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Social Learning and Innovation at Retail Farmers' Markets*

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ABSTRACT Retail farmers' markets are seen as key institutions in a more "civic agriculture," but little is known about how they promote small business entrepreneurship. Drawing on research in economic sociology and economic geography, this paper examines the role of social learning in vendor innovation. Data from a 1999 mail survey of farmers' market vendors in California, New York and Iowa show that business innovation, as represented by intensity of vendors' innovative marketing practices and vendors' successful enterprise expansion, was modest. Social learning through engagement with customers contributed to more innovative marketing by vendors, while social learning through engagement with customers and fellow vendors increased the likelihood of vendors diversifying to additional markets beyond the farmers' market. Certain individual and enterprise characteristics also influenced vendor innovation. This suggests that, although important, the beneficial effects of social learning for vendors at farmers' markets remain moderated by human capital and structural factors.

Introduction

Farmers' markets in the U.S. have enjoyed a renaissance during the last 10–20 years (Festing 1998). As manifestations of a new "civic agriculture" that sees community well-being as attainable through local, collaborative problem-solving (Lyson 2001), farmers' markets contrast, often markedly, with the standardized, industrialized commodity

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markets of an increasingly globalized food and agricultural system. Civic agriculture emphasizes quality and specialty product innovation by producers, who are embedded in and informed by regionally based food relationships with consumer-citizens. Farmers' markets are arguably the flagship of civic agriculture, given their widespread distribution now throughout the U.S. and their longstanding role both as fora for community interaction and sites for small business development (Hinrichs 2000; Warner et al. 1999).

Even though vendors at farmers' markets participate for varied and often multiple reasons, it remains important to learn how farmers' markets shape the business practices and enterprise development of vendors. By what mechanisms do farmers' markets incubate small agricultural and rural businesses, which might contribute to household livelihoods and to local or regional economies? Few sociologists have systematically explored the rural economic development processes occurring in farmers' markets and their associated impacts. Gale (1997) has documented the overall increase in direct farm marketing in the U.S. in the 1990s, some of which takes place at retail farmers' markets, but cautions that the income involved remains comparatively small and concentrated in communities near urban areas. The numerous case studies of farmers' markets and surveys of vendors in specific regions have mainly described the farmers' market in terms of either customers or vendors (see, e.g., Andreatta and Wickliffe 2002; Davis 1978; Larson and Gille 1996; Roy and Jordan 1978; Vaupel 1989).

One exception is Lyson, Gillespie, and Hilchey's (1995) survey of New York farmers' market vendors, which suggests that farmers' markets demonstrate potential to serve as small engines of rural economic development by providing a bridge between the informal and formal economies. The authors note that "as a social structure linking the formal and informal economies, farmers' markets are organizationally flexible. They accommodate diverse personal motivations, products and organizational strategies. They allow producers to enter and leave easily, while enduring as an organization" (Lyson et al. 1995:109). Nonetheless, these authors contend that "we need more research on how farmers' markets function as business incubators" (Lyson et al. 1995:112).

We take up that challenge by examining how specific forms of social learning experienced by vendors at farmers' markets contribute to their innovation in marketing. New marketing approaches build on desired product attributes of freshness, wholesomeness, and distinctiveness and communicate about these to customers. Such approaches have not been part of the repertoires of many traditional agricultural producers (Hu 2002). We argue that farmers' markets serve as mediating social

institutions where informal networks encouraging such innovation can emerge. Farmers' markets afford intensive, periodic opportunities for vendors to interact directly both with their customers and with other farmers' market vendors. While such interactions are often social and greatly valued as such, they can also generate and circulate knowledge vendors might use to develop new products and creative ways of marketing them.

Agricultural Change and a Renaissance for U.S. Farmers' Markets

Since the height of the 1980s farm crisis, and intensifying with the ongoing structural transformation of agriculture, many farmers have abandoned conventional farming as a household livelihood strategy or have been expelled from it (Dudley 2000; Lobao and Meyer 2001). In response to the social and economic dislocations associated with agricultural and rural change, calls have resounded for more entrepreneurial approaches to the farm and rural economies, focused less on production and more on marketing (Nothdurft 1986; Nothdurft, Vaughan and Popovich 1986). Policymakers and planners have identified the need for different, more innovative strategies to create and nurture flexible and dynamic rural enterprises and foster greater diversification at both the enterprise and regional level (Greene 1988; Stark et al. 1988).

In agriculture, customer-oriented, direct-marketing approaches are hailed as one key to success for small- and medium-sized diversified enterprises and, indeed, may be essential innovations if small farms are to remain viable with growing corporate concentration and control in the conventional agricultural and food system (Volkmer 1999). Modest resources, such as USDA's Sustainable Agriculture Research and Education program, now exist for education and training on direct farm marketing, with complementary initiatives by some state and local governments and non-governmental organizations. Producers are exhorted to focus not on production quantity, but on product quality, to turn from thinking about commodities to thinking about end-consumers. In contrast to bulk commodity marketing, direct marketing allows producers to learn the needs, interests, and reactions of local people using their products. Countless manuals, conferences, and workshops discuss attitude changes and specific practices for farmers and rural businesspeople to pursue direct and specialty marketing effectively (see Corum, Rosenzweig and Gibson [2001] on farmers' markets). These constitute, in effect, a new entrepreneurial mandate.

