

Pollution Shopping in Rural America:

The myth of economic development in
isolated regions

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Introduction

This paper addresses one aspect of industrial agriculture—the shift to large, concentrated animal feeding operations (CAFOs). The rationale for concentrated animal feeding operations is usually presented to rural residents in three parts:

- (1) People need cheap food—CAFOs provide cheap food.
- (2) The US has an obligation to feed the world—CAFOs provide a vehicle for fulfilling that obligation.
- (3) Rural regions are in economic trouble—CAFOs are the best way to provide economic development for rural regions.

The first two statements both misstate sound economic principles:

(1) People don't need cheap food—they need food whose price accurately reflects the total cost of its production. This cost is an economic cost—not an accounting cost. Concentrating on accounting costs and not considering externalities results in misallocation of resources to methods of food production that appear cheaper because they are more successful in shifting their costs of production to others.

(2) Moral issues aside, the US does not have an obligation to feed the world. The economic argument for providing food to another country—when correctly stated—is that if the United States can produce food efficiently compared to other things it produces, it would be to the advantage of other countries to trade for that food. However, any argument based on the benefits of trade only holds when the prices of the traded items fully reflect the costs of their production. Unless those costs include the costs of pollution associated with the agricultural production, any country that exports food may simply import pollution into its food-producing areas. Evidence that this has occurred when large producers have been able to shift pollution costs away from their operations—expressed as lowered property values in areas adjacent to CAFO operations—has been well documented by Palmquist (1995, 1997), Hamed, Johnson, and Miller (1999) and Kilpatrick, (2001).¹

The first two rationales for CAFOs have, as a fundamental assumption, the idea that the prices of agricultural products fairly reflect the economic costs of their production. For conventional agriculture—where pollution generated on the land is usually dealt with on the same land—the ability to treat waste and other costs in a closed system may satisfy this assumption. However, when industrial forms of agriculture are employed, the concept of a closed system is usually not applicable. Unfortunately, rural zoning laws are often based on the assumption of a closed agricultural system and they cannot deal effectively with industrial wastes. This loophole allows the costs of industrial agriculture to be shifted away from the owners of large industrial systems and to the residents of the regions, artificially lowering the costs of large CAFOs and the prices of their products.

The third rationale for CAFOs concerns regional economics and is the subject of the remainder of this paper. Even when industrial agricultural operations such as CAFOs cannot satisfy the first two rationales listed above, it is conceivable they could be used to replace the failing economic foundations of rural areas. Stauber has identified the following four types of rural regions:

- Urban periphery—rural areas within a 90-minute commute of urban employment, services, and social opportunities.

- Sparsely populated—areas where the population density is low and often declining and therefore the demand for traditional services, employment, and social opportunities are limited by isolation
- High amenity—rural areas of significant scenic beauty, cultural opportunities, and attraction to wealthy and retired people.
- High poverty—rural areas characterized by persistent poverty or rapid declines in income.²

For the purposes of the discussion in this paper, it is helpful to further distinguish between urban periphery and high amenity areas and those areas that are isolated or have high poverty. Urban periphery and high amenity areas have various natural and locational assets that allow them to keep significant amounts of spending within their regions. In addition, they have the ability to bring substantial amounts of outside money into their local economies. This is usually not the case with those regions characterized as either sparsely populated and isolated or high poverty. These latter two types of regions are most likely to attract CAFOs and they will be the subject of the remainder of this paper.

The Importance of a Full Service Economy

Regional economists have long understood that every local economy needs money from outside the region to survive. To get this money, each region must either export products made in the region or have federal or state money spent in the region. Export activities in most rural areas have historically been based on either agriculture or resource extraction industries like logging and mining. As both resource extraction and agriculture fell on hard times, the search for other economic activities led to one of three types of industries: (1) companies that manufacture exports, (2) large, concentrated animal feeding operations (CAFOs), or (3) federal or state facilities such as prisons or military bases.

Of these three, acquiring a manufacturing company that exports outside the region has always been preferable. However companies will only locate where the services provided by the local economy are adequate to support their operations. A company's ability to find these services depends on how close the region is to having a full service economy--an economy with the array of services and goods one is likely to find in a city. The likelihood of finding a full service economy is obviously based on the size of the region's population and economy.

