
CaRDI Reports

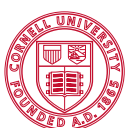
ISSUE NUMBER 13/MARCH 2011

New York Communities 2010: A Year of CaRDI Publications



A Multidisciplinary Social Sciences Institute of Cornell University

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Preface

The Community & Regional Development Institute (CaRDI) at Cornell University has strengthened Cornell's role as a leader in responding to current and emerging challenges and opportunities in community and economic development in New York State for two decades. New Yorkers are living through a period of remarkable change. Among challenges faced are the restructuring of traditional economic bases, increasing local government costs and demands for services, a global recession, land use changes, and pressures to develop new energy resources in the face of climate change. At the same time, new domestic and global markets are emerging, green technologies represent a growing employment sector, land use planning innovations are taking hold, the local agricultural sector is growing, environmental interests and concerns are influencing policy directions more generally, and communication technologies are bringing people together in new ways. Working with Cornell faculty and staff--including Cornell Cooperative Extension's network of county offices--and other state and regional institutions, CaRDI is a center of dialogue and collaboration addressing needs at the local, state, and national levels.

CaRDI's programming seeks to build community capacity – the knowledge, skills, attitudes and resources community members need to proactively and collaboratively identify, pursue and achieve their development goals. The CaRDI publications are an important vehicle for connecting Cornell University researchers and their work on community and economic development issues with stakeholders across New York State and beyond. The publications may be reprinted in community newspapers, published in organizations' newsletters, forwarded via listservs, and used as teaching tools in schools and elsewhere. It is our hope that these publications provide evidence-based research to inform decision-making at the local, regional, and state level. We strive to foster a productive dialogue around these and other issues and to strengthen our relationships with stakeholders across the state.

The following is the 2010 collection of two CaRDI publications: the New York Minute (August 2010 was the first issue to carry this new name – previously the publication was named Rural New York Minute) and the Research & Policy Brief Series. Both of these publications are issued 6 times per year, alternating every other month. In addition to the publications featured here, CaRDI also published one CaRDI Reports during 2010, entitled "Making Good Choices: What Local Policy Makers Need to Know about the Green Economy". All CaRDI publications are available on our website at www.cardi.cornell.edu.

If you have any questions or comments about these publications, please contact Robin Blakely-Armitage at rmb18@cornell.edu or 607-254-6795.



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Research & Policy Brief Series

ISSUE NUMBER 33/JANUARY 2010

Estimating the Job Impact of Public Investment in Bio-fuel Plants*

By Susan Christopherson and Zachary Sivertsen, Cornell University

What is the Issue?

There is a great deal of excitement about the green economy, clean technology, and the potential creation of “green jobs”. However, the methods used to project job creation from investments in renewable energy and energy efficiency are not well understood. Since these employment projections are used to legitimize public investment in “clean tech” firms via tax incentives, state and local economic developers need to know how to assess their reliability. In this policy brief, we examine 16 studies of the economic impact of ethanol plants and this “green” industry’s prospects for job creation.

The Where and Why of Ethanol Plants

Corn remains the most prominent source for ethanol production. The big corn producing states are well positioned to take the lead in ethanol production because of concentrated ownership, very large farms, and storage and processing facilities. These attributes make ethanol production an economically rational “add-on” to other corn production activities.¹ Ethanol processing plants are popular investments in the major Midwestern corn-producing regions, not only because ethanol provides another market for corn, but because the processing plants are tied to the resources and local advantages of individual communities (<http://www.ethanolrfa.org/industry/locations/>).



While most job creation from ethanol processing occurs in the plants themselves, ethanol production creates jobs throughout the regional economy: on farms; in the transport of corn and processed ethanol to and from processing facilities; in the utility companies that provide electricity, natural gas, and water; in the cattle operations that utilize the spent grain for feed; and in the construction of the facilities and infrastructure needed for plant operation.² In addition to these new jobs, indirect or “induced” jobs are created in services such as banking, accounting, manufacturing, chemical production, retail, etc.³

While economic development officials may be interested in the ethanol plants’ job creation potential, investors are more interested in the potential for profit. Government subsidies for the facilities are almost always required to assure private sector profits while regulatory initiatives

are sought to create a market to increase bio-fuel consumption. Economic impact studies of ethanol plants help justify government policy to create bio-fuel markets and government investment in facilities resulting in profits for private firms (such as Archer Daniels Midland, the largest producer of ethanol in the U.S.).⁴

How are economic impacts projected?

The sixteen studies we analyzed included both independent assessments and those conducted by organizations with a financial interest in promoting government subsidies. Studies sponsored by organizations that have a stake in the industry are not necessarily independent since sponsors have a significant interest in positively influencing the projected economic impacts. The studies we reviewed are based on different assumptions and use different methods, though most rely on input-output models to project job and tax impacts. The majority of input-output models in the studies we examined use federal, county and zip code data compiled by IMPLAN (an acronym for Impact Analysis for Planning), a private firm that specializes in input-output data and modeling. Because IMPLAN models and data are adaptable and relatively inexpensive, they are widely used in economic impact analysis.

Input-Output models are accounting frameworks that show how output for each and every regional industry is affected by a one-dollar change in final demand.⁵ If money comes into the regional economy to build new roads or a new ethanol plant, the expenditures connected to that investment ripple through the economy, also known as a “multiplier” effect. However, while the standard accounting framework works well for many industries, it is problematic for assessing ethanol’s impact. One reason for this is that dry milling is the most prominent process in ethanol processing and that industrial category is not represented in the IMPLAN model. Accordingly, economic impact analyses of ethanol plants typically use the industrial sector of wet-milling to account for inputs into ethanol processing. While these two industries are similar in many respects, there are critical differences⁶ that lead to problems estimating inputs into the industry and in the ultimate reliability of the multipliers produced. This example shows that the models used to project the job impacts of ethanol plants are affected by many individual decisions about which data are used and how they are interpreted.

Another important limitation of input-output models is that they use *estimated* data. None of the studies we examined used real world data to evaluate projections. Even when looking at existing ethanol plants, evaluators used input-output models to estimate job gains rather than looking at actual job change numbers. In order to determine the accuracy of model-based *ex ante* estimates, we need studies of the actual job impact of ethanol plants. In the absence of studies looking at actual jobs created, policy makers and citizens need to understand that the numbers produced in impact studies are only projections. They are not guaranteed and often are highly sensitive to factors beyond the control of the ethanol plant operators.



How and why estimated impacts can differ

Given that these impact analyses are based on models, some differences among the results are attributable to the way the input-output analyses are constructed and the assumptions used to construct the analysis. For example:

- **IMPLAN** has to be adjusted to create a dry-mill ethanol industry sector. The way these adjustments are made affects how many jobs are projected for different inputs into the process.
- Construction costs and jobs are sometimes included and sometimes excluded from operating projections.⁷
- Corn being grown for the ethanol plant is sometimes considered a new input into the model although it was already being grown for other markets (feed and food).⁸
- New utility jobs associated with the consumption of natural gas, water, and electricity used in ethanol production are often over-estimated because: "All three of these...are massive, declining cost industries where the average cost of delivering their respective commodities up to capacity is declining sharply."⁹
- Transportation jobs are often over-estimated, especially in corn-belt states, because corn is already being hauled from farms to mills, or to livestock feeders or out of state. With ethanol production, the infrastructure and jobs that are already present would simply switch to ethanol transportation with small if any increases in employment.¹⁰
- Results can differ dramatically depending on how the model calculates the location of expenditures - whether key inputs are purchased locally or imported into the region. If inputs are imported, then local expenditures and their ripple effect on the local economy are lost to the region.
- The opportunity costs of growing corn rather than other crops or of using land for other purposes are rarely assessed in economic impact models.

An important consideration for policy makers is whether the *assumptions* are clear and available for evaluation. Without that information, public officials or interested citizens cannot assess whether the economic impact model is reasonable. Almost half of the studies examined did not discuss the assumptions made by the researchers. While this does not mean that the studies produced invalid or unrealistic projections, it means that the projections are difficult to evaluate. For example, if public officials examined the sixteen studies we analyzed, they would find that projected job multipliers differed significantly, ranging from a high of 73,¹¹ to a low of 2.8.¹² While some differences in projected job multipliers may be attributable to plant and expenditure location, such a wide range indicates that not all the projections are reliable. Among the studies evaluated, the most reliable seemed to set a job multiplier in a range from 2 to 7. A job multiplier of 2 is more likely in rural areas where there are fewer goods

and services (including inputs to the ethanol processing plant) that can be purchased locally. A multiplier around 7 is more likely if the plant is located near a metropolitan area where more inputs can be purchased locally and where there is potential for greater recirculation of dollars spent in connection with the plant.

Information to Consider When Determining Whether to Subsidize the Production of Ethanol

- **Local variation:** The impact of an ethanol plant on a local economy depends on a wide array of local and regional factors that are often overlooked in impact studies. The number of jobs that a given facility creates depends on the size of the plant, the complexity of the local economy, what goods and services are available locally, and how much income is generated locally by the corn price premium provided by the facility.¹³
- **Political motivation:** Political motivation may often determine results or affect interpretation of results. And, while the executive summary of a report may emphasize the positive, those interpretations are not always justified in the more detailed study findings. Policy makers need to take political interests and economic motives into consideration when evaluating study results, and these motives are not always apparent.
- **Property ownership and existing infrastructure:** Ownership patterns and how farmers make money are critical elements which determine whether a bio-fuel plant investment is economically feasible. Farmers will not participate in a bio-fuels program unless it has money-making potential. This includes the long-term and short-term costs of changing what they are doing to grow a bio-fuel crop. Large corn farmers in the Midwest grow corn as their primary commodity crop. Bio-fuel provides them with another market for their product and has the potential to raise prices. In eastern States, such as NYS, where farms are smaller and many farmers are engaged in high value-added crop production, such as organic food, bio-fuel production may not be efficient. Economic developers need to consider the comparative advantages of their own agricultural sector rather than basing decisions conducted in regions where the structure of agriculture is significantly different.
- **Return on Investment:** If public investment is required, economic developers and public officials need to assess whether the investment is likely to pay off for the tax payers. Could tax revenues be used in a more effective way? What are the opportunity costs of subsidizing ethanol production? For example, investment in marketing and distribution for farmers engaged in high value added food crop production may have a better long-term economic impact than investment in an ethanol plant.

