of those efficiencies to a broad share of the local population.[34]

This is no small task, because the economy of the Southeast region has largely been structured in ways that benefit urban centers and external finance networks.[35] The systems that are in place are very efficient at extracting potential wealth away from the region. Southeast Minnesota will need to isolate itself from, or reverse the impact of these economic structures, if it is to implement its own vision.

A long-term approach will not focus on individual firms, but upon the value created by supportive networks. This path will emphasize *retaining options* for local residents, and will ensure *flexibility* in the face of changing conditions. The backbone of this effort is likely to be the small firms of less than 20 employees that currently serve as the core of the region's economy.

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[5] Interview with Neil Weaver, ABA Water Systems, July 21, 2004.

[6] Interview with Mike Lorentz, April 14, 2004.

[7] Capsule summary of Sno Pac foods prepared by Minnesota Countryside, available at http://www.mncountryside.org, viewed July 19, 2004. Also drawn from promotional materials published by Sno Pac, and telephone interview with Nick Gengler, vice president.

[8] Interview with Julie Carlson at the Thornton Hardware Store, March 9, 2004.

[9] Meter & Rosales (2001), 6.

[10] Telephone interview with Ron Ziegler, July 20, 2004.

[11] Interviews with local historians, business owners and civic leaders in Lanesboro in 1988, 1990, 1992 and 1995.

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