Retail farmers' markets have become key contemporary market venues for such agricultural entrepreneurship. Well into the first half

of the 20th century, periodic farmers' markets served as places where U.S. farmers could convert their crops and animals into cash through face-to-face transactions (Erdman 1928).[1] However, farmers' markets waned both in number and vigor with the spread of refrigeration and rise of a national supermarket sector (Hu 2002; Lyson et al. 1995). The current revival of retail farmers' markets began in the 1970s, when federal government funds became available to state departments of agriculture to support direct marketing (Brown 2002; Hu 2002). From a low of as few as 100 nationwide in the 1960s, farmers' markets have steadily increased to more than 2800 in 2000 (Payne 2002), with growth in both urban and rural areas. Their present popularity can be traced to a confluence of factors, including producers' renewed search for more profitable alternatives to wholesale commodity markets, consumers' rising interest in farm-fresh and regional specialty foods, and also the cachet of colorful open-air markets as trendy arenas for consumption (Atkinson and Williams 1994; Holloway and Kneafsey 2000; Shakow 1981).

This renaissance of farmers' markets has piqued interest in how farmers' markets foster small business innovation and entrepreneurship and contribute to economic development for local communities (Bullock 2000; Cummings, Kora, and Murray 1999; Feenstra and Lewis 1999; Hilchey, Lyson, and Gillespie 1995; Lyson et al. 1995). Although vendors may have economic and social reasons in varying mixes for participating in farmers' markets (Lyson et al. 1995), vendor motivations, per se, are not the focus of this study. Instead, we examine the structures and resources shaping vendors' business practices at farmers' markets, focusing in particular on how social learning through engagement with others at farmers' markets contributes to innovation. But first we develop a conceptual framework drawing on literatures concerned with entrepreneurship, innovation and social learning.

Entrepreneurship, Innovation, and Social Learning

Entrepreneurship has long interested social scientists, particularly those analyzing processes of economic growth and development (Greenfield et al. 1979; O'Farrell 1986; Thornton 1999; Wilken 1979). Economist Joseph Schumpeter is often credited with having developed a comprehensive theory of entrepreneurship, specifying how it serves as a force

[1] A periodic market is one held on particular days, which are separated by days when the market is not held. Farmers' markets in the U.S. today are usually periodic markets, but not every periodic market is a farmers' market. See DeLigt (1993) on periodic markets in the Roman Empire and Halperin (1996) on how migration shapes urban and rural periodic market activity in the contemporary Appalachian region.

in economic development. For Schumpeter, entrepreneurship rests on "the carrying out of new combinations" (1934:78) of materials and processes, resulting in new products, methods, or markets. Schumpeter's notion of "new combinations" brings forward the idea of innovation, a theme popularized today in accounts of entrepreneurship in the small business literature and popular press.[2] More recently, social scientists, particularly economic geographers, have reworked Schumpeter's insights in an effort to understand the institutional and spatial dynamics of innovation across firms, industries, and regions. Such analysis focuses on how knowledge, technology, and organization combine to drive innovative product development and patterns of competitiveness in the so-called "new economy" (Mytelka 2001; Pratt 1997; Storper 1997).

But what exactly is innovation? Most fundamentally, it implies *newness*. Although innovation is sometimes narrowly seen as new, commercially exploitable technologies, it also encompasses new ways of doing things across diverse arenas of human activity (Menon 2001). Consistent with a practice centered understanding of entrepreneurship (Gartner 1989), developing new products, initiating more stream-lined and responsive business practices, diversifying markets, or forming new business alliances also offer examples of innovation. With growing industrialization and concentration in the food and agriculture sector, local and direct marketing, although not strictly "new," represents a form of innovation. Products may be innovative in their nutritional, ecological, and aesthetic departure from the standardized, globally sourced fare of supermarkets. More importantly, a market approach centered on proximity and personalized contact may also be innovative, particularly when contrasted to the anonymity and distance characterizing most producer-consumer relations today (Hinrichs 2000). Working from a broader practice-based conceptualization of innovation, what helps to foster innovation by those operating small food, agricultural, and rural-based enterprises?