Conclusions

Economic impact analyses should never be accepted at face value to justify public investments. Officials engaged in making decisions about public investment in ethanol production should base their decisions on a deeper understanding of the inputs, methods and assumptions used in producing job projections and other ethanol related impacts. Experts on impact analysis exist on most college campuses and, in many states, in cooperative extension offices. These experts can provide assistance in understanding impact analyses and whether and how to use the results as a guide for policy. ▲

Notes:

* The 16 studies examined and other references cited in footnotes are available on the CaRDI website along with this publication.

A working paper on this topic has been archived in eCommons@Cornell, and can be accessed at: <http://hdl.handle.net/1813/14219>.



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ISSUE NUMBER 37/FEBRUARY 2010

Community Attitudes Towards a Climate Action Plan (CAP) *

By Richard C. Stedman and Katherine A. McComas, Cornell University

What is the issue?

Climate Action Plans (CAP) have recently emerged in response to concerns about the impact of human behavior on environmental sustainability. Hundreds of U.S. cities have signed on to the U.S. Mayors Climate Protection Agreement which strives to meet or beat the Kyoto Protocol targets in their own communities, as well as to urge state and federal governments to enact policies and programs to reduce greenhouse gas emissions. Similarly, hundreds of cities around the globe participate in the Cities for Climate Protection program managed by the International Council for Local Environmental Initiatives (ICLEI). One of the program's milestones is to develop a local action plan to reduce emissions. Universities have followed suit, resulting in the University Presidents' Climate Commitment, with over 650 signatories.

Understanding attitudes toward climate change control is an important first step in designing climate action plans at the community, state, or international levels. Public views are diverse and complex. They are based on factors such as the technical nature of the initiatives, the perceived costs and benefits (how much, and for whom), and the process by which involvement is sought. Moreover, it is important to go beyond assessing levels of support and explore why people hold these judgments. Successful implementation includes garnering genuine public enthusiasm, rather than grudging acceptance, so it is critical that policies be judged as responsive and fair. Research on public attitudes helps bring policies and public sentiments into better balance.

Cornell explores community attitudes

Under the University Presidents' Climate Commitment, Cornell University is developing a climate action plan to reduce the Ithaca campus' greenhouse gas emissions to a net impact of zero. The University is exploring different strategies to provide renewable energy for the campus, reduce greenhouse gas emissions, and protect the environment. To examine local community attitudes toward possible strategies, questionnaires were mailed to 2,200 property owners in Tompkins County in the spring of 2009, with an overall response rate of 34% (N=677). Respondents received one of six versions of the questionnaire, each including a different approach that Cornell could pursue to decrease its carbon footprint and increase its energy efficiency. Prior to answering questions on the specific approach, respondents were asked to read a brief description of it, including advantages and disadvantages. These approaches were: bioenergy, wind power, enhanced geothermal systems, urban park-and-ride, carbon offsets, and forest carbon sequestration. These were selected on the basis of (1) their potential impact on the community, (2) their likelihood of occurring during the next 10 years, and (3) their effectiveness in decreasing Cornell's carbon output.

Predictors of opposition or support to the various climate control strategies included:

- (1) **Risk perception:** risk judgments are based on perceived control, the distribution of costs and benefits, and the trust in those managing the risks;
- (2) **Environmental attitudes:** Deeply held values and beliefs underlie overall assessments about environmental issues. Research, has shown that the perceived risk of climate change is less tied to specific beliefs about cause and effect and more tied to fundamental values of environmentalism;
- (3) **Procedural fairness:** The extent to which people view decision making procedures as fair (for example, if they believe they have a "voice" in the process) can influence their support of the outcome;
- (4) **Community and Place:** Several place-specific factors may drive support or opposition. Support in the abstract can easily turn to opposition when the strategy or approach is proposed for one's local neighborhood.

What was the response?

Respondents generally supported most CAP approaches, but were most positive toward wind power and least favorable toward carbon offsets. Support increased when CAP elements were presented as creating benefits for the community, not only for Cornell. This finding speaks to the importance of having a decision that includes benefits for the communities that are being asked to share some of the costs, broadly construed, of these elements. Attention to a fair decision making process can ensure that community benefits are considered in the design and implementation of the CAP. These findings should not imply, however, that project proponents should attempt to persuade the community of "how fortunate they are" to receive the benefits of a CAP.

Given the importance of providing a "voice" to communities affected by a decision, these findings underscore the need for any organization - community or university - creating a CAP to design a fair process that mindfully and respectfully solicits and incorporates community input in its decisions about implementation. Conducting research on community attitudes can provide the basis for understanding current challenges and opportunities related to potential Climate Action Plan elements, and help inform continued engagement with community members.

*To view the full summary report, please visit http://www.sustainablecampus.cornell.edu/climate/process_breakout.cfm
For more information on Cornell's Climate Action Plan, visit <http://www.sustainablecampus.cornell.edu/climate/>



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Research & Policy Brief Series

ISSUE NUMBER 34/MARCH 2010

Industrial Wind Power: What Local Officials Need To Know

By **Kate McCarthy** and **Eric VanderMaas**, Cornell University*

What is the issue?

In recent years, the ridges of upstate New York have caught the interest of wind developers, spurred on by federal subsidies that have helped make industrial wind farms profitable. For some upstate residents, hosting a wind farm is an opportunity to stimulate economic growth and develop “green” industry in their towns. Other residents have voiced strong concerns over such issues as noise, bird and bat fatalities, visual impacts, and the impact on their rural community life. Do wind farms actually contribute to economic development in towns in upstate NY? What tools are available for local officials faced with decisions about wind power in their communities?

This brief addresses these questions by 1) describing industrial scale wind development and its economic development potential, and 2) suggesting four actions for managing it. We also include a list of additional resources on industrial wind and the development process¹.

What is “industrial” wind power?

Unlike small wind turbines in people’s backyards, or community wind energy (turbines that are at least partially owned by local landowners and other community members), an “industrial wind farm” can range from a few, to a few hundred turbines. All power produced on an industrial-scale farm is sold to, and distributed by, the “grid” - an interconnected network for delivering electricity from suppliers to consumers (non-industrial wind may or may not be sold to the grid). A turbine’s classification as “industrial” usually depends on its size and how much power it can produce, but turbines generating over one megawatt (enough to power about 495 homes) are commonly considered “industrial.” These structures stand, in some cases, over 400 feet tall from their concrete base to the tip of the blade. Wind companies usually sign 20-30 year leases with private landowners to erect turbines.

Financial matters

For local officials considering industrial wind installations, the development process consumes significant time and resources. Taking a long term view of the structure of financial agreements can help to yield a more balanced return for those efforts.

Building a wind farm requires a large initial investment by developers. To compound this financial burden, the land value improvements result in higher property tax assessments. Since developers would generally absorb any tax increases, they contend that the potential expense could challenge industrial wind farms’ short-term financial viability. In addition, NYS’s real property tax law, §487 provides developers with a 15-year shelter from real property taxes for industrial wind installations. Therefore, as an alternative



to the routine payment of property taxes, towns, developers, and the county’s Industrial Development Agency (IDA) put together financial contracts like PILOTs (Payments in Lieu of Taxes) and host community agreements (HCAs). The advantage is that these contractual payments vary over time and are discounted from the standard property tax formula, resulting in a more developer-sensitive payment instrument. PILOTs and HCAs help the developers get started, while still providing the host municipality with revenue.

PILOT payments generally are “back-loaded”, starting off small at the beginning and growing over the life of the project, giving the developer a chance to recoup costs. Similar to taxes collected by a local government, PILOT revenue is split among the different public service providers and governments according to a standard tax formula. This can be problematic in places where a municipality’s share represents the smallest portion of a property tax bill, inadequately reflecting the time and money the municipality has spent in the process of review, negotiation, and permitting. For this reason, some municipalities have designed a Host Community Agreement (HCA) to balance the small PILOT payments early in the process. With an HCA, the developer makes up front payments to the municipality which invests its resources to negotiate the development, and can negotiate to cover the wind farm development costs up front and distribute the revenues with respect to impact and involvement.

Economic development potential

The economic development potential of industrial wind farms can take several forms. First, as described, industrial wind development can reduce a community’s property tax rate as well as diversify its sources of revenue, leaving more money in residents’ pockets and the community less reliant on the more traditional revenue sources.

Second, it can benefit individual property owners who lease their land and generally receive yearly payments for the turbine(s) on their land, increasing the community's net wealth. This assumes, of course, that the increased wealth of a relatively few landowners benefits their community as they spend and invest within it. Third, some claim that wind farms can be a draw for tourists and create a "multiplier effect" by creating demand for other services in the area. Because multipliers attempt to measure the "ripple effects" of development, however, these benefits are harder to measure.

An important economic development question is how many jobs are created by wind farms. Wind farms create few long-term jobs as compared with other types of economic development, such as regional retail. Most jobs are created during the construction phase, sometimes but not always relying on the local work force. For longer term day-to-day operations, estimates suggest that one job is created for every ten to twenty turbines installed. The exact number of jobs, and the required training will depend on the type of turbines and the location of the wind farm. While the regional economy may benefit as money earned from these jobs is spent in area businesses, the broader impacts, are uncertain. This is an important factor for local officials to consider when deciding if wind energy is a good economic development strategy for them.

Taking charge of the process

In order to proactively address wind development, local officials need to understand who is involved in the development process and what tools are available to guide how (and if) development happens. This may help officials manage or regulate development so that it supports, rather than undermines, local goals.

Understanding roles

Understanding the roles and constraints of each actor in the wind development process is essential. Like many general contractors, a developer works for a large wind energy company, often a multinational firm (Aeon or First Wind are examples of such companies working in NYS). Developers assemble land leases, work on obtaining permits, and purchase and install the turbines. They are a bridge between a global industry (turbine and parts manufacturing) and a local project (the wind farm). While competing for turbines with other sites across the world, developers must also contractually "reserve" space on the electrical grid for their project. Failure to meet the capacity of the reservation or delivery date results in a loss of the "slot" – as well as penalties for the developer. The coordination of these many factors increases their risk.

Once a developer identifies a potential wind farm site, he or she works with private land owners to secure land through lease agreements or, in some cases, ownership and/or easements. Because developers compete for the best sites, this phase often involves "behind the scenes" site exploration and negotiation with property owners, sometimes leading a community to feel deceived once the developer emerges with a proposal.

When a wind farm is proposed, local officials have the important but challenging role of balancing the rights of private land owners with broader community goals. Industrial wind siting decisions commonly require additional hearings, negotiation between the developer and the municipality, site visits to other wind farms, and new zoning or wind ordinances. The not-always-transparent process of site exploration that developers use can sometimes create

an atmosphere of distrust in the community. This sequence, as outlined, often means that local input comes late in the process. If a community assesses their potential as a site for wind development and creates wind development guidelines, they can have a more active role earlier in the process.

