

Research & Policy Brief Series

Defining the Rural Wealth Impacts of Regional Food Systems

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What is the issue?

Policymakers increasingly view local and regional food systems as a priority for supporting rural development in America. Between 2009 and 2015, the U.S. Department of Agriculture (USDA) invested more than \$1 billion in over 40,000 local food systems projects.¹ However, our ability to assess the *impacts* of these investments is still limited. Most existing measurement efforts focus on short-term economic impacts, but growth-focused indicators shed little light on changes to wider notions of wealth and wellbeing in rural communities. If researchers can develop more comprehensive ways to measure the broader impacts of local and regional food systems, policymakers and extension educators can more effectively design and target rural community development support.

Rural wealth creation

An emerging area of rural development research uses the concept of “rural wealth creation” to go beyond short-term, traditional economic measurements to evaluate opportunities for community economic development.² In this context, wealth is defined to include many types of community capital assets (net of liabilities), including social, built, financial, individual, intellectual, natural, political, social, and cultural capitals (see text box for definitions).³ Accordingly, our work integrates the rural wealth creation framework into assessments of local and regional food systems efforts to understand the full spectrum of potential impacts on both rural and urban communities.

Part of the challenge of operationalizing the rural wealth creation framework is the almost unlimited number of impacts one could measure, and the lack of agreement on the appropriate indicators/data with which to do so. Prioritizing and accessing possible metrics and data required for a more comprehensive analysis of regional food systems remains a critical next step. This requires narrowing the list of potentially measurable indicators into those that are expected to most ‘move the needle’ in terms of impact. This research project, funded by the USDA’s

Built capital: the stock of fully functioning constructed infrastructure

Financial capital: the stock of unencumbered monetary assets invested in other forms of capital or financial instruments

Individual capital: the stock of skills and physical and mental healthiness of people in a region

Intellectual capital: the stock of knowledge, innovation, and creativity or imagination in a region

Natural capital: the stock of unimpaired environmental assets (e.g., air, water, land, flora, fauna, etc.) in a region

Political capital: the stock of power and goodwill held by individuals, groups, and/or organizations that can be held, spent, or shared to achieve desired ends.

Social capital: the stock of trust, relationships, and networks that support civil society

Cultural capital: the stock of practices that reflect values and identity rooted in place, class, and/or ethnicity

Source: Yellow Wood Associates, Inc. 2016

National Institute of Food and Agriculture, seeks to prioritize and measure rural wealth creation indicators as an important next step in evaluating the potential of food systems to support positive rural development outcomes.⁴

Research Methods

The research pairs a case study with a two-pronged forecasting and primary data collection effort. The case study area centers on the New York City (NYC)-based GrowNYC Greenmarkets Program (formerly the NYC Council on the Environment), the largest network of outdoor farmers markets in the United States. In 2015, there were 54 Greenmarket farmers markets in all five NYC

¹ Vilsack, T. 2016. New markets, new opportunities: Strengthening local food systems and organic agriculture. U.S. Department of Agriculture Results. April 4, 2016.