On the other side of the equation, cities, towns, and regions are well aware that new or growing companies usually create local economic growth and development. The more services available in a region, the more money a company is likely to spend there. And the more services in the region, the more likely the company's money will stay and continue to circulate in local communities, creating additional economic growth.

Thus the company needs the economy of the region and the region needs the economic impact of the company. The larger the economy of the region, the more likely a company will be able to purchase the materials it uses locally. Similarly, the larger the economy of a region, the more likely money spent by a company that resides in the region will have a significant local impact.

The Fate of Isolated Regions

Given these relationships, what is the likely fate of isolated, rural regions who want economic development to replace failed agriculture or resource extraction industries? To answer this question, one must first consider why a company would locate in an isolated region whose minimal economic activity cannot support the company's needs.

Everyone has heard stories of organizations or individuals who moved into an isolated rural region to enjoy the lifestyle. But companies who do this seldom manufacture anything and they seldom create many jobs. In fact, when one looks at the requirements these companies have, they usually center around two things--electronic access for their computers and highway access to the nearest airport. Further, the employees of these companies, who are usually few in number and highly paid, want a very specific type of isolation--one with the lifestyle amenities that come from a world-class recreation environment with snowy peaks, or a lake, or great fishing rivers. This kind of environment is simply not available in most isolated, rural areas.

Because isolated regions have little to offer most companies, recruiting new companies to assist in their economic development seldom yields results. Further, isolated rural regions are usually relatively poor and they have few resources to dedicate to hiring professional staff to pursue economic development possibilities. Thus, when extractive industries die or agriculture begins to fail, an isolated region is ill-equipped to deal with the consequences.

However, in a perverse twist of the recruiting process, isolated regions often find that certain companies seek them out. And because recruiting is so difficult, the idea that someone would come to you with a proposal seems appealing. Those companies that seek out isolated regions usually come to an area from one of two sources: (a) either one or more citizens in the region proposes to bring an outside company or organization into the region (this is what happened with the Circle Four hog CAFO in Milford, Utah), or a company arrives unbidden and announces it would like to establish itself in the area (this was the case for the Big Sky hog CAFO proposed for Cassia County, Idaho.)

No matter how the process is initiated, a rural environment with pleasant to barren land, unique but not outstanding scenery, and virtually no economic activity except agriculture or extractive industries attracts only one kind of company--a company that seeks isolation. Currently, two kinds of companies or organizations dominate the search for isolation: prisons and factory farms. For both, *pollution shopping* provides the motivation for seeking isolation--their operations are so onerous that they must find a region desperate enough to except the negative aspects of having them as neighbors.

While every company or organization has a different reason for being in an isolated area, each interacts with a local economy in the same manner--it *camp*s out in the area, bringing its supplies in from the outside and sending whatever it produces back outside the region. By definition, this means that a company or organization that seeks isolation will operate in a manner that severely limits its economic impact on the region.

How The Company Selects the Region

In an era when it is estimated that over 10,000 communities across the US compete to recruit companies to their areas, it is reasonable to question why some companies must search for regions willing to take them. The answer to this question lies in the previous description of the companies that seek isolated locations--most are pollution shopping and their presence imposes considerable social or environmental costs on their hosts.

Further, companies that seek out isolated regions have very specific requirements in mind. Since they do not intend to grow crops, they actively search for cheap land to lower their investment in an area. They prefer a CAFO location surrounded with enough good cropland to grow the feed the CAFO

requires and to absorb the waste the CAFO generates (although this land is likely to become overloaded with salts and heavy metals after a few years.)

In some arid western areas the search for cheap land may cause the CAFO to locate where all crop land is of lower quality and is incapable of producing the feed the CAFO needs at economically competitive rates. Such land is also less able to absorb the manure the CAFO must continuously spread and hence, is likely to quickly become overloaded with nutrients that then find their way into the water.

In addition to these requirements, pollution shopping companies usually need large amounts of cheap water and they also need ready access to the transportation infrastructure that will bring in the supplies they need to operate and ship out the animals or product they generate. But even more important, these companies look for counties or regions where the permitting of potentially polluting activities is easiest and where environmental laws are seldom or loosely enforced.