How to manage wind development

Local officials can take several basic steps to engage the community, gather information, and strategically plan for the possibility of local wind development.

Working with community members early and often – Discussing how (and if) wind fits in with a community's future before a wind developer appears allows residents time to ask questions and voice concerns without pressure. Assessing a community's potential for wind development can help determine the urgency of this work (see the wind maps in the reference section).

Involving a neutral third party – Forming a team that includes a knowledgeable, neutral third party can help engage residents in conversations about wind development, developing wind ordinances, and how to negotiate effectively. While an attorney can be a key player, engineers, foresters, and mediators are also important members of such a team. In some communities these teams may be comprised of local residents who are willing to provide their services pro-bono.

Gather information about the developer – Wind developers take many different approaches to negotiation, working with communities, and dealing with environmental and conservation issues, making it essential to gather information about a developer's previous projects. This might include looking at financial statements, talking with local officials where the developer has worked, searching for newspaper articles about the company, and comparing the developer's approach with that of other developers.

Developing zoning and wind ordinances – Many prime wind farm sites lie in towns without zoning or comprehensive plans. While this gives landowners flexibility on how they use their land, it leaves towns without the ability to regulate wind turbine siting or other industrial development. Developing a comprehensive plan, a zoning code, and/or a wind ordinance can define things like setbacks and bonding for decommissioning. Introducing such measures may be challenging in places without zoning, but will ultimately help deal with development on this scale.

Is it worth it in the end?

The volatility in gas and oil prices, continuing subsidies for wind power development, and advances in turbine efficiency will likely increase wind's importance to upstate New York. This challenges local officials to balance growth and economic development with their community's concerns and long term goals. While wind power appears to have *some* economic development potential – the construction jobs, the few permanent positions, and the increased income for land owners and municipalities, the question of industrial wind farms as long-term and sustained economic development has not been settled in upstate New York. It is suggested that communities take a proactive approach that considers future goals, and whether wind, as a specific economic development strategy, supports that vision.

*the authors are both Graduate Students in the Department of City & Regional Planning.

¹Additional resources are posted with this publication on the Cardi website at: <http://www.cardi.cornell.edu>



Department of Development Sociology
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rural new york minute

ISSUE NUMBER 38/APRIL 2010

Natural increase is the key to NYS population growth*

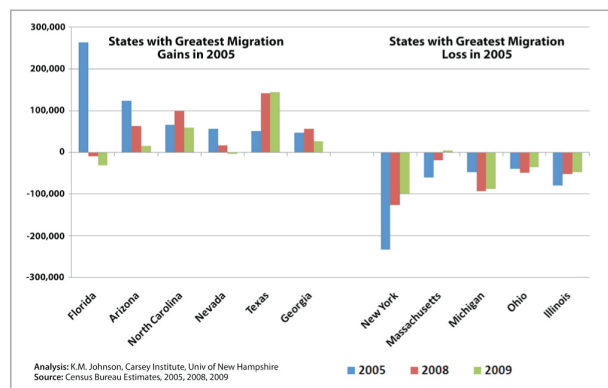
By Kenneth M. Johnson, Carsey Institute, University of New Hampshire

What is the Issue?

As a result of the economic recession in the U.S., fewer people are moving from one state to another. Given the lower rate of internal migration, natural increase (births minus deaths) now plays a greater role in producing interstate differences in population growth. For states that gained the most domestic migration from other states during the mid-2000 boom years, the impact of the migration slowdown has reduced their rates of population growth compared with other states. In contrast, for some states that suffered large domestic migration losses during the boom years, such as New York (NYS), slower migration has narrowed the gap in population growth rates compared with more rapidly growing states. As a result, this may strengthen NYS's ability to retain more seats in the U.S. Congress.

Florida, long a major recipient of movers from New York and other north-eastern and mid western states, saw its domestic migration drop from a *gain* of 263,000 in 2005 to a *loss* of 31,000 last year (Figure 1). Nevada also experienced a domestic migration loss of 4,000 persons last year after gaining 56,000 domestic migrants in 2005. Arizona's inflow dropped from 124,000 to only 15,000 last year. Even Georgia and North Carolina, which appeared to be weathering the domestic migration downturn, show sharply reduced levels.

Fig. 1: Migration Trends for States with History of Migration Loss or Gain



Among states that experienced large domestic migration losses during the mid-2000s, the situation has changed significantly. With the exception of Michigan, each of the five states with the greatest migration losses in 2005 either lost *fewer* domestic migrants last year or actually *gained* some. In NYS, the domestic migration loss last year was 98,000 compared to a loss of nearly 233,000 in 2005. Massachusetts enjoyed a modest domestic migration gain of 4,000 last year after losing more than 60,000 domestic migrants as recently as 2005. Ohio and Illinois also experienced less migration loss than they had in 2005.

Why natural increase is important

With domestic migration at record postwar lows and with immigration also reduced, population growth in the U.S. depends increasingly on the excess of births over deaths ("natural increase"). At the national level, natural increase accounted for 67% of the total population gain last year. But there are distinct regional- and state-level differences in how much influence natural increase has on population growth. In the Midwest, natural increase accounted for *all* the population gains last year—offsetting migration losses. Similarly, in the Northeast, natural increase accounted for most (88%) of the population gain. In contrast, it only accounted for 51% of the growth in the South and 68% of the growth in the West.

For the states that enjoyed the largest migration gains during the mid-decade boom, continuing population growth now depends less on migration and more on natural increase. For example, migration fueled virtually all of Florida's population gain between 2000 and 2005, with natural increase accounting for only 14% of state population increase. Last year, the excess of births over deaths accounted for 51% of the population gain. Similar trends are evident in other fast-growing states.

In states like New York, however, the story is quite different. Natural increase combined with foreign immigration and smaller domestic migration losses has reduced or even reversed population loss in NYS. This is a striking contrast to the situation during the migration boom, when natural increase together with immigration had to offset huge domestic migration losses. Between 2000 and 2005, NYS's population diminished by 26,000 because it lost 233,000 migrants to other states. Even with 99,000 more births than deaths and 109,000 immigrants, NYS's domestic migration loss was too great to offset. In contrast, NYS grew by 74,000 last year because the domestic migration loss diminished to 95,000, and this was more than offset by a natural increase of 95,000 and 75,000 immigrants.

Implications of these trends

With lower domestic migration, state population growth is increasingly determined by natural increase, and has important implications for the allocation of seats in the U.S. Congress. Congressional seats will be reallocated after the population counts from the 2010 Decennial Census are finalized. Recent media speculation regarding whether Minnesota will retain its eight congressional seats is a prime example. Research by the Brookings Institution suggests that had the demographic trends of the migration boom years continued, Minnesota would likely lose a seat in Congress. However, with migration slowing, Minnesota may be able to hang on to the seat, in no small part due to the state's continued natural increase. A similar scenario might play out in New York. Will New York State lose fewer seats in congress as a result? The 2010 Census will tell us.

*Kenneth M. Johnson is a professor of sociology and a senior demographer at the University of New Hampshire's Carsey Institute. This *Rural New York Minute* is a revised version of an article (*With less migration, natural increase is now more important to state growth*) that first appeared as a Carsey Institute publication (www.carseyinstitute.unh.edu/publications/FS-JohnsonNationalMigration.pdf)



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Research & Policy Brief Series

ISSUE NUMBER 35/MAY 2010

Poverty and Food Insecurity in the United States*

By Thomas A. Hirschl and Katherine L. Dickin, Cornell University

What is the Issue?

The current recession pushed the number of Americans in poverty to the 40 million mark for only the second time since 1960, and there are indications that this surge will continue until the recession ends. Many view the nation's high poverty rate as a failure of policy, a failure that is cumulatively evident over the past 30 years, and forecast little hope for near-term improvement¹. Thus, there is a practical need to assess what can be done in the near term to ameliorate poverty, and to situate policy analysis and education about poverty within a practical framework.

In this policy brief we examine food insecurity - a critical manifestation of poverty. Although hunger and poverty in the United States are not the same as in less developed countries where 56 percent of the population lives on less than \$2 per day², and approximately one in eight persons are malnourished³, there is still widespread "food insecurity" in the United States. We describe recent trends in poverty and food insecurity, examine national programs targeted towards ameliorating these conditions, and make the case for locally-oriented action.

The connection between poverty and food insecurity

Food insecurity is defined by the absence of "consistent access to enough food for an active, healthy life"⁴. Poverty is related to food insecurity because: 1) the vast majority of food insecure families have incomes below, or slightly above, the poverty line, and 2) food insecurity rates decline precipitously as family income moves above the poverty line⁵.

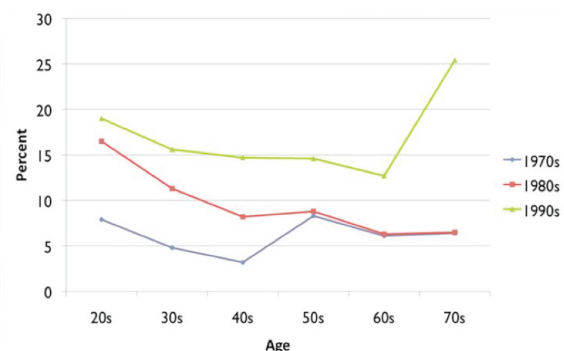
Furthermore, food insecurity is related to poverty in the U.S. because the official measurement of poverty reflects the cost of basic necessities, in particular the cost of food. Developed in 1963, the poverty measure consists of thresholds in family income relative to family size. For example, in 2008 a family of four was considered poor if its total income was less than \$22,025 per annum. Since 1970 the annual poverty rate for individuals has varied between 11 and 15 percent⁶. Poverty rates tend to trend up during periods of economic recession, and trend down when the economy expands.

When we look at the *cumulative* risk of poverty over people's lifetimes, there is evidence that *more* than 15 percent of Americans have experienced poverty at some time during

their lives. This perspective examines an individual's risk of moving in and out of poverty over a period of several years rather than just determining if one is poor or not at a particular time. There is evidence that this cumulative risk has increased over the past 40 years. Data from a representative national sample⁷ indicates that a slight majority of Americans (51 percent) experience poverty for at least one year between the ages of 20 and 65. There is also evidence that cumulative poverty risk increased between 1968 and 2000⁸. These increases are not surprising, considering that overall economic risk is also growing as a result of more Americans losing their health insurance, becoming unemployed, experiencing work-related disabilities, and/or becoming increasingly burdened by consumer debt. Accordingly, families are also more likely to experience food insecurity sometime during their lives than was true in the past.