Until recently, most social science accounts of entrepreneurship and innovation emphasized either the individual characteristics and capacities of entrepreneurs (the supply side) or the effect of regional structures (the demand side) (Thornton 1999). After World War II, research shifted away from a Schumpeterian concern with how innovation occurs (and contributes to economic development) and focused instead on identifying the individual characteristics—psycho-

[2] The other crucial component of entrepreneurship in Schumpeter's and others' formulations is risk-taking. Although a minor theme in our analysis, it is relevant how farmers' markets as organizations reduce costs and risks of operation for individual enterprises.

logical, demographic, and cultural—of entrepreneurs. This individualist approach is perhaps epitomized by the work of social psychologist David McClelland (1967) who sought to measure "need-for-achievement," a set of motivational attributes compelling people to become entrepreneurs. Although "need-for-achievement" has fallen out of analytical favor with most development and rural sociologists, individualist approaches to entrepreneurship and innovation remain evident in the attitudinal studies of researchers in psychology and management (see, e.g., Jackson and Rodkey 1994).

Cross-national research on entrepreneurship, however, has shown that psychological and other individual traits of entrepreneurs may have less influence on innovation and business development than government policies or regional economic and demographic conditions (Wilken 1979: 262). Regional governmental and economic structures can create environments more or less conducive to entrepreneurial initiatives and economic development (O'Farrell 1986) and, in this sense, structure contexts for innovation. Thus, public policies or even private sector initiatives enable some regions or industries to establish reservoirs of resources, such as financing or training, which increase the likelihood of successful and sustained innovation (Thornton 1999). Indeed, these structural factors would seem to assure the continued and dynamic relevance of space as innovation emerges unevenly in a globalizing economy (Amin and Thrift 1997).

Yet focusing primarily on the individual characteristics of entrepreneurs or on the regional structures in which they operate is to overlook other possible explanations of innovation. Economic sociologists have highlighted the importance of a social embeddedness perspective, which begins with the observation that economic activity is nested in and partially shaped by its larger societal context (Granovetter 1985). Market activities and behaviors, in this view, are shaped both by their structural insertion within formal social institutions and, at the level of social interaction, by the relations enacted in informal social groups and networks.

Farmers' markets offer an example of an embedded and embedding institution. As organized institutions bridging the formal and informal economies, farmers' markets provide a relatively low-risk, supportive social context for small business development (Lyson et al. 1995; Moline 1997). They can nurture small businesses by providing contexts that bring together helpful material and social resources. At most farmers' markets, the costs of participation remain low, which is attractive for undercapitalized small enterprises. Yet the opportunities for learning can be abundant. Some market managers (particularly those that are paid) provide formal or informal training for vendors in business management or direct marketing or route them to useful

resources. In this sense, farmers' markets are social institutions mediating economic activity.

Considering embeddedness in terms of actual social interactions is also relevant for understanding the entrepreneurial significance of farmers' markets. To the extent that more embedded ties facilitate diverse flows of information, mutual trust and commitment to collaborative problem-solving, they may ultimately improve some businesses' economic performance (Uzzi 1996). While it is naive to view embedded social ties or the cognate notion of social capital as socio-economic panaceas (Hinrichs 2000; Portes 1998), the very uncertainties of restructuring economies and the growing importance of information make such *socio*-economic relations more critical than ever (Storper 1997).

The concept of social learning, as developed most recently in economic geography, builds on these insights about social embeddedness at an institutional and social relational level. Emerging from research on high technology firms, industries, and regions in the new economy, accounts of social learning stress that innovation is a highly social enterprise and that the capacity of actors within and across firms to *learn* is critical to the innovation process (Wolfe and Gertler 2002). Studies of the "new economy" emphasize that firm survival and growth in a context of rapid technological change require heightened reflexivity centered on continual, even strategic, learning through interaction with suppliers and end-users of products and services (Storper 1997). Wolfe and Gertler (2002:2) write that:

> the centrality of learning for the innovation process stems from the recognition that the knowledge frontier is moving so rapidly in the current economy that simple access to, or control over, knowledge assets affords merely a fleeting competitive advantage. It is the capacity to learn which is critical to the innovation process and essential for developing and maintaining sustainable competitive advantage.

But does a concept of social learning developed to understand institutional and spatial change in economies mobilizing large amounts of research, finance, and technology apply in the seemingly slower, more modest world of farmers' markets? We believe that it does. Viewing farmers' markets as mediating social institutions,[3] we can see the

[3] Other community-based organizations and settings also provide a mediating context for social and economic action (Berger and Neuhaus 1977). Harkavy and Puckett (1991) note the strategic role of schools as focal centers for partnerships aimed at both high-tech business incubation and community revitalization. Pérez (2000:205) observes that local action groups associated with the EU's LEADER program have become crucial "learning laboratories for the practitioners of local rural development."

relevance of social learning for innovation by vendors at farmers' markets. Face-to-face interactions between vendors and customers foster more personal and immediate relations. Greater reflexivity about the form and content of economic activity becomes both possible and necessary. Beyond the gratifications of increased sentiment and affect that may emerge among vendors and their regular customers, these interactions can provide vendors with valuable information and insight about customer receptivity to products and services and generate ideas about new products and services (Sommer, Herrick, and Sommer 1981; Thompson 2001). Similarly, social learning, through experienced vendors mentoring newcomers and vendors observing one another and comparing notes, can help vendors strategize and steer their enterprises. In this sense, the social context of the farmers' market as a mediating institution provides an arena for social learning. Such learning should stimulate innovation, including new products and services and new places to market both.