When this search locates a likely target region, the company must convince the region that the environmental, social and resource consumption problems it may cause are not important and that it can solve some of the region's economic problems. In the case of CAFOs, this case is usually based on Right-to-Farm laws and it is pursued in any or all of the following ways:

(a) legal challenges that attempt to exploit any leeway in the laws governing permitting of new facilities,

(b) a publicity barrage that concentrates on verbal (never written nor contractual) promises of economic benefits,

(c) the use of contract operators so the company can make the case that this is really a "local operation run by local folks," and

(d) the use of state agencies and, often, the faculty of land grant colleges, to influence the outcome of the permitting decision.

The region, which must now decide whether to let the operation in, finds it has few resources to evaluate the proposition and the decision is usually thrown to the Zoning Board or the County Commissioners, both of whom must rely for guidance on ordinances that were not written to control the kinds of operations being proposed. For residents of a rural region, many of whom are relatively unsophisticated in these measures, this onslaught can be overwhelming.

Social/Community Impacts

One could claim this is how economic development must and should proceed in isolated, rural regions. Areas that only attract companies seeking isolation should accept these kinds of companies to build their economies. However, every company has both positive and negative impacts on a local economy and on the environment in which it is located. Only if the positive economic and social impacts outweigh the negative ones can the company assist the long-term economic development of a region.

Isolated rural regions usually possess tightly bound, cohesive social communities. In fact, this is a natural outcome of living in a rural environment where many social and economic services are not available. People depend on each other to fill the void created by the lack of a full-service economy and they have little need for the monitoring or regulatory agencies that may be required if environmental, social or economic problems arise.

When a facility like a CAFO is imposed on such a community structure, its impact can be devastating. The pollution problems that originally forced the CAFO to seek an isolated region increase

in intensity the closer one gets to the polluting facility. As a result, the economic and social effects of the pollution fall unequally across the residents of the region. For some people to make money from the polluting facility others must incur losses, and those losses increase as the distance to the facility decreases.

This is a direct violation of the historic social code in most rural areas--one does not create problems that impose a hardship on one's neighbors. As a result, the immediate effect of having a CAFO or other pollution shopping organization locate in a rural region is to split the community into warring camps, destroying the cohesive structure that has sustained the area in the past and upon which acceptable solutions for the future must be built. The costs of this can be high, particularly when the outside organization attempts to force its way into a community where a significant percentage of the residents opposes the operation.

Negative and Positive Economic Impacts

Positive economic impacts generally arise from three sources: (1) local purchases of goods and services by a company, (2) payment of wages to local workers and local spending by those workers, and (3) taxes generated from (1) and (2) and from the taxation of the company's property. However, positive economic impacts are difficult to generate from a company that seeks isolation.

A. Purchase of goods and services

For a company to survive in an isolated area it must be able to import into the region all the things it needs to operate. If the company is vertically integrated (like most CAFOs) inputs to the production process will be shipped in from other parts of the organization. And even if the company is not vertically integrated, a number of studies have shown that as the size of agricultural operations grows, CAFOs and other large farms purchase less and less in the local area.

Companies that locate in isolated areas are carefully structured to facilitate this kind of existence. They select areas close to good roads, railroads, and airports so they can import those things they need to build their facilities. They often import people to run their facilities and these people may live in company communities or in urban areas far removed from the site. The local residents they do hire often face long commutes because the isolated nature of the area means little housing is available.

Because they are intent on finding isolated locations, these companies are also designed to use out-of-area suppliers. These may be other members of their organization if they are vertically integrated, or they may simply be the lowest cost national supplier who ships into the region using the rail or road infrastructure the company specified as part of its site requirements. Thus, the supplies needed by the company will originate outside the region and the things the company produces will quickly migrate there. Unfortunately, the purchase of supplies is precisely the kind of economic activity necessary to produce economic growth and employment in the region. With these activities no longer performed locally, the economic impact of the facility is further diminished.

Additional economic damage is likely to follow any pollution from the operations of the company. Pollution not only destroys the resources of the region (such as a local aquifer or river), thus diminishing resources available for future economic activity, but it also creates an environment that is not conducive to getting new residents into the area. This lowers both future economic activity and future tax collections.