Food insecurity is most common among individuals and families who experience what the Census Bureau refers to as "deep poverty", e.g., having a household income below 50 percent of the poverty line (less than \$11,013 per year for a family of four). Of the poverty population, this segment is growing disproportionately rapidly. Not only did deep poverty increase for all age groups between 1968 and 2000 (see Figure 1), but also during the current poverty surge. The Census Bureau reports that 58 percent of the increase in poverty between 2007 and 2008 was deep poverty^{1,9}.

Figure 1: The Incidence of Deep Poverty Across the U.S. Life Course, 1968–2000



Source: Sandoval, Rank, & Hirschl 2009

Food insecurity data have been gathered annually since 1995, and the share of the U.S. population measured as food insecure has varied between 8 and 13 percent¹⁰. Since the food insecurity rate co-varies over time with unemployment and poverty, it has increased markedly during the current recession that began in December 2007⁴.

Federal Programs for Food Insecurity

There are several federal programs intended to directly ameliorate food insecurity. Of these, the Supplemental Nutrition Assistance Program (SNAP, formerly the Food Stamp Program) is the most general in that it is not targeted to particular age groups or families and the benefits can be used for a wide range of food purchases. All individuals/households are eligible to receive support from SNAP provided they meet the program's income and assets criteria. Eligible households cannot have more than \$2000 in assets (not counting their home and one vehicle), and family income must be less than 130 percent of the federal poverty standard. SNAP benefits averaged \$124 per person per month in 2009⁴. SNAP benefits are sometimes provided to individuals who receive other means tested programs such as General Assistance or Supplemental Security Income. In addition to financial assistance, SNAP and the Expanded Food and Nutrition Education Program (EFNEP) provide education designed to enhance families' food choice and preparation skills and their ability to manage food budgets and resources^{11,12}. These educational efforts complement direct food assistance by promoting healthy choices within limited budgets to improve food security and nutritional well-being.

Recognizing that nutrition is fundamental for child health and development, the Women, Infants and Children (WIC) program provides food supplements and education to low-income, pregnant women, and children up to age five¹². Other federal nutrition programs targeted to children include the USDA's School Meals program that provides free or subsidized lunches to students meeting low-income criteria, and several additional programs that provide subsidized food to preschool and school age children¹³.

Federal programs that are aimed at ameliorating food insecurity share several common characteristics. First, they are *supplemental* programs, and are not intended to offset all food expenses. This may be problematic for extremely low-income families. Second, accessing these programs requires the initiative of the person or family in need. Third, these programs are means tested, requiring documentation of family income, and in the case of SNAP, a valuation of family assets.

There is evidence that factors such as programmatic knowledge and social stigma can affect participation decisions. Government assistance is generally stigmatized in American

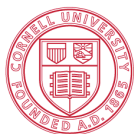
society, and one apparent consequence of stigma is to reduce the likelihood that eligible individuals will access food assistance¹⁴. Moreover, social stigma and lack of awareness about government assistance is often more prevalent in rural communities where participation in SNAP is generally lower than in cities¹⁵.

The Case for Local Action

While SNAP and other federal food assistance programs are designed to address food insecurity in individuals and families, poverty and food insecurity intersect at the neighborhood and community level as well. Economically-deprived neighborhoods are sometimes characterized as "food deserts", given the scarcity of supermarkets and limited availability of healthy foods. Convenience stores and fast food outlets tend to be numerous in these communities. While much of the research on food insecurity has focused on urban areas¹⁶, the problem of a lack of access to healthy food also exists in rural areas¹⁷. Addressing food insecurity at the community level involves a food systems approach that takes into account the full cycle beginning with food production and processing, to distribution, consumption and waste management. A community-level focus offers solutions that benefit multiple stakeholders (including food producers and food consumers of all income levels), reduces or eliminates stigma associated with utilization of food assistance, and contributes to community development. Based on food systems research in upstate New York, McCullum and colleagues developed a framework of evidence-based strategies for enhancing community food security¹⁸. Initial strategies include documenting food quality and price inequities in low-income neighborhoods, and educating consumers about the local food system, food assistance programs and other resources. The second stage includes creating partnerships among multiple sectors of the food system, connecting local food programs with local agriculture, and organizing community mapping and participatory decision-making. Later stages focus on policy development to ensure sustainable food system changes that support community food security.

Communities can do a lot to improve their food security even though the overall relationship between poverty and food insecurity remains a challenge. At least in the near term, poverty appears likely to persist at record levels, and deep poverty will continue to constitute a significant share of total poverty. In this environment, supplemental assistance from federal programs is not enough, and localities become logical sites for targeted programmatic activity to support local food systems and increase access to adequate food for all community members.

*All references are provided in a separate document available with this publication on our website at www.cardi.cornell.edu



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ISSUE NUMBER 39/JUNE 2010

Environmental Volunteering and Older Adults*

by Linda Wagenet, Cornell University

What is the Issue?

The level of citizen participation in environmental activities has increased over the past ten years. While there are efforts to engage people of all ages in volunteer activities, the rapidly growing older population presents an untapped potential resource for recruiting environmental volunteers. In New York State alone, the population age 65+ is projected to grow from approximately 2.5 million persons in 2010 to 3.1 million in 2020 and to over 3.6 million by 2030 (see CaRDI Research & Policy Brief Issue 28/April 2009). Not only is this age group increasing in number, it also constitutes a growing share of NYS's total population, increasing from 13% in 2010 to more than 18% by 2030 (Program on Applied Demographics, Cornell University).

Volunteering benefits the community and region where it takes place, but volunteerism also benefits the older volunteer. Retirement, particularly early retirement, can lead to a fairly long period of "rolelessness". Being a volunteer can provide unique opportunities for social integration among older adults, whether retired or not. Connecting environmental volunteerism with retirees is a win-win for the individual and the local community.

Who Volunteers, and What Do They Do?

About sixty-two million people in the US volunteered for an organization at least one time between September 2007 and September 2008 (Bureau of Labor Statistics 2008). Individuals age 35 to 44 are the most likely to volunteer, although over 30% of those age 65+ are engaged in some kind of volunteer work (AdvantAge Initiative 2004). In general, women tend to volunteer more frequently than men, whites more frequently than African Americans, Asians, and Hispanics, and married more than unmarried persons. College educated people also volunteer at higher rates than do those without a college degree (BLS 2009, see: <http://www.bls.gov/news.release/volun.nr0.htm>). Older in-migrants to rural retirement communities have also been shown to be active volunteers (See CaRDI Rural NY Minute Issue 14/February 2008).

Religious organizations currently engage the most volunteers (34%), particularly among those aged 65+ (44.8%). Social and community service organizations attract the next largest group of older volunteers (18%). Currently, only about 2% of volunteers age 65+ work with environmental and related organizations (Bureau of Labor Statistics 2009 – <http://www.bls.gov/news.release/volun.t04.htm>).

While only a small portion of those aged 65+ currently volunteer for environmental causes, volunteering for the environment could be particularly rewarding and beneficial for this age group. Interest in environmental issues is also particularly high among older adults (Moody 2008). A national survey done through the Cornell Institute for Translational Research on Aging (CITRA) found that while only 12% of respondents 65+ were members of an environmental group, more than 80% agreed with the statement: "I do what is right for the environment, even when it costs more money or takes up more time" (Survey Research Institute 2008). Moreover, environmental organizations tend to be more age integrated than the majority of senior citizen-focused organizations and activities, and older persons benefit from engaging in age-integrated activities (Achenbaum 2008).



Encouraging volunteering among older adults

It can be challenging to motivate older volunteers to become engaged in environmental work and to link them with appropriate activities. While environmental volunteerism can include physical and outdoor activities, which are important for long-term health and well-being (Librett et al. 2005), some older adults may have limitations that restrict their physical ability to engage in more rigorous pursuits. Environmental organizations can emphasize a wide range of volunteer opportunities directed to the 65+ age group that match an individual's skills, physical abilities, and interests, rather than treating older adults as an homogeneous group. In addition, while older persons who are retired may have a wide range of interests, specific life priorities and disposable time and income, they may be less willing to spend time volunteering (Achenbaum 2008). Motivation to participate must come from an interest in new experiences after a formal career, a desire to give back to the community, and, perhaps, a curiosity about environmental issues (Sykes, et al. 2008). Volunteers may also be intimidated by the technical knowledge perceived as necessary in order to be an effective volunteer. Emphasizing an educational component to these programs and offering a broad variety of opportunities can help to address this issue.

More research and outreach needed

Given the aging of the Baby Boom generation, there is a need for more targeted information about how environmental volunteerism can fit into the later life activities of older adults. Important questions to address include identifying what factors determine whether an older adult will become engaged in environmental volunteerism; what the physical and mental health consequences of environmental volunteerism for older adults are; whether environmental volunteerism can be a mechanism for reducing ageism; and how environmental organizations can be more open to older adult volunteers.

More education and outreach on linking environmental volunteerism and older adults is also needed. The Environmental Protection Agency has developed the Aging and Environment Initiative, and organizations such as Cornell Cooperative Extension have developed programs like Master Gardener Volunteers, Master Composters and Master Naturalists while Generations United links older adults with younger age groups. All of these provide an outlet for rewarding environmental work. In addition, the federal Serve America Act provides opportunities for environmental organizations to more actively include older adults in volunteerism. Connecting environmental volunteerism with retirees is a win-win situation for the individual and the local community. A better understanding of individual-level motivation and how to overcome institutional barriers is critical.

The author would like to acknowledge the contributions of her colleagues Karl Pillemer and Lori Bushway at Cornell University.

*References are available in a separate document posted on the CaRDI website alongside this publication.



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Research & Policy Brief Series

ISSUE NUMBER 36/JULY 2010

CaRDI's Support for Community Economic Development

By Heidi Mouillesseaux-Kunzman and Rod Howe, Cornell University

Cornell's Community & Regional Development Institute

Like many land grant universities, Cornell assists communities achieve their economic development goals. Cornell's Community & Regional Development Institute (CaRDI) supports local and regional development through its primary focus on community development. Based in the Department of Development Sociology, CaRDI's programs of applied research and outreach are motivated by a concern for understanding the determinants and consequences of societal development, and a desire to produce knowledge and educational programs that contribute to the alleviation of social problems, while creating opportunities for improved well-being both at the local level and throughout the United States¹.