Accordingly, this study of how retail farmers' markets foster innovation is guided by two main and interrelated research goals. First, we seek to determine the extent to which U.S. farmers' market vendors show evidence of innovation. Here we pose two specific questions. First, are farmers' market vendors using innovative marketing practices associated with the turn to a more "civic agriculture" and believed to support rural and community economic development? And second, viewing farmers' markets as informal business incubators for food, agriculture, and rural-based enterprises, does selling at farmers' markets enhance the likelihood that vendors will successfully expand their markets in other settings?

The second goal of this research is to determine if social learning at the farmers' market is related to evidence of innovation, both at the market, in terms of using more innovative marketing practices, and beyond the market, in terms of increasing vendors' sales in other venues. Given a history of other explanations for innovation, we examine the effect of social learning through engagement with customers and with other vendors, relative to relevant regional structural, individual, and enterprise factors that comprise the farmers' market experience and the situation of vendors. Evidence for the importance of social learning at farmers' markets can begin to establish the relational processes that shape farmers' markets as institutions fostering agricultural and rural community economic development.

Study Regions

We selected three states for study—New York, Iowa, and California—to capture a range of agricultural, economic, and cultural contexts and

also different histories of farmers' market development. New York, a Rustbelt state, has seen decline in its traditional agricultural sector centered on such commodities as milk, corn, and soybeans on family farms (Gillespie, Lyson, and Harper 1994). The conventional fruit and vegetable sector and the large-scale food manufacturing sector in New York are also in decline. On the demand side, however, New York includes several major population centers, which now rely mainly on food imported from out of state, due in part to the seasonality of agricultural production in New York and now dominant systems of year-around distribution. Affluent consumers, mainly from these centers, show growing concern about the freshness and healthfulness of their food and are beginning to value foods produced more locally. Other consumers, many from various immigrant groups, desire foods important to particular ethnic cuisines, and such foods may not be readily available through the conventional commercial food system. These conditions create many opportunities for farmers' market vendors to produce and sell fresh foods, organically-grown foods, ethnic foods, and local specialty items. There are now 228 farmers' markets in the state. Recently, with the support of Cooperative Extension and the New York Department of Agriculture and Markets, a group of farmers' market managers formed the Farmers' Market Federation of New York to promote and support farmers' markets, including providing low-cost liability insurance and educational opportunities.

In contrast to New York, California, a Sunbelt state, has many more large-scale farms and is very important nationally in fruit and vegetable production. Due to its agro-climatic conditions, the growing season in California extends virtually year-round, especially where water is available for irrigation. California also has major population centers (e.g., the Bay Area and Los Angeles Basin), where affluent consumers show growing concern about food quality, freshness and healthfulness, as in New York. In addition, its large and increasing Latino and Asian populations have distinctive food preferences. These conditions generate market opportunities for farmers' market vendors with fresh, organic, and local specialty foods. As a result, farmers' markets in California now number approximately 350, and a state farmers' market association has been active for some time. California's markets have more state regulation than do markets in New York or Iowa. Both farmers' markets and their individual food vendors are licensed and inspected to "ensure and maintain quality and wholesomeness of the products" (State of California 2001: Chapter

10.5). State certification of farmers' markets was first authorized in California in 1977.

In contrast to the other two states, Iowa is a major producer of conventional grain and livestock commodities (i.e., corn, soybeans, and pork) and currently receives more dollars in federal farm support payments than any other state (Anthan and McCormick 2001). Although historically significant in the state's agriculture, commercial production of fruits and vegetables is now minor. As in New York, agroclimatic conditions permit only seasonal production of most field-grown food crops. In the mid-1980s, prompted by the farm crisis, state officials sought to identify alternative markets for producers. The Iowa Department of Agriculture and Land Stewardship began tracking farmers' markets, finding about 60. Since then, one to two staff persons in the Department's Agricultural Diversification Bureau have been responsible for supporting farmers' market development in Iowa. Their efforts include annual training workshops for market managers and organizers, an occasional newsletter for market managers and vendors, a directory of Iowa farmers' markets for the general public, and occasional tours for vendors of farmers' markets other than their own. The number of Iowa farmers' markets has grown, particularly in small, rural places, standing now at about 125. A statewide farmers' market association was formally organized in 2002. Despite increased urbanization, Iowa's major metropolitan areas are both far fewer and much smaller than New York's or California's and, thus, provide a smaller base of affluent, urban consumers. Iowa remains more ethnically homogeneous than either New York or California, and, thus, ethnic food interest is less evident. Public concern about the quality and healthfulness of foods in the conventional commercial food system is growing, as is enthusiasm about "local foods," but both are less widespread than in the other two states.