Meanwhile, the company, which intentionally located close to transportation links that allowed it to bring in those supplies it needs, now uses those same transportation links to ship what it produces out of the region. This denies the region the ability to add value to the product through processing and removes yet another route to economic development. The overall effect is that of the camper who brings what he needs, stays for a while, and leaves--leaving behind whatever pollution and environmental damage were caused by the stay. In this scenario, any positive impact on the region is unlikely to exceed the negative impact of the facility.

It is sometimes claimed that the initial construction expenses of a facility like a CAFO will alone significantly boost the economy of an isolated region in the same way that home building does in most communities. But CAFO buildings are usually constructed out of the cheapest possible prefabricated materials both to limit investment in the facility and because the life of a hog CAFO is so short (11-12 years) due to disease considerations. These materials are normally brought in from outside the region and assembled with large amounts of concrete--none of which is likely to provide significant stimulus to the local economy.

B. Payment of wages

Modern companies like CAFOs minimize their use of labor. The number of jobs are limited, known health concerns make those jobs less attractive, and finally, isolated areas usually have limited housing and little ability to absorb an influx of new workers. In addition, isolated areas also have few stores and little shopping to absorb the wages of workers. As a result, the impact of wages on the local economy is limited and most wages are likely to quickly migrate out of the area.

C. Tax generation

For tax benefits to accrue, the impact of a facility on a region should be at least tax-neutral and, hopefully, tax positive. In other words, hosting the company should create more tax revenues than the region has to spend to accommodate the facility. However, government installations are unlikely to pay any taxes at all (although PILT payments may substitute for some tax losses) and CAFOs are likely to be taxed only at low, agricultural rates instead of commercial or industrial rates.

The lack of tax revenues could be tolerated in a region if the company or organization cost the region little or no extra expenses. Unfortunately, companies that seek isolation usually do so because their presence imposes considerable social or environmental costs on the area in which they are located--costs that would not be willingly borne by the residents of more populated areas (and often, costs that would not be willingly borne by the isolated region if they were fully understood by the residents). Most of these costs involve air and water pollution, wear and tear on roads, and resource depletion associated with the consumption of large volumes of water. They may also include social costs, other infrastructure costs, and finally, the cost of remediation after the company leaves.

In addition to these costs, recent studies show that the presence of a facility like a CAFO reduces overall tax revenues. Assessed evaluations of farms and houses around the facility are consistently decreased by ten to twenty percent in recognition of the loss of value that accompanies the odors and other forms of pollution from the CAFO. The resulting losses in property taxes are almost impossible to make up from the new taxes generated by the CAFO for two reasons: first, a CAFO is specifically structured to minimize the amount of local taxes it pays and second, a CAFO is capable of polluting a substantial area around its perimeter and this area is likely to have an assessed value that far exceeds that of the CAFO.

Finally, the ability of high taxes to reduce growth is well known. If a local facility does not cover its costs, it imposes an additional tax burden on the region. If the region is rural, it doesn't take much to significantly increase the general tax burden on the area. If the facility also lowers the assessed valuation and hence, the tax base of the region because of its polluting activities, this further raises the tax burden on those parts of the region whose tax base has not been damaged. Further, the negative impact tax may not be in the specific area of the costs. For example, while road costs may be covered by a usage assessment on the CAFO, a decrease in property values may actually affect the quality of local schools.

Conclusion

The problems just discussed are likely to affect both short and long term initiatives to restore and develop rural economies. Stauber has identified four key parts of these efforts:

1. Redefine and restructure the rural-serving college and university to increase human capital in sparsely populated and high-poverty rural areas.
2. Create new market demands and linkages to increase regional competitive investments in urban periphery and sparsely populated areas. Provide incentives for producers, processors, and marketers to enter into new relationships that create profitable supply chains to meet the needs of individual consumers and firms.
3. Develop and use new technology to overcome remoteness to create infrastructure that expands competitive advantage in sparsely populated and high-poverty areas.
4. Encourage immigration to rural communities to increase human capital in sparsely populated and high-poverty areas.³

If implemented, these initiatives should generate new technology and new residents for rural regions that, in turn, will provide new sources of economic activity for rural economies. However, each of Stauber's initiatives appears to be incompatible with the presence of large CAFOs in rural regions. CAFOs are major beneficiaries of land-grant college research—research that would be redirected if these colleges were redefined and restructured to concentrate on human capital issues. Thus, CAFO owners are likely to oppose any attempts to change the mission of land grant colleges. In addition, CAFOs and their vertical organizations—which may either purchase and shut down local value-added activities like small slaughterhouses or control these activities through long-term contracts—are a major impediment to creating new supply chains in the region.