CaRDI's programming seeks to build community capacity – the knowledge, skills, attitudes and resources community members need to proactively and collaboratively identify, pursue and achieve their development goals. Since CaRDI's programs are based on empirical research, Cornell's extensive research resources provide the evidence base for most of its information and training services. CaRDI's strong commitment to the University's land grant mission guides its work as a multidisciplinary social science institute, providing the citizens and communities of NYS and nationally with current research-based information and training to promote sustainable community and regional development and well-being. CaRDI's approach to community and economic development is similar to that of many Cooperative Extension programs across the nation, and indeed, Cornell Cooperative Extension (CCE) is a key partner with CaRDI in many efforts. CaRDI's educational programs respond to local needs and opportunities, drawing upon university expertise to provide information, strategies, and relevant education. These programs are developed and often delivered in partnership with local groups – local government, community organizations, individuals and agencies – all of which have a stake in the economic and social future of their communities.

In this brief we discuss the methods and principles which guide CaRDI's work, provide some examples, and explore the challenges and opportunities of these approaches.

CaRDI's Guiding Principles, Methods & Approaches

CaRDI's information and education programs are guided by the following tenets:

- *A focus on community*
- *Balancing short- and long-term goals*
- *Balancing social, ecological, and economic goals*
- *A commitment to inclusion and democracy*
- *Integrating science-based and experiential knowledge*
- *Understanding that local communities are embedded in regional contexts*
- *Building on a community's existing assets & capacities*
- *Integrating planning and evaluation*

CaRDI uses several methods to approach community development and capacity building - Research, Facilitation, Education, Technical Assistance, and Infrastructure Development.

Research – applied social science research examines communities' needs and opportunities, and identifies appropriate research-based development models. For example, utilizing EDA University Center resources, CaRDI worked in collaboration with Pipeline for Progress (a thirteen county workforce development initiative in New York's Southern Tier) and Cornell faculty to assess current industry strengths and economic development opportunities in the region, resulting in the development of a regional action plan.

Facilitation – CaRDI collaborates with local, regional, state, and federal level public and private partners, including county-based CCE staff, to design and implement educational and informational projects. For example, CaRDI and the EDA University Center worked with CCE agriculture and nutrition educators to better understand and enhance the ways local and regional foods contribute to community and economic development in Northern NYS².

Education – CaRDI, often in partnership with CCE, offers research-based trainings and publications to enhance community leaders' knowledge, skills, and resources that contribute to local and regional development. For example, CaRDI offers the Land

¹ CaRDI is supported by the College of Agriculture & Life Sciences, the College of Human Ecology, and Cornell Cooperative Extension (CCE), and is also the host of Cornell's Economic Development Administration (EDA) University Center funded by the U.S. Department of Commerce.

² The North Country Regional Foods Initiative Report is available at: <http://www.nnyagdev.org/ncrf-publications.htm>

Use Leadership Alliance (LULA) training program to increase participants' understanding of NYS land use structure, and to develop key leadership skills useful for managing land use change especially in instances where the choice among alternative uses is controversial.

Technical Assistance – CaRDI engages Cornell faculty, CCE educators, and other partners to provide communities with technical assistance to address development needs and opportunities. For example, CaRDI collaborated with the Regional Economic Area Partnership program, Tioga County CCE and the Tioga County Planning and Development Office to develop a leadership training program. CaRDI's role was to present information on understanding and using demographic information, managing land use conflicts, and how to employ key community development process skills.

Communication/Network Development – CaRDI helps develop networks to support regular and sustained communication among community members, encouraging long-term shared learning, peer support and collaboration. For example, in Central and Western NY, CaRDI created a network of community and economic developers, legislative officials and other local leaders called The Rural Learning Network (RLN). The network is designed to provide members with a forum for shared learning and peer support on key community development issues via an online list, face to face meetings, and through the social networking tool, NING.

CaRDI's Training Programs – Specialized Focal Areas

CaRDI offers several trainings as part of its regular program, available to a variety of audiences at the community and regional level. The training programs include:

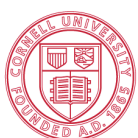
- *Land Use Training* - CaRDI's land use programming improves understanding of, and decisions about forces that influence the landscape in New York insofar as they involve residents, the communities they live in, and the land (physical and natural environments) that supports and connects them. CaRDI has entered into an exciting new partnership with the Pace University Land Use Law Center to make the Center's Land Use Leadership Alliance (LULA) training widely available beyond its original location in the Hudson Valley. LULA offers four full days of training to a carefully selected and balanced group of local and regional "land use leaders". Participants a) understand the legal foundations and structure of New York State's land use system, b) appreciate the importance and role of collaborative community decision making and conflict management skills in attaining sustainable community development, c) are taught to integrate new legal knowledge with new leadership and process skills, and d) become part of an inter-municipal, regional, and statewide network of similarly trained land use leaders. (See http://appserv.pace.edu/execute/page.cfm?doc_id=23924 for a description of the original program as offered by Pace University)
- *Accessing & Using Demographic Information* - Local leaders increasingly need access to socioeconomic and demographic

data for effective planning and grant preparation. The VIEW (Vital Indicators for Enhanced Well-being) website and training program provides a practical approach to thinking about data and indicators, directions to accessing useful data in various subject areas, guidance on how to interpret data and how to use this information strategically for decision-making purposes.

- *Sustainable Community Webinar Series* – This series of webinars provides a web-based opportunity for Extension Educators, local officials and other community leaders to broaden their understanding of current and emerging community and economic development issues and processes. Researchers and practitioners share research-based information and personal experience designed to help local leaders make informed decisions. Some recent webinars include, "Prospects for Fighting Poverty in the 21st Century", "Green Entrepreneurship as an Economic Development Strategy", "Integrated Data System for School and Community Planning", and "Exploring the Green Economy." Sustainable Community webinars are recorded and archived on the CaRDI website for later viewing.
- *Cornell Municipal Clerks Institute* - This Institute is a premium educational opportunity provided by a partnership between the City and Village Clerks and the Town Clerks Associations of the State of New York and CaRDI. City, town, and village clerks, deputy clerks, and clerks of county legislative boards, as well as other municipal officials who seek professional development gain new knowledge and skills to enhance the administration of their office, and contribute to the professionalism of their municipal government. Classes are taught by Cornell University faculty, faculty from other New York State universities, as well as professionals within the Cornell community.

Challenges and Opportunities in Community Development

New Yorkers are living through a period of remarkable change. Among challenges faced are the restructuring of traditional economic bases, increasing local government costs and demands for services, a global recession, land use changes, and pressures to develop new energy resources in the face of climate change. At the same time, new domestic and global markets are emerging, green technologies represent a growing employment sector, land use planning innovations are taking hold, the local agricultural sector is growing, environmental interests and concerns are influencing policy directions more generally, and communication technologies are bringing people together in new ways. These challenges speak to the need for more fully integrating community development and economic development efforts in the context of broader regional structures, processes and changes. In developing and implementing community and economic development projects, CaRDI's programs seek to enhance outcomes and impacts for the people and communities of New York State.



new york minute

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CCE's "Energy Efficiency Rebates Tool": Estimating cost savings & job creation from local energy efficiency work

by **Ken Schlather**, Cornell Cooperative Extension, Tompkins County

Retrofitting residential and commercial buildings for improved energy efficiency can result in significant broad-scale energy savings as well as job creation at the local level. Helping local government officials accurately estimate these impacts is the goal of a new tool, the "Energy Efficiency Rebates Tool" (http://ccetompkins.org/sites/all/files/164/NY_Energy_Efficiency%20v2.xls) developed by Cornell Cooperative Extension (CCE) of Tompkins County. Local government officials can greatly benefit their communities by using this tool to make informed decisions about investing in energy efficiency work at the local level.

For nearly every town and county in New York State, the "Energy Efficiency Rebates Tool" calculates the dollar value of energy saved by retrofitting a specified percentage of homes in a given municipality. The spreadsheet calculates the total cost of retrofitting a specified number of homes, and how much money the municipality would be eligible to receive in the form of state and federal subsidies and credits for the retrofitting work. Users can calculate the number of job-years of energy efficiency work that would be created for a specified level of work in each municipality, and the number of permanent jobs that would be

created as a result of the decreased expenditures on externally sourced energy. In addition, by using this tool, each municipality can calculate the reduction in carbon dioxide emissions that would result from the specified level of energy efficiency retrofitting.

By using the Energy Efficiency Rebates tool, Tompkins County officials estimated that the county's 42,059 households could save over \$34 million per year on energy costs if their homes and apartments were retrofitted. In addition, almost 1,700 job-years (421 jobs of 4 years' duration) would be required to accomplish the work. The tool estimated that the annual savings in energy use would result in increased local economic activity supporting the creation of approximately 412 permanent jobs. The subsidies and credits available to homeowners and renters were estimated at \$204 million, almost 61 percent of the \$336 million total retrofitting price tag. And, the energy efficiency work is estimated to result in an annual reduction of over 267,000 tons of carbon dioxide.

The spreadsheet is designed with pull down menus for selecting the county and/or town to be analyzed. The user inputs the percentage of homes to be retrofitted, the projected average cost per home of retrofitting, and a range of other factors. The ability to vary the inputs permits various scenarios and outcomes to be examined. This information is extremely valuable to localities for determining how best to use available energy efficiency funds, and in developing energy-related grant proposals. The "Energy Efficiency Rebates Tool" can help build awareness of, and interest in, the enormous potential impact of broadscale energy efficiency work at the local level. *For more information or a tutorial, contact Dominic Frongillo at CCE Tompkins County at 607-272-2292 or df66@cornell.edu*

Energy Efficiency Rebates Tool:

Developed by Anosh Shah, CCE Tompkins County.