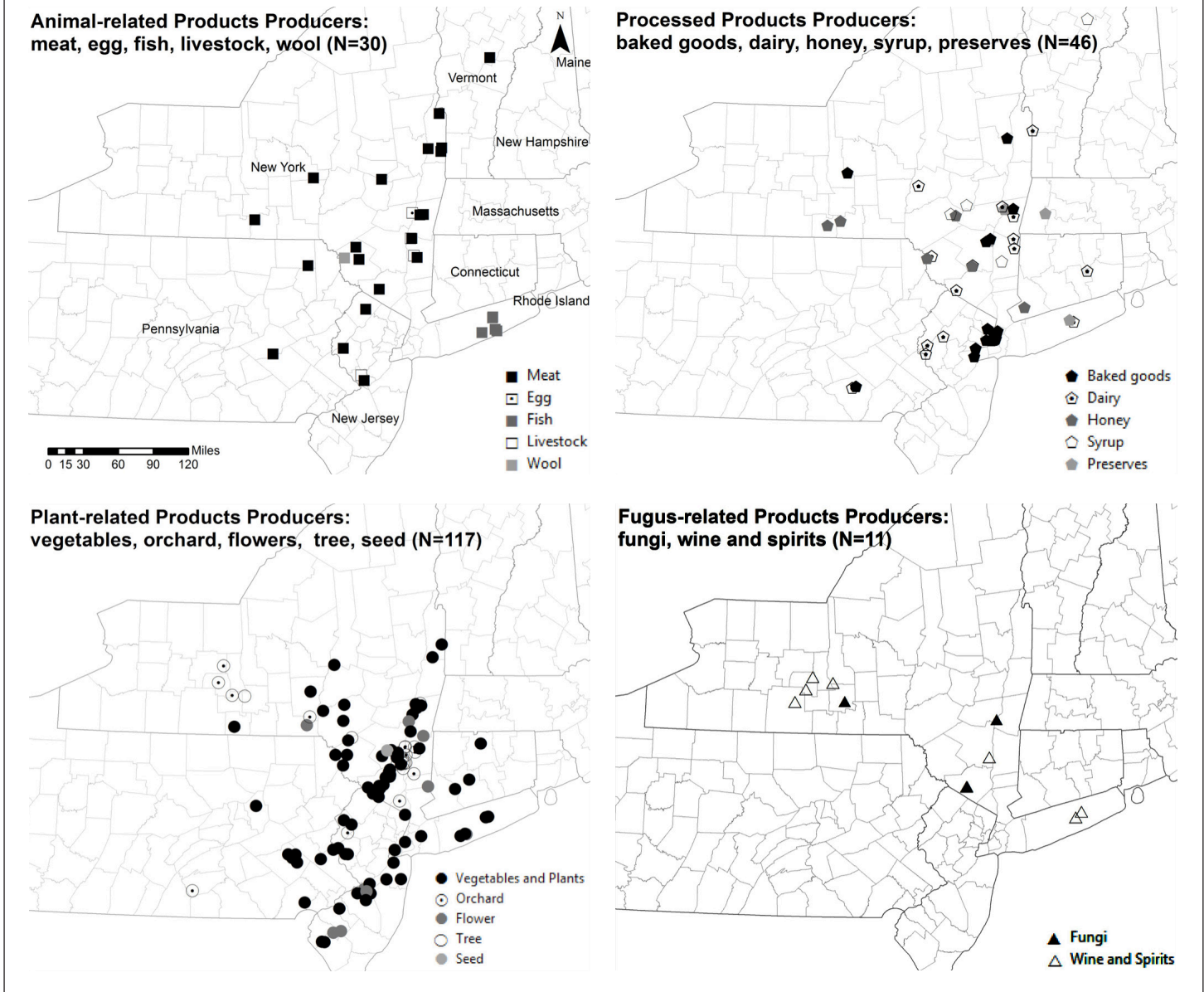
² Pender et al., 2012. Rural wealth creation: Concepts, measures, and strategies. *American Journal of Agricultural Economics*, 94(2):535:541.

³ Carolan and Hale. 2016. “Growing” communities with agriculture: Generating value above and below the ground. *Community Development*. DOI: 10.1080/15575330.2016.1158198

⁴ This brief is based on Jablonski, B.B.R., T.M. Schmit, J. Minner, and D. Kay. 2016. “Rural Wealth Creation Impacts of Urban-based Local Food System Initiatives: A Delphi Method Examination of the Impacts on Intellectual Capital,” Working Paper WP 2016-13, Charles H. Dyson School of Applied Economics and Management, Cornell University, Ithaca, NY. July. The material is based upon work that is supported by the Agriculture and Food Research Initiative Competitive Grant no. 2015-68006-22848 from the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA), and the Farm Credit Northeast AgEnhancement Program, project no. 75314/A001. The views expressed are the authors’ and do not necessarily represent the policies or views of any sponsoring agencies.

Figure 1: Map of Greenmarket participating farm vendors, by commodity and location

Map produced by research assistants Yanlei Feng and Xiao Shi (Cornell University).



boroughs, selling product from 230 farms and fishermen, farming over 30,000 acres in six states and dozens of rural counties (see Figure 1).