Data and Methods

Sampling Procedures

Sampling proceeded in two stages. First, within states, farmers' markets were stratified based on the size of their host communities. For each state we randomly selected 60 farmers' markets in proportion to the overall prevalence of markets in that state in (a) urban places [50,000 population or more], (b) small cities [10,000–50,000 population], and (c) small towns [10,000 population or less]. To be considered for the study, a farmers' market also had to have existed for at least three years,

assuming that entrepreneurial effects would take time to emerge. Beginning with a telephone survey with the market managers at these 180 farmers' markets, we selected 20–24 of these markets in each state, again stratified by size of place and the main geographic regions within each state, and conducted a mail survey of farmers' market vendors.[4] The sampling frame for the mail survey consisted of vendor lists provided by managers of these selected markets. If a market had 20 or fewer vendors in total, we surveyed all the vendors at that market; if it had more than 20 vendors in total, we drew a random sample of 20 vendors. Many vendors sell at multiple markets and, thus, some appeared more than once in our samples; such vendors were randomly assigned to one of the markets. To emphasize that we were seeking information about a particular market, we used customized questionnaires that named this market frequently throughout. We will refer to the market through which a respondent was included in the study as the "surveyed market." We did not measure the degree of vendor identification with this particular market.

Survey Instrument

The mail survey was developed through collaboration among the researchers in the three states. A previous farmers' market study conducted in New York provided a starting point (Hilchey et al. 1995; Lyson et al. 1995). The questionnaires for Iowa and New York were almost identical and 10 pages long. The questionnaire for California omitted some items included for New York and Iowa and was seven pages long. We administered the questionnaire in the spring of 1999, following a modified Dillman (1978) procedure. We asked vendors for their experiences and views concerning the surveyed farmers' market and also farmers' markets more generally.

The usable response rate for the survey was 56 percent for the California sample, 68 percent for the Iowa sample and 59 percent for the New York sample. The pooled sample of 569 farmers' market vendors represents the vendor population at established farmers' markets in these three states.[5]

[4] We favor the term "vendor" because not all persons selling at farmers' markets are agricultural producers. Vendors potentially include crafters, producers of prepared foods, as well as resellers of produce in some markets.

[5] However, note that the representativeness of the sample for large urban markets in New York State is diminished by the decision of the New York Green Market administration not to participate in the vendor survey part of the project.

Dependent Variables

Intensity of innovative marketing practices. Innovation in direct marketing involves actions that diversify, change, or fine-tune product lines and increase forms of contact with current and prospective customers. Vendors reported whether or not they had used six specific practices frequently discussed in the practical literature on selling at farmers' markets (see Corum et al. 2001). We asked whether, since selling at the farmers' market, vendors had (1) "added new categories of products (like a fruit vendor who added baked goods, or a vegetable vendor who added handcrafted birdfeeders);" (2) "expanded existing product lines (like a vegetable vendor who added a new variety of pepper or a potter who added a new kind of vase);" (3) "begun additional processing to add value to one or more products;" (4) "developed a mailing list of your regular farmers' market customers;" (5) "provided opportunities for farmers' market customers to visit your farm;" and (6) "made new business contacts through the market, e.g., with restaurants, stores." A summated measure of scores for the six individual practices provided one dependent variable, intensity of innovative marketing practices.

Expansion beyond this farmers' market. Developing new markets can be seen as a business innovation representing both growth and reduction of risk through diversification. Successful expansion beyond one farmers' market can also indicate a business incubation effect by that farmers' market. We asked a fixed-choice question: "How do you think selling at the X market (i.e., the market through which the vendor was surveyed) has affected sales of your products in other outlets?" and created a dichotomous variable where "increased sales in other outlets" was the reference category.

Independent Variables

Regional and community context. Three context measures were used. First, given the history of farmers' market development in California and a longer, often year-round season at farmers' markets in California, we expected higher levels of innovation among California vendors. A region dummy variable posed California as the reference category. Second, we expected markets in larger towns to provide more resources fostering innovation than markets in smaller places. Larger towns have more potential customers, creating more abundant and diverse opportunities for vendors to interact with and learn from local people. A community dummy variable posed large farmers' market host community (i.e., population greater than 50,000) as its reference category. Finally, we expected markets having more vendors to show more vendor innovation. Markets with a greater density of vendors offer

more (and more varied) vendors to observe and with whom to interact. Markets with more vendors tend also to attract more customers, which increases opportunities for social learning. A market size dummy variable posed large market (i.e., 20 or more vendors participating over the course of the season) as its reference category.

Individual characteristics. We included three socio-demographic variables as controls. First, given limited evidence for "third age (i.e., elder) entrepreneurship" (Curran and Blackburn 2001), we expected younger vendors to show higher levels of innovation. Age was measured as years reported at last birthday. Second, given women's innovations in other types of direct agricultural marketing, such as community supported agriculture (Wells and Gradwell 2001), we expected women vendors to demonstrate higher levels of innovation. Sex was coded 0 = male and 1 = female. Finally, we expected more formal education, potentially increasing analytical and creative skills, to correspond to higher levels of innovation as measured in this study. Highest level of formal education was measured by a seven-category ordinal variable (1 = grade school; 2 = junior high school; 3 = high school; 4 = some college; 5 = associate degree; 6 = bachelors degree; 7 = graduate degree).