Instructions:		Color Key	
• Follow steps in red		Date (Blue)	
• Edit yellow cells		Calculated (Green)	
		User Input (Yellow)	
Step 1: Select Your County and Municipality			
County:	Tompkins County		
Municipality:	Tompkins County		
Step 2: Select Average Household Size			
Household Size:	2		
Step 3: Enter Number of Households for Each Income Range (if auto-completed data needs to be updated)			
Income Brackets	Income Range	Qualifies for	Households
Less than 60%*	<=\$30,804	WAP, EmPower, Heap	16908
Less than 80%**	\$30,804-\$45,950	AHP, Federal Tax Credit	5810
Greater than 80%	>\$45,950	Federal Tax Credit, NYSEDA Self-Financing	19432
			Total: 42,059
<small>*Based on New York State median (for WAP qualification) **Based on county median (for AHP qualification) ***Rebates assume qualifications are met for listed programs</small>			

Step 4: Enter Assumed Cost of Improvements		
Assumed Cost of Improvements	\$8,000.00	
Step 5: Percentage of Buildings Not Requiring Work*		
Income Range	Percentage Not Requiring Work	Households Requiring Work
<=\$30,804	0%	16908
\$30,804-\$45,950	0%	5809.5
>\$45,950	0%	19341.5
<small>*Some houses may already be energy efficient. These houses are taken into account here.</small>		
Step 6: Percentage of Population Town or Country Wishes to Finance*		
Income Range	Percentage Financed	Households Requiring Work
<=\$30,804	100%	16908
\$30,804-\$45,950	100%	5809.5
>\$45,950	100%	19341.5
<small>*The town or county can choose what percentage of each income range it wishes to finance. Altering the percentage financed for the middle and high income range can lead to variations in the final cost. Note that variations in the lowest income range causes no change to the final cost since WAP covers 100% of the cost for that income range.</small>		

Step 7: View Summary Statistics				
Project Summary				
For Tompkins County, this project will:				
• Cost the county \$132,315,600 (\$3,146 per household):				
• The income range <=\$30,804 will cost the county \$0.				
• The income range \$30,804-\$45,950 will cost the county \$16,266,600 (\$2,800 per household).				
• The income range >\$45,950 will cost the county \$116,049,000 (\$6,000 per household).				
• Create 1,682 jobs-years, 412 permanent jobs, and \$34,320,144 in annual energy savings for the county.				
• Eliminate 267,096 tons of carbon dioxide.				
Rebate Summary				
Income Range	Households Financed	Pre-Rebate Cost	Total Rebate	After-Rebate Cost
<=\$30,804	16908	\$135,264,000	-\$135,264,000	\$0
\$30,804-\$45,950	5810	\$46,476,000	-\$30,209,400	\$16,266,600
>\$45,950	19432	\$154,732,000	-\$38,683,000	\$116,049,000
	42059	\$336,472,000	-\$204,156,400	\$132,315,600
Per Household Financed				
		\$8,000.00	\$8000.00	\$0.00
		\$8,000.00	\$5,200.00	\$2,800.00
		\$8,000.00	\$2,000.00	\$6,000.00
				\$3,146
Job Creation, Energy Savings, and Carbon Dioxide Reduction				
Job-Years Created*	Permanent Jobs Created	Total Annual Energy Savings for County	CO ₂ Eliminated (tons)**	
1,682	412	\$34,320,144	267,096	
Based on the following assumptions:				
5 – Job-Years Created Per \$1M of Energy Efficiency Work				
12 – Permanent jobs created for every \$1M of energy savings (between 10 and 20)				
\$816 – Annual energy savings per house***				
12,701 – lbs of CO ₂ eliminated per house***				
<small>*Number of people working for one year **Equivalently, 72,977 tons of Carbon ***From Home Energy Saver for 14850: http://hes.lbl.gov/hes/vh.shtml</small>				



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What is Cumulative Impact Assessment and Why Does it Matter?

by David Kay, Charles Geisler, Richard C. Stedman, Cornell University

What is the Issue?

Development projects and policies often have notable impacts on communities, individuals, and ecosystems. New shopping malls and wind farm installations are but two examples of projects capable of initiating significant change. When environmental, social and economic impacts of such projects are evaluated, the effects are typically examined individually and in response to a specific proposed action. Unfortunately, this approach to evaluation – one action at a time – can overlook important cumulative impacts. Both informed decision making and adequate protection of people, communities, and the environment are undermined when cumulative impacts are ignored.

Examples of Cumulative Impacts

- The number of lakefront homes on a sparsely developed lake doubles over 20 years. While each new structure may comply with local sanitary and land use codes, and have little or no impact on the lake, the increased nutrient load resulting from the doubling of development may cause problematic levels of aquatic weed growth.
- The completion of a major highway reconstruction project results in more than a dozen new stores and restaurants along a previously sleepy commercial strip. While the traffic increase induced by each store individually is not significant, the combined traffic creates congestion on residential streets, negatively affecting driver and pedestrian safety.
- A service road to a new cell tower is built through a remote forest. Over time, as increasing numbers of recreationists use this road to access the forest, this use alters the aesthetically unique site and degrades nearby trout streams.
- A few dozen natural gas wells are drilled in a rural county over a decade, having little impact on the local economy or environment. When high fuel prices result in a rapid increase in well numbers, a broad spectrum of impacts follows the road and pipeline construction. While some impacts are immediately evident, others do not emerge for years.



Source: "Keuka Lake shore development," 42°29'31.03"N and 77°07'20.48"W, Google Earth. Imagery date 5/1/07. Access date 10/1/10.

or linked set of resources (for example, when fish habitat silts up due to runoff from many small, unrelated upstream construction sites or logging operations). While individual impacts may appear modest or inconsequential, over time and in combination with other impacts, they can significantly degrade the natural and human environment. Total impact is often greater than the sum of the parts.

Cumulative Impact Assessment – Challenges

Cumulative impacts involve relationships between discrete actions. Because many of these relationships can be complex and hard to identify, they are often over-looked. In addition, other practical and conceptual factors complicate the assessment of cumulative impacts. These include:

- (a) observing and isolating "cause and effect" relationships is complex;
- (b) impacts may simultaneously compound and offset each other (c) the distribution of "winners and losers" associated with projects and policies may differ from one context to another; and (d) evaluating the impacts and feedback effects like those between ecological change and human/social behaviors requires cross-disciplinary expertise. These factors raise the likelihood that cumulative impact assessments will generate disagreement, expense, and complex engagement with policy.

Approaches to Cumulative Impact Assessment

Specifying and assessing cumulative impacts of projects and policies is difficult but important.

Approaches to cumulative impact assessment can be characterized as those tailored to the requirements of environmental law, and those that are more broadly policy-oriented. The former typically respond to a particular proposed development that triggers a formal Environmental Impact Statement (EIS). They are shaped by both environmental law and court decisions. Fundamentally, the purpose of any EIS is to produce detailed information on environmental impacts, based on expertise and scientific standards, which decision makers take into account. However, the rigor with which agencies require cumulative impacts to be examined as part of an EIS is uneven. Even when undertaken with a close eye on meeting basic legal requirements, the law was intended to ensure that environmental impacts were not overlooked. Within this tradition, other kinds of impacts, cumulative or not, are often excluded from formal analysis.

The less widely used policy-focused approach offers a more common-sense, proactive and big-picture evaluation of cumulative impacts. While it may lack the immediately motivating force and some of the prescriptive authority of the legal (EIS) approach, it provides a less technical yet more comprehensive basis for evaluating cumulative impacts. This is especially true of impacts broadly influencing community quality of life and economic well-being, which often fall outside the legally mandated scope and intent of "environmental" impact assessment. In contrast, regional and municipal comprehensive planning traditions offer an existing institutional framework for

Cumulative Impacts: A Closer Look

Each of the previously described situations shares a common characteristic: while the impact of a single change may be limited, the combined effects of multiple similar or related changes are of much greater consequence. Cumulative impacts occur when the individual effects of many actions combine over time and/or space. They typically have a combined impact greater than the individual projects added together. Actions may be causally linked: a given action influences the likelihood that other actions will follow (for example, when extending a sewer line increases the likelihood that farmers will sell their land for development, and each sale increases the chance of additional sales). Actions may also be linked when they are seemingly small and independent of each other but have an impact on the same resource

shaping policy that naturally encompasses a big-picture approach. These traditions address social, economic and environmental topics simultaneously. Moreover, they are intended from the start to provide an integrated framework for evaluating generalized future development and conservation alternatives on a community and regional scale. Though generalized alternatives are turned into reality project by project over time, the alternatives are usually well enough defined for important cumulative impacts to be evaluated.

Legally Required Cumulative Impact Assessments in NYS

Although typically focused on single project impacts, federal environmental regulations have, for more than 30 years, explicitly required projects undergoing federal environmental review to consider cumulative impacts. In NYS, the State Environmental Quality Review Act (SEQRA)¹ similarly acknowledges the importance of examining cumulative impacts. Where it is determined that the cumulative impacts of multiple proposed actions or projects may be significant when combined over time or space, SEQRA requires that these impacts be formally assessed in an EIS before permits allowing the actions can be issued. The law requires that significant harmful or negative impacts, whether cumulative or not, must be mitigated insofar as is practical. There are no legal mandates to analyze or respond to positive cumulative impacts.

Although specific procedures are required to be followed when the impacts of proposed projects are examined, SEQRA allows the permitting agency room for case by case judgment, even for the initial determination of the kinds of environmental cumulative impacts that may be significant and deserve a “hard look”. Courts rarely hold decision makers accountable because they made the “wrong” decision. Instead, they tend to be judged on adherence to required procedures, thoroughness, and whether their final decision is clearly based on evidence and rationales that are not arbitrary.

Legally required approaches to cumulative impact assessment evolved in a context directed at highlighting environmental factors relevant to a larger decision making process. While these approaches were often dismissed as unimportant prior to the passage of SEQRA, the law now forces decision makers to consider environmental impacts. However, many social, economic and institutional impacts are still not systematically examined, presented as only positive, viewed as unmeasurable, and/or explained away as a purely local occurrence. As such, they are typically not subject to the same review standards as environmental impacts; or they are viewed through the narrow and “unscientific” lens of effects on “community character”. We suggest that a more inclusive framework involving both natural and socioeconomic impacts is preferable, giving balanced consideration to a full range of possible outcomes. This would facilitate a broad look over the time scales, geographies, and interaction effects that distinguish cumulative impacts, and emphasize foresight and policy over administration and reaction to particular proposed actions.

An Alternative Approach: Regional and Comprehensive Planning

An approach drawing on regional and comprehensive planning traditions has also evolved for cumulative impact analysis. It is distinguished by an emphasis on policy analysis and weighing trade-offs between competing goals, centering attention on the larger decision making process. This approach emphasizes the use and generation

of data/information in resource management decisions. Rather than being either-or substitutes, the planning and legal approaches overlap in many ways and are ideally complementary.

Interestingly, some drafters of the SEQRA in NYS intended environmental impact assessment law as a transitional regime that would eventually be replaced by “real comprehensive planning at the local, regional, and state level”². While this has not yet happened, decision making bodies interested in broad topics involving whole systems like “ecosystem management and sustainable development” have increasingly employed the planning approach³. The planning approach offers an alternative, institutionally familiar, and broader policy-oriented framework for analysis and decision making.

Comprehensive plans, in addition to having time-tested and familiar procedures, have flexible structure and content in NYS. Comprehensive plans offer a framework for developing a living planning document that creates and captures community consensus around the kinds of growth and economic development that are considered most desirable or undesirable, and the existing community and natural resource assets that are felt to be most worthy of protection. In addition, by their nature, cumulative impacts often cross boundaries and are often best addressed in plans by agencies with regional perspectives.