Researchers used a Delphi Method approach involving two panels of experts to forecast the most likely rural impacts and related measurable indicators that result from farm participation in urban food markets.⁵ Iterative rounds of questions were posed to a group of experts to arrive at a group consensus. This method is shown to be more comprehensive than individual judgements. The two panels of experts assembled included a Research Advisory Team made up of 16 inter-disciplinary food systems or rural development researchers from across the Northeastern

U.S., and an Extension Advisory Team made up of 25 food system stakeholders. The discussions helped shape questions for farmer interviews (conducted with 40 farms from July 2015 through April 2016) and for rapid market assessments (also known as dot poster surveys) with over 800 urban consumers that shopped at Greenmarkets throughout NYC (conducted September and October 2015).

Findings: *The Importance of Intellectual Capital*

Preliminary results focus on a single rural wealth creation capital asset: intellectual capital. Defined as the “existing stock of knowledge, resourcefulness, creativity and innovation in a region’s people, institutions, organizations

⁵ Rowe et al. 1991. Delphi: I re-evaluation of research and theory. *Technological Forecasting and Social Change*. 39(3):236.

Table 1: Results from the Delphi Method application on prioritized impacts and indicators regarding Intellectual Capital in rural areas from farmer participation in Greenmarkets.¹

Prioritized Impacts from Advisory Teams		Proposed Indicators
Extension Team	Research Team	
GM educates people (farmers and consumers) that it is possible and cool to be a farmer, a career with a future, promoting rural youth retention in agriculture	Market and industry education to and from urban and rural communities <ul style="list-style-type: none"> • Demystification - of city for farmers, of farming for customers (+) • Increased knowledge of food system among consumers (+) • Increased knowledge for farmers of consumer demands (+) • Urban consumer experimentation with new products, new ideas (+/-) • Promotes youth education on cooking, agriculture, health (+) • Strain on rural human resources, expertise, capacity, competition (-) • Limited public resources to facilitate innovation and new farmer training (-) 	<ul style="list-style-type: none"> • Urban perceptions of agriculture and rural places • Urban understanding of policy issues related to agricultural and rural communities • Farmers better informed of consumer demands • Level of public education on agriculture
Marketing to GM leads to collective knowledge of opportunities and exploration of other/newer markets	Rate of entrepreneurial innovation and idea sharing among farmers <ul style="list-style-type: none"> • Increasing collaborative networks of farmers, idea sharing at GM (+) • Limited intellectual network expansion with non-GM producers (-) • Immediate feedback with a larger consumer audience at GM (+) • Increased knowledge of and stimulus to traditional/new production practices, new products, impacts on profitability (+/-) • Greenmarket rules may limit innovation (-) 	<ul style="list-style-type: none"> • GM farmers share new ideas/marketing techniques with other GM farmers • GM farmers share new ideas/marketing techniques with rural area farmers • Change in farm products, varieties, and practices
GM formal and informal education leads to new kinds of value chain linkages and product development/processing initiatives	Product and value chain innovations to meet or create consumer demand <ul style="list-style-type: none"> • Creative class connections (creating an environment in which entrepreneurial people want to live and work) or gentrification, rural redevelopment (+) • Promotes linkages with local supply chain intermediaries (+) • Misalignment with rural technical, infrastructure capacity (-) • Limited farmworker sharing of ideas about what is required (-) 	<ul style="list-style-type: none"> • Farmers expand into processed products • Farmers increase links with downstream intermediaries • New or increased capacity of rural value chain infrastructure

¹ Reproduced from Table 1 in Jablonski, B.B.R., T.M. Schmit, J. Minner, and D. Kay. 2016. "Rural Wealth Creation Impacts of Urban-based Local Food System Initiatives: A Delphi Method Examination of the Impacts on Intellectual Capital." Working Paper WP 2016-13, Charles H. Dyson School of Applied Economics and Management, Cornell University, Ithaca, NY. July.

and sectors", this capital was chosen because it clearly illustrates a type of indicator that is not often considered in standard economic analyses (often referred to as a non-market valued good).⁶ Through the use of the Delphi Method, the panels of research and extension experts forecasted intellectual capital impacts in rural communities resulting from farm sales through the urban-based Greenmarkets (Table 1).