Enterprise characteristics. We included various enterprise characteristics to account for how differences in vendors' resources and orientations to their enterprise might relate to innovation. Commonly used in sociological studies of agricultural change (Lobao and Meyer 2001), such measures help connect this analysis of farmers' markets enterprises to the more general literature on farming. Dummy variables were used to reference the three most common types of farmers' market vendors in our sample.[6] The mutually exclusive types are (1) full-time farmer, (2) part-time farmer or market gardener, and (3) food business. "Dependence on this farmers' market" was measured as the percent of the vendor's enterprise's total sales at the surveyed farmers' market. Higher scores on this indicator suggest less diversification overall of market outlets for the vendor's enterprise. Two indicators measured labor resources. The first was a summated measure of "*paid* persons working at the farmers' market enterprise in 1998," who were either full-time/year around or part-time/seasonal and either family or non-family members. The second was a summated measure of "*unpaid* persons working at the farmers' market enterprise in 1998," who were either full-time/year around or part-time/seasonal and either family or non-family members. Greater labor availability,

[6] Other vendor types were either "crafter" or "other" (usually a mix of various vendor types; i.e., selling produce, some baked goods, and/or some crafts).

whether paid or unpaid, can be important in doing more innovative, sometimes time-consuming, direct marketing. "Years vendor has sold at any farmers' market" permits assessment of whether experience over time at farmers' market enhances or inhibits vendor innovation. "Number of days vendor sold at the surveyed farmers' market during the 1998 season" measured whether simply "being there" at the market more regularly over the season increases innovation and thus takes account of the gradient between casual, intermittent vendors and serious, all-season vendors. Finally, "Gross sales at all farmers' markets" provided an indication of enterprise scale. It was measured by a ten-category ordinal variable (1 = $0–$999; 2 = $1,000–$2,499; 3 = $2,500–$4,999; 4 = $5,000–$9,999; 5 = $10,000–$19,999; 6 = $20,000–29,999; 7 = $30,000–$49,999; 8 = $50,000–$99,999; 9 = $100,000–$249,999; 10 = $250,000 or more). Very small enterprises can enter and sell relatively easily at many farmers' markets (Lyson et al. 1995), but innovation in marketing may be undertaken more readily by larger, presumably more commercial, enterprises, due to their greater resources and stronger interest.

Social learning at farmers' markets. Two indices measured vendors' social learning at the farmers' market. "Social learning through engagement with customers" was created by summing and averaging responses regarding benefit for the vendor at the surveyed farmers' market from (1) direct feedback from customers, and (2) opportunities to educate customers about products and services (Pearson's R for the two items = .64; alpha = .78). "Social learning through engagement with other vendors" was created by summing and averaging responses regarding benefit for the vendor at the surveyed farmers' market from (1) encouragement and social support, and (2) business ideas and information from other vendors (Pearson's R for the two items = .57; alpha = .72). Both were measured on a five point scale, ranging from 0 = "none" to 4 = "very much."

Results and Discussion

Descriptive Analysis

Dependent variables: Innovation. Table 1 shows some evidence of the innovation seen as typifying more customer-attuned agriculture, food, and small rural enterprises. However, adoption of six commonly discussed marketing practices was not high among the farmers' market vendors; results in Column 1 show that on average vendors engaged in just 2.07 of the practices. Levels varied significantly across the three states, with California highest at 2.38 and Iowa lowest at 1.78, as might

Table 1. Descriptive Statistics of Dependent and Independent Variables

	All Vendors ($N = 569$)	New York ($N = 135$)	Iowa ($N = 225$)	California ($N = 209$)
Dependent Variables				
Number of innovative practices (range = 0–6)	2.07	2.09**	1.78	2.38
Selling at this farmers' market increased sales in other outlets (percent yes)	24.6	24.6	20.6	28.9
Independent Variables				
Market host community population of 50,000 or more (percent)	26.7	21.5**	20.4	36.8
Market having 20 or more total vendor participants (percent)	67	43**	64	90
Age of vendor	54	54**	57	51
Female vendor (percent)	47	49**	54	35
Vendor education (1 = grade school, 7 = graduate degree)	4.36	4.03**	3.95	5.01
Full-time farmer (percent)	33.9	33.3**	19.1	50.2
Part-time farmer/market gardener (percent)	37.7	31.9**	48.9	29.5
Food business (percent)	10.8	10.4	12.4	9.2
Percent of enterprise sales at surveyed farmers' market (mean)	44	43**	61	25
Total paid workers for enterprise	4.2	2.1**	1.6	8.3
Total unpaid workers for enterprise	1.6	1.8	1.5	1.5
Years vendor has sold at any farmers' market	9.2	11.3*	8.8	8.3
Number of days vendor sold at surveyed farmers' market during 1998 season	24	23*	21	29
1998 gross sales at all farmers' markets (1 = <$1000; 10 = $250,000 or more)	3.85	3.36**	2.71	5.40
Social learning through engagement with customers (0 = none; 4 = very much)	2.86	2.81*	2.72	3.05
Social learning through engagement with other vendors (0 = none; 4 = very much)	2.23	2.20	2.25	2.24

* $p < .01$; ** $p < .001$.

be expected, given the states' contrasting demographics, urbanization patterns, and farmers' market development histories.