Procedures already exist in NYS for linking the legal and planning approaches to cumulative impact assessment. A formal impact assessment (normally, a “generic” EIS (GEIS)) of a municipal comprehensive plan is required upon its legal adoption. Since a comprehensive plan and a GEIS are likely to contain many of the same elements, a GEIS and comprehensive plan are beneficially prepared in tandem and can enhance the strengths of each approach by ensuring systematic evaluation of the full range of cumulative impacts implied by the comprehensive plan, not solely the environmental impacts required by SEQRA.

Conclusion

Many of the most momentous impacts of development result not from the effects of any single action, but from the combination of individually minor effects of multiple and subtly related actions over time. Informed decision making and the adequate protection of people, communities, and the environment are often not possible unless cumulative impacts are considered. While assessing cumulative impacts is challenging and costly, such assessments ideally proceed by drawing on the strengths of both SEQRA law and complementary planning frameworks. Improving the institutional and technical capacity to assess cumulative impacts of projects and policies can contribute to improved quality of life and greater protection of the natural environment. Accordingly, cumulative impact assessment should be a priority.⁴

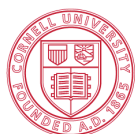
² Paul Bray, The Historical Development of SEQRA, Discussion, Albany Law Review, Vol. 65, pp. 325-334

³ Council on Environmental Quality, Considering Cumulative Effects Under the National Environmental Policy Act, January 1997, See <http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm>; Harry Spaling and Barry Smit,

Cumulative Environmental Change: Conceptual Frameworks, Evaluation Approaches, and Institutional Perspectives Environmental Management Volume 17, Number 5, 587-600. See <http://www.springerlink.com/content/wh78387h201w683m/fulltext.pdf>

⁴ Cf. Zhao Ma, Dennis R. Becker and Michael A. Kilgore, The Integration of Cumulative Environmental Impact Assessments and State Environmental Review Frameworks, Staff Paper Series No. 201 Department of Forest Resources, College of Food, Agricultural and Natural Resource Sciences University of Minnesota St. Paul, Minnesota January 2009 at http://www.forestry.umn.edu/prod/groups/cfans/@pub/@cfans/@forestry/documents/asset/cfans_asset_184736.pdf

¹ The State Environmental Quality Review Act requires most projects or activities proposed by a state agency or unit of local government, and all discretionary approvals (permits) from a NYS agency or unit of local government, to undergo an environmental impact assessment.



new york minute

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LEAD NY: Cultivating New Leaders for the Food & Agriculture Industry

by **Larry Van DeValk**, Cornell University

What is LEAD NY?

The New York State food and agricultural system benefits from strong leadership at every level. As fewer people are involved in the production of food, many begin to take a seemingly endless food supply for granted. With this decreasing knowledge of how food systems work, it has become more crucial for the industry to clearly communicate its needs, participate in policy formulation, and interact with stakeholders such as consumers and local and state elected officials. This requires strong leadership, developed from within the ranks of the food and agricultural industry.

The Empire State Food and Agricultural Leadership Institute (LEAD New York) has recently joined the Community & Regional Development Institute (CaRDI) to enhance its expertise in leadership training, a critical element for successful community and regional development. LEAD NY is a well-established, two-year program of seminars, workshops and field travel designed to inspire and develop leaders for the food and agricultural industry. It is a rigorous program that emphasizes the development of communication, leadership and networking skills, studies public policymaking, enhances issue evaluation and problem-solving techniques, and enhances social capital. Many of the industry's most influential leaders - including growers, lenders, shippers, retailers, educators, marketers, agency heads, consultants and others - have successfully completed the LEAD NY program.

"The emerging take-home lesson for me is the vital role networking plays in becoming a great leader. Networking helps in the business environment and is essential in becoming an active leader in my community, especially local government. The networks gained through LEAD class members, alumni, and session speakers are priceless. The contacts made through the LEAD experience allow me to become a better leader and an active member of my community." Susan Dingee (Class 12)

What are the objectives?

LEAD NY's goals can be identified in three broad categories:

1. To improve participants' leadership skills and behavior, including:
 - Public speaking, written communication, and effective listening
 - Working with media, marketing and promotion
 - Conflict resolution, argumentation and debate
 - Networking, diversity appreciation
 - Teambuilding and teamwork
 - Meeting management
 - Problem identification/Collaborative problem solving
 - Critical thinking/Systems thinking/Change management
 - Technological literacy/Research skills
 - Time management and organization
2. To improve self-awareness, encourage reflection, and foster a commitment to lifelong learning:
 - Personality type awareness and self assessment
 - Improve understanding of how others perceive their leadership behavior
 - Set individualized learning goals and develop a plan of action to meet them
 - Reflect on past practice, learning opportunities, and how to grow/improve
 - Develop a commitment to lifelong learning
3. To improve participants' knowledge of relevant issues facing their industry and community and enhance their sense of civic responsibility:
 - Activities help participants understand the policy development process at the local, state, federal and international levels

- Participants learn *how* the policy development process works, how it *affects* them and how to *influence* it
- Participants are challenged and *motivated to get involved* in the public policy process and community service roles
- Awareness of our *"place" in a global society*
- The specific issues studied in LEAD NY will vary according to the *learning needs* of participants and the *relevancy* to current industry/community challenges
- These issues provide the context in which leadership skill development is practiced, and public policy is examined
- These issues may include, but are not limited to:
 - Labor
 - Trade
 - Environment
 - Technology
 - Food safety/security
 - Land use and development
 - Ethics
 - Innovation/creativity
 - Specific agricultural sectors (e.g. dairy, equine, forestry, etc.)

Who benefits?

Many people's jobs are affected in some way, either directly or indirectly, by the state's food and agricultural system. Some examples of individuals and occupations benefitting from LEAD NY participation include: dairy producer, grape producer/winery owner, commercial fruit or vegetable grower, fresh-market fruit or vegetable grower, cash crop producer, livestock producer, organic farmer, greenhouse or nursery operator, turf-grass or sod producer, forest owner, maple producer, equine owner, breeder or trainer, food processor, consultant, educator, Farm Bureau representative, government agency representative, extension educator, food retailer, cooperative staff, insurance provider, lending officer, animal health provider, and land preservation specialist, to name a few.

Over 300 people have completed the LEAD NY program over the past 25 years. Ninety percent of graduates are involved in agricultural or community organizations and a significant number are corporate officers, board directors, or serve in government positions. Others have applied their skills as management consultants, media advisors, or in their own entrepreneurial endeavors.

"One common theme that emerged is the constant need for change and challenging of the status quo in technology, people, ideas, and/or organizational structure. I don't think a lot of people outside of the agricultural community think of this as such a dynamic, technologically advanced industry. A passion for success, both personally and for their agriculture community, and respect for others really has been exemplified by all the leaders we have met."

Karen Barie Keouah (Class 12)

CaRDI is pleased to highlight LEAD NY this month, and we hope you will contact us to find out more about this well-established and valuable program.

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Moving Local Foods from Farm to Consumers: Lessons from NYS Apples

by Miguel Gómez, Cornell University

What Is the Issue?

Consumer awareness of and interest in locally produced food has increased sharply in recent years. This interest in “buying local” stems from a variety of economic, human health, environmental, and social perceptions. But despite increasing interest in locally grown and processed food, little is known about the supply chains that move local foods from farms to consumers. To improve our understanding of the way local food products are introduced or reintroduced into the broader food system and the potential barriers that exist to expanding markets for local food, a study¹ involving 15 case studies around the U.S. was conducted. In this brief we highlight the 3 case studies focused on the New York State (NYS) apple industry.

What were the study's objectives?

Two general research questions are addressed in this study:

1. What factors influence the structure and size of local food supply chains? Here, “structure” refers to the configuration of processes, participants, and product flows as a product moves from primary production to consumers. “Size” refers to aggregate sales volume as a percentage of total food sales for a product category.
2. How do local food supply chains compare with mainstream supply chains for key dimensions of economic, environmental, and social performance?

These questions are designed to provide insight into the role of local foods in several public policies and programs. For example, federal and State policymakers, as well as local community groups and private enterprises, increasingly look to local-food projects to reduce food insecurity, support small farmers and rural economies, and foster closer connections between farmers and consumers.

How Was the Study Conducted?

As part of the larger study, we examined three supply chains for apples in the Syracuse metropolitan area: a supermarket chain (mainstream), a producer who sells at a farmers market (direct market), and a school district that purchases local apples for inclusion in school lunches (intermediated).

Mainstream Supermarket Supply Chain

The focal store belongs to a regional supermarket chain (called here SuperFoods) that operates its own distribution center. Five apple suppliers account for all apples moving through SuperFoods’

distribution center. Four of the five suppliers are vertically integrated grower/packer/shippers (GPS); two are from NYS, while two are from Washington State (WA). The fifth supplier is a broker from WA. One of the NYS suppliers provides about 35 percent of SuperFoods’ apples, delivering them via their own trailer trucks to SuperFoods’ distribution center. About 80 percent of the sales from this supplier are sourced from its own farms, and 20 percent are sourced from 20 to 25 independent NYS growers and a few importers. This supplier provides apples labeled as “local” during a 12-week apple harvest period from early September through late November. One of the WA suppliers sells apples grown on about 3,100 acres by 70 growers. Another supplier packs 85 percent of all the apples it sells.

Two factors facilitate market coordination. Under proper conditions, apples can be kept in storage longer than most produce items. Apples harvested in the fall are sometimes stored a full year, until the next harvest. As a result, suppliers know their annual inventories quite precisely once harvest is complete. Second, the supermarket chain employs an Electronic Data Interchange (EDI) system that facilitates placing orders to suppliers, monitoring product inventories, and receiving orders from the focal store.

Direct Marketing Supply Chain:

Central New York Regional Farmers Market Vendor

The Central New York Regional Market operates year round on weekends and has more than 300 vendors. This market accepts farmers selling only products from their own farms and NYS product re-sellers. In 2009, the market included 12 apple vendors: 6 farmers and 6 local, in-State resellers.

The focal vendor, Jim Jones, farms 90 diversified acres (about half planted to apples), which allows him to participate in the farmers market. Jones produces 20 different varieties, including small amounts of uncommon varieties, such as Northern Spy and Zestar. About 10 percent of Jones’s total sales are to farmers markets, and 90 percent go to a packer-shipper. In addition to the Syracuse market,

Jones sells in three other farmers markets in the region.