Further, the pollution associated with CAFOs makes investments in rural regions by other, non-polluting enterprises unlikely. In fact, the presence of CAFOs endangers the very rural attributes that might attract investment. For example, in a 2001 study of farming dependent areas, the Council for Agricultural Science and Technology Task Force found that if they create environmental problems such as those just discussed, CAFOs may undermine a community's opportunities to expand its economic base. They also found the vertical coordination structure used by large CAFOs can cause a loss of resources from farms and rural communities and decrease aggregate employment and other economic activities in rural communities.⁴

CAFOs are also not compatible with in-migration to any rural area. In fact, CAFOs stimulate out-migration. A 2000 study of 1,106 rural communities by Gómez and Zhang of Illinois State University found that economic growth rates were 55% higher in areas with conventional hog farms as opposed to those with larger hog operations even though these growth rates had been almost identical in the studied communities before the advent of larger hog operations. This study also showed that

communities with heavy hog concentration suffered larger population losses than those with conventional hog operations..⁵

Rural regions that follow the economic development model proposed by Stauber, must avoid those economic activities that make it impossible for this or similar models to function. This means these regions must avoid the problems caused by CAFOs while making the most of the environmental and social advantages they have, and the major advantage isolated regions have to offer is their quality of life. People want to move to rural regions because of the environment and because they can live in a community where they are known and where they can make a difference. A 1995 Roper survey found that 41 percent of people polled (up from 35 percent in 1989) said they would like to live in a rural area or small town within 10 years.⁶

Lifestyle is an elusive characteristic, but it appears to have three important components--the social environment, the physical environment, and the economic environment. Of these three, the social environment is probably the most important factor in establishing a good quality of life. As a result, rural regions should carefully evaluate proposed companies and organizations to determine if they are likely to divide the community and destroy the social fabric the way pollution shopping companies do.

Many anti-social activities can be controlled through careful zoning, but this will only work if the zoning is in place before the decision has to be made. In this respect, it behooves every rural region to carefully review its current zoning regulations. And there is a second, important part of social preservation--local control. Rural areas know they are highly subject to arbitrary and intrusive decisions by state government agencies that respond to outside political pressures, not local concerns, and they should endeavor to establish a firewall against this kind of intrusion. Again, a pre-emptive review of the permitting process followed in the region is the best defense. If zoning regulations and the permitting process demonstrate that a region is serious about preserving its lifestyle, pollution shoppers will look elsewhere.

Avoiding problems that divide communities and stress local budgets is critical because a second important issue in rural areas is cost--there is simply not enough tax money to run anything other than a small local government. Rural areas should act accordingly and try to minimize those things that drive up the cost of government. The majority of these will be associated with pollution shopping companies, i.e., air and water pollution, social turmoil, excessive use of infrastructure, and depletion of resource--all big ticket items that require rural areas to make large investments of money and people. Companies that are likely to cause these problems should be avoided.

Finally, problems and potential solutions for rural areas must be viewed in a long-term manner. There are, unfortunately, no short term solutions for the economic problems that affect most rural areas. But there are many reasons that short-term fixes should be avoided. Rural areas have extremely limited resources and they cannot afford to repair the problems caused by short-term thinking. Those communities that fall into the short-term trap find that since they have created a problem they cannot afford to fix--pollution from a CAFO, for example--their only recourse is to let in more polluting activities since no other form of economic development is now possible. The only way to avoid this situation is not to get in it in the first place.

To effectively deal with long-term economic and social issues, a rural area must have a plan that is supported by the residents of the region. This plan must incorporate both a commitment and a long-term vision for the rural area and it must be in place before the offer/threat to the region occurs so the offer/threat can be properly evaluated. This implies that the future of isolated rural regions is, and ought

to be, left in the hands of the residents of those regions. The question each region must address is whether they have in place a mechanism to make intelligent decisions about that future.

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