Similarly, although the ability of farmers' markets to "incubate" small agricultural and rural businesses has been posited (Hilchey et al. 1995; Lyson et al. 1995), only about one-quarter of vendors (24.6 percent) in this study reported that selling at the surveyed farmers' market had helped increase their sales in other outlets. Average proportions varied

across the three states, but the differences were not statistically significant.

Independent variables. Table 1 also shows that slightly more than 26 percent of the vendors were surveyed through a farmers' market where the host community had a population of 50,000 or more. Sixty-seven percent of the vendors were surveyed through larger farmers' markets (20 or more total vendor participants over the season). The average vendor age was 54, and 47 percent of vendors were female. The average level of formal education was "some college." The largest proportion of vendors was part-time farmers/market gardeners (37.7 percent), followed by full-time farmers (33.9 percent) and food business vendors (10.8 percent). On average, the surveyed farmers' market accounted for 44 percent of vendors' total enterprise sales. Vendors had slightly more than four paid workers of all types on average, while 1.6 different unpaid workers helped with their enterprises. The number of years vendors had sold at any farmers' market was on average 9.2. The average number of market days per season vendors had sold at the surveyed farmers' market was 24.[7] Gross sales at all farmers' markets vendors attended in 1998 were, on average, nearly 4, indicating the category $5,000 to $9,999. Vendors reported moderate levels of social learning from engagement with customers at farmers' market (2.86); they reported somewhat lower levels of social learning from engagement with other vendors (2.23).

Columns 2, 3 and 4 of Table 1 permit comparison of New York, Iowa, and California farmers' market vendors for the independent variables. California vendors were most likely to be surveyed through a market with 20 or more vendors and one located in a town of at least 50,000 population. Vendors tended to be older in Iowa and younger in California. Iowa had the largest proportion of female vendors, while California had the smallest. Formal education was higher for California vendors than for New York or Iowa vendors. In California, more than half of vendors identified themselves as full-time farmers. In Iowa, almost half (48.9 percent) of vendors identified themselves as part-time farmers/market gardeners. Iowa vendors had the highest sales dependence on the surveyed farmers' market (61 percent of enterprise sales), while California vendors had the lowest (25 percent). California vendors, on average, hired more paid workers of any type than vendors in the other two states. New York vendors had the most experience selling at farmers' markets (11.3 years). Not surprisingly, given a longer season, California vendors sold more days/season at the surveyed farmers' market than did

[7] It is not uncommon for farmers' markets to hold two "market days" per week, but at different times, e.g., Wednesday evening and Saturday morning.

New York or Iowa vendors. Gross sales at all farmers' markets were above "5" ($10,000–19,999), on average, for California vendors, while for Iowa vendors they were less than "3" ($2,500–4,999). Finally, California vendors reported higher levels of social learning through engagement with customers at farmers' markets than vendors in Iowa or New York.

Multivariate Analysis

Intensity of innovative marketing practices. We used ordinary least squares regression to examine the influence of regional-structural, individual, enterprise, and social learning variables on vendors' intensity of innovative marketing practices. We entered each category of variable into the regression model separately, concluding with a single model that included all the variables in sequence (see Table 2).

In model I, region (California) is the only statistically significant variable, but the explanation of variance is very low. Adding in individual vendor characteristics in model II, level of formal education is significant, in addition to region. Adding in enterprise characteristics in model III, total number of market days/season selling at "their" farmers' market and gross sales at all farmers' markets are significant, in addition to level of formal education. California is no longer significant, while being a female vendor has become significant. In the final model, the four significant variables in the previous model remain significant. In addition, social learning through engagement with farmers' market customers is significant.

Based on the beta scores, social learning at farmers' markets most strongly influences vendors' intensity of innovative practices. Significantly, it is social learning between vendors and customers—the end users of vendors' products and services. Greater attention and receptivity to the customer relationship on the part of vendors facilitate and encourage more use of marketing practices now seen as innovative and important for small food and agricultural enterprises. Social learning through engagement with other vendors, however, does not influence vendors' intensity of innovative practices. This latter finding calls into question the claim that observation, informal training, and mentoring among vendors are always important learning dynamics at farmers' markets that increase entrepreneurial activity. Vendors may interact, but in ways that tend to reinforce the positive aspects of what they do, *as they currently do it.* Furthermore, while some vendors in some markets may enjoy supportive, even collaborative, relations with other vendors, competitive business relations are certainly possible. Vendors at farmers' markets sometimes vie for customers or stall space or harbor long-standing personal antagonisms (Andreatta and Wickliffe 2002; McGrath,

Table 2. Ordinary Least Squares Regression of Intensity of Innovative Practices on Model Variables (Unstandardized Coefficients in Parentheses)

Independent Variable	I	II	III	IV
Context				
California market	.164*** (.487)	.119* (.353)	.020 (.05918)	−.011 (−.03277)
Host community 50,000 population or more	.002 (.00821)	.010 (.03464)	−.064 (−.216)	−.051 (−.171)
20 or more total vendor participants in market	.058 (.174)	.048 (.143)	.008 (.02397)	.004 (.01207)
Individual characteristics				
Vendor age		−.096 (−.01005)	−.092 (−.009648)	−.078 (−.008117)
Female vendor		.080 (.229)	.120** (.345)	.113** (.325)
Vendor level formal education		.172*** (.155)	.166*** (.150)	.153*** (.138)
Enterprise characteristics				
Years vendor has sold at any farmers' market			−.031 (−.005095)	−.016 (−.002612)
Total paid workers			−.002 (.0001142)	−.005 (−.0003579)
Total unpaid workers			.037 (.02875)	.035 (.02733)
Number of days vendor sold at surveyed farmers' market during 1998 season			.164*** (.009759)	.154*** (.009206)
1998 gross sales at all farmers' markets			.224*** (.127)	.229*** (.130)
Social learning at the farmers' market				
Through engagement with customers				.241*** (.358)
Through engagement with other vendors				−.052 (−.07159)
Constant	(1.859)***	(1.658)***	(1.124)**	(.251)
Adjusted R^2	.031	.079	.142	.183

* $p < .05$; ** $p < .01$; *** $p < .001$.

Sherry, and Heisley 1993). It appears simplistic to suggest that mere proximity between vendors at the farmers' market ensures cooperation, solidarity, and a context for social learning that prompts innovation.

In addition to the strength of one social learning variable, how other variables affect vendors' intensity of innovative practices is noteworthy. Scale of enterprise, as judged by total farmers' market sales, confers advantages in implementing innovative marketing practices (Feenstra et al. 2003). Vendors with larger, presumably more commercial

enterprises, use more innovative marketing practices, in part because such practices can improve business and the income from the farmers' market enterprise constitutes a bigger livelihood stream for such vendors. Yet total number of paid workers, a labor variable that also indicates scale, was not important, suggesting possible differentiation among "large" vendors. For example, some more traditional labor-intensive farm operations, especially in California, may try out farmers' markets, but resist or reject their distinctive marketing culture.

Another enterprise variable may shed further light on these relationships. Total number of market days/season also significantly increases intensity of innovative marketing practices. Simply attending and selling at the farmers' market more often increases the opportunity for social learning. Vendors attending more market days during the season have more opportunities to observe and interact with customers and also more opportunities to make money. Sweet corn vendors attending for only a few weeks in high summer are not likely to use many of the innovative practices considered here, nor may they need to.

Two individual characteristics—having more formal education and being female—also significantly influenced intensity of innovative practices. Human capital is useful in learning about and implementing the innovative practices under consideration here. People with more formal education draw on practical skills and reflexive dispositions learned in university and other non-farm work settings, which can enhance their application of customer-oriented direct agricultural marketing (Gilg and Battershill 1999). As marketing and direct marketing, in particular, have become more sophisticated about collecting and using diverse forms of "information," formal education can confer an advantage.

Although more modestly, vendor's gender also influences innovative marketing practices. Half of the innovative marketing practices explored here involved attention to product line and merchandising, while the other half involved modes of contact with current or prospective customers. An essentialist might argue that women are more naturally inclined to the "care work" entailed in detail-oriented and customer-intensive marketing practices. However, the longstanding social organization of gender in production agriculture is surely relevant. Through the post-war years, male farmers have produced and sold undifferentiated bulk commodities. As that model erodes, the different assumptions and requirements of direct marketing—particularly the emphasis on social relationships and responsiveness to customers—may put off or elude some male farmers (Hu 2002). This social organizational disjuncture may create special openings for women vendors (some of them wives of those selfsame male commodity

farmers) at farmers' markets. It could be noteworthy that California, the state showing the highest levels of innovation at farmers' markets and the highest gross sales at farmers' markets, is also the state with the smallest proportion of female vendors in this study (see Table 1). Further study is needed on the changing role of female vendors as commercial traffic at farmers' markets increases.

Despite some predicted relationships, the final regression model for intensity of innovative practices yields an adjusted R-square of only .183. This suggests limits to the explanatory power of the overall model we have examined. Although customer-based social learning contributes to intensity of innovative marketing practices, farmers' markets are complex and varied institutions across the U.S., and vendors are far from a homogeneous population.

Farmers' market increasing vendor's sales in other outlets. We also regress *farmers' market increasing vendor's sales in other outlets*, another measure of innovation, on the same general categories of variables