At the farmers market, Jones sells a wide variety of his own fruits and vegetables 3 days a week, from April through December. He staffs the market with family members. Most vendors sell apples at the same prices and in the same presentations, with little variation through the year. When asked about the economic benefits of participating in the farmers market, Jones estimates that revenues per pound are almost



¹http://foodindustrycenter.umn.edu/Local_Foods_Case_Studies/index.htm

twice the revenues of apples sold to the packer-shipper (\$0.50/lb and \$0.28/lb, respectively). However, it is important to note that charges for distribution activities beyond the farm gate are approximately \$0.10/lb, or 20 percent of the retail value at the farmers market. According to Jones, customers cite the most important factor in shopping at the market as the ability to buy directly from the grower, followed by the lower prices of apples relative to those at retail stores. Jones also believes that more apples could be sold if more retail space was available in the farmers market.

Intermediated Supply Chain: Hannibal (NY) School District

The Hannibal School District (www.hannibal.cnyric.org/) has three schools with a total enrollment of over 1,600 students. About 95 percent of apples in the school district are sold as part of the school menu, and the rest are sold separately à la carte. These apples come from NYS except for a small amount supplied to the school district by the U.S. Department of Defense (DOD) Fresh Fruit and Vegetable Program, usually bought from Washington State.

This apple supply chain consists of four channel members who have maintained business relationships for over 20 years: the school district, a local produce wholesaler (C's Farms), and two local farms. C's Farms (www.csfarmmarket.com/) supplies nearly 100 percent of the school district apples. C's Farms deliver fresh fruits and vegetables to 65 local restaurants, schools, and institutions in Oswego County. It plays an essential role of aggregation to make this local supply chain vibrant. The wholesaler procures apples primarily from two apple farms, each with about a 50-percent share. The apples from the DOD Program account for approximately 10 percent of total apples in the school district.

Ontario Orchards is one of the two apple suppliers to the school district via C's Farms. Ontario Orchards specializes in a large variety of locally grown produce, offering 29 apple varieties, including small amounts of uncommon varieties. It operates a small production line in which apples are washed and sized, and packed in 42-pound boxes. The owner stated that the availability of long-term storage facilities in the area has enhanced his ability to supply the school district during the academic year. No written contracts are employed between Ontario Orchards and C's Farms; the contract has been word of mouth for 20 years.

The school district has had several programs to promote apple consumption. In 2009, for example, the school district nutrition team launched a program called "The Smart Choice Café," whereby wise nutrition choices, like local produce, are featured to students. Members of this supply chain mention the sometimes unintended negative impacts of the DOD Fresh Fruit and Vegetable Program. This affects coordination in the supply chain because DOD apples, while free, do not have an established calendar for shipments.

Key Findings

Comparing the three cases suggests the following findings regarding supply chain performance:

- Producer share of the price paid by the final consumer is greatest for the direct marketing chain. The price received by the farmers

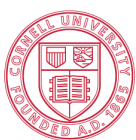
market vendor net of marketing expenses is \$0.40 per pound, substantially higher than the average grower price of \$0.26 per pound. Marketing expenses of the direct marketing chain are estimated to total \$0.10/lb or 20 percent of the retail value.

- The supplier share of the retail dollar decreases with distance to market: in the direct case, the producer's share of the retail dollar is 80 percent whereas in our mainstream case, the shares of Washington and New York suppliers are 35 percent and 47-60 percent (depending on package type) of the retail price, respectively.
- The "local" attribute does not command price premiums perhaps because NYS is a national player in the apple market. In fact, apples at the farmers market, all of which are local, usually exhibit the lowest retail prices in Syracuse. Instead premiums are often paid for differentiation by apple variety.
- Calculations indicate that local apples marketed through the direct and intermediated supply chains perform better than non-local apples in terms of food miles and fuel efficiency. Apples supplied by the mainstream supplier in Washington State have the worst fuel usage performance (1.41 gallons/cwt).
- The intermediated supply chain, where the school district organizes an extensive variety of events aimed at promoting local produce (and apples), ranks first in social capital formation. Likewise, SuperFoods participates in activities to support the local community including support to local farmers and college scholarships for its employees.

The apple supply chains described in these three cases all exhibit a high degree of diversification in their distribution strategies. Local and mainstream apples complement one another in the supermarket supply chain. In addition, the focal farmers market vendor engages in some direct marketing but is also linked to the mainstream chain through his relationship with a conventional packer-shipper. Moreover, the school district procures from mainstream suppliers and from local apple supply chains. Local supply chains are profitable and important for participating firms, even if the volume is small.

The presence of a strong industry that distributes nationally has substantially facilitated the development of local food supply chains. The NYS apple sector offers a wide variety of products to consumers regionally and nationally and, as a result, it has the postharvest infrastructure (e.g., packing, shipping, short- and long-term storage) and marketing expertise to support distribution of apples from local farms to various local retail and foodservice outlets.

The case studies underscore the high degree of competition within the apple sector as reflected by the price formation mechanisms. Final prices are generally established by the market in all supply chains considered, with the exception of a few truly uncommon apple varieties in the farmers market produced in very small quantities. In all supply chains, apple growers appear to be price takers. It is noteworthy that no price premiums were observed for local apples in any of the direct supply chains studied. It is speculated that, because New York State is a major apple producer with year-round supplies, "local" is not a significant differentiating attribute.



new york minute

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Growing Farmers Markets in Northern New York: Improving Community Development, Food Access, and Farm Returns

By Todd M. Schmit and Miguel I. Gómez, Cornell University

What is the Issue?

Consumer interest in local foods has increased sharply in recent years prompting substantial changes in food supply chains. The increased use of direct marketing channels by producers, such as farmers markets, is providing an important market mechanism linking farmers and consumers. Farmers markets have also attracted the attention of policymakers concerned about consumers' ability to access affordable nutritious diets, particularly in lower-income rural areas where there is less incentive for food retailers to provide a wide assortment of food products.

While the value of total farm sales sold through direct marketing channels is relatively small (less than 2% in NYS), expanding in this area can contribute significantly to overall returns for particular producers and benefit local economies. The value of direct farm sales per capita and existence of community farmers markets is considerably higher in rural areas (around \$18 per capita) -- indicative of areas with prioritized community development objectives towards increasing local foods availability and stronger connections to agriculture.

Farmers markets are one approach to expanding food supply chains and increasing access to local food. Farmers Market Nutrition Programs operate in nearly all states providing federal income subsidies to low-income and nutritionally-at-risk families to increase consumption of local fresh fruits and vegetables. Additional public programs are becoming available at state and local levels as well. For example, the Healthy Foods/Healthy Communities Initiative in NYS is coordinating revolving loan funds and matching grants programs to support the establishment of farmers markets

Assessing Farmers Market Vendor Performance

Based on recent research in a six-county region of Northern New York (NNY), we identified several factors driving the performance of farmer market vendors, yielding valuable planning information to farmers and managers of farmers markets. In addition, we provide policy recommendations for community leaders and policy makers. A conceptual framework for our approach is outlined in Figure 1.

Vendor performance is measured in both objective (financial) and subjective (satisfaction) dimensions. This distinction is important; some vendors may utilize farmers markets as a way to advertise their farm/products available through other channels, while others may simply appreciate the opportunity to interact with customers and/or promote particular forms of production. Improved vendor performance is expected to enhance the overall economic sustainability of the markets they participate in, thereby, improving food access and strengthening the social capital of rural communities.

Improving Farmers Market Viability

We offer four inter-related planning recommendations when considering private strategy and public policy interventions.

Larger, centrally located markets. Centrally located regional/multi-community markets can increase customer traffic and support higher vendor recruitment with larger product assortments. Site selection is critical and can benefit from public and

private stakeholder input and municipal investments in market amenities. Larger markets increase managerial responsibilities, so vendor-controlled organizations, such as farmers markets cooperatives, may provide an improved governance structure to support a wider diversity of stakeholders. The availability of credit/debit card readers at these markets can also increase purchasing convenience.

Target variety in products and vendors. Wider product assortments can support a one-stop-shopping environment, improve consumer convenience, and increase customer traffic. "Variety" should consider the balance between organic and conventional products, food and non-food vendors, and fresh and processed foods. Attracting full-time farmers with larger product supplies and potentially lower unit production costs may offset deficiencies in other local food supply chains. Establishing formal vendor policies that reflect a need for a variety of vendors may help facilitate larger commitments from existing vendors.

Increased attention to marketing. Vendors report greater satisfaction at relatively newer markets - more established markets need to develop new and innovative market features or activities. Integrating farmers markets with community events can facilitate social and civic structure improvements. Market directors should consider adopting strategies utilized by food retailers (e.g., coupons) or pairing promotions across vendors (e.g., wine, bread, and cheese specials) to improve customer traffic and support repeat purchases, perhaps with municipal financial support. Policies directed to strengthen entrepreneurship and marketing skills among vendors, particularly those with less experience, is increasingly important and existing federal programs can be better utilized for these purposes (e.g., value-added producer grants and farmer market promotion programs).

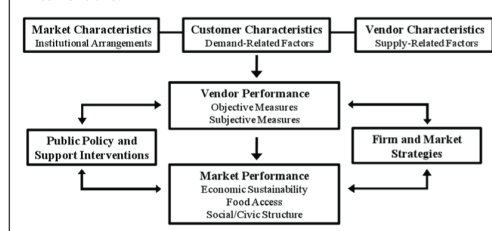
Reducing cost burdens to underserved residents. Increasing the use of federal nutrition benefits, such as SNAP (Supplemental Nutrition Assistance Program), by lower-income customers at farmers markets should be encouraged and would support higher sales. The recently initiated Healthy Incentives Pilot Program in Hampden County, MA (with funding from the 2008 U.S. Farm Bill) is a promising effort, where for every dollar participants spend on fruits and vegetables using their SNAP cards, 30 cents are added to their benefit balance. Given vendor preferences to participate in fewer and larger farmers markets, alternative transportation and bussing services or travel subsidies to markets for lower-income residents will likely be needed. Such services add to the attractions of a market's amenities while reducing travel cost burdens.

Looking Ahead

Farmers markets are drawing increasing attention from consumers and policy makers as an affordable source of local fresh and nutritious foods in rural

communities, as well as a mechanism to increase local farm sales and support broader economic development. The success of community farmers markets and their vendors requires considerable planning, management and marketing experience, and involvement by all participating stakeholders. To what extent can local farmers/vendors and rural community leaders sustainably address a void in rural food systems unmet by grocery retailers? The answer depends on whether market channel diversification into farmers markets can improve overall farm performance, while also addressing community development goals to substantiate public investment.

Figure 1: Conceptual framework assessing vendors' farmers market performance and linkages to public policy and market strategy interventions.



Cornell University

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