The proposed indicators largely focus on interactions between farmer vendors and customers at Greenmarkets, and were used to collect empirical measurements of these

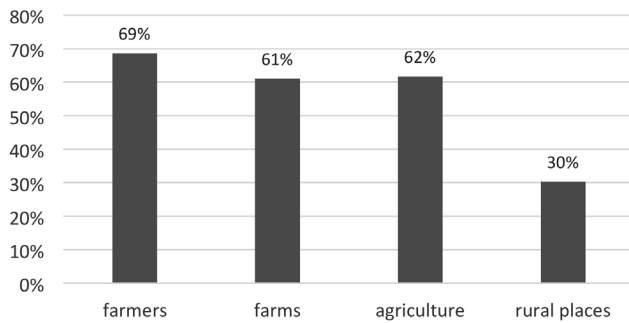
impacts through the farmer interviews and consumer surveys. Farm interview questions centered on how Greenmarket participation influenced changes in urban perceptions and knowledge of agricultural and rural issues, farmer idea sharing, and the process of new product development and value chain linkages.

More than 70% of farm respondents reported that they acquired at least some new ideas from selling at a Greenmarket, and 66% said they had already made changes to their farm business based on the new ideas (with an additional 9% intending to make changes in the near term).

⁶ WealthWorks. N.D. Wealth: The eight capitals. The Aspen Institute Communities Strategies Group. <http://www.wealthworks.org/basics/explore-regional-wealth-building/wealth-eight-capitals>.

Figure 2: Summary results of Greenmarket customer responses (yes/no) to “Shopping at Greenmarkets has influenced my perceptions about...”

Respondents (N = 824) checked all that applied.



Importantly in terms of rural development, 45% of farms reported they made changes to products sold in both rural and urban markets, and almost 70% had shared new ideas acquired at Greenmarkets with farmers or others in their home communities. Almost two-thirds of farm respondents reported changes in value-added (processed) product development due to participation in the Greenmarkets.

Questions for the consumer surveys focused on knowledge exchange and perception changes related to farmers, farms, agriculture, and rural places. The majority of Greenmarket customers reported that purchasing products at the Greenmarkets changed their perceptions about farmers (69%), farms (61%), and agriculture (62%), while only 30% reported that their perception of rural places had changed (Figure 2). Further, over one-third of survey consumers reported discussing ideas for a new and/or value added product with producers at the market.

Extension and Policy Implications

This research shows that the exchange of ideas and immediate feedback that occurs at the Greenmarkets impacts the stock of rural intellectual capital. Producers selling at urban farmers markets appear to act as a “node of transmission” for information and knowledge to pass between urban and rural communities, where participation by farmers in these markets affects both customers and

farmers. In particular, these effects are related to knowledge generation, awareness, and engagement in farming and agriculture development issues.

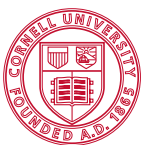
Interactions at the Greenmarkets created opportunities for entrepreneurial innovation and diversification in rural areas. Farmers not only got ideas for new and/or value added products at the markets, but they reported implementing and sharing these ideas with other farmers and entrepreneurs in their home (rural) communities.

Innovation in the farming sector has well documented indirect linkages, including supporting new kinds of linkages throughout the value chain (e.g., working with new processors or distributors). However, for net gains to be realized in rural areas, the appropriate stocks of assets must exist. Existing limitations in rural communities in regards to the ability to provide technical assistance and existence of appropriate infrastructure may limit the ability of rural communities to reap the benefits of these opportunities. In these cases, benefits may be more likely to accrue in urban places. Ensuring that technical assistance and appropriate infrastructure exist in rural places presents a clear opportunity for policymakers and extension educators to provide support.

While consumer interaction with farmers improved urban perceptions about farmers and agriculture, this effect was largely muted with respect to urban perceptions about rural communities more generally. This finding has interesting implications for policy development: notions of “farming” and “agriculture” appear to resonate more with urban consumers (and voters) than “rural places.” The urban majority may be more likely to support rural development policies that are framed to support “farming and agricultural” development because they value the vendors at their local farmers market.

Conclusions

This research demonstrates a preliminary empirical assessment of changes in one form of capital important to understanding longer-term rural wealth creation impacts that result from regional food systems. The results show that if we only measure the short-term economic impacts that result from food system initiatives, we will likely miss important impacts on rural places (both positive and negative in nature). The longer term goal of this research is to fully actualize a rural wealth creation framework to assess the impacts resulting from re-localized food system efforts across the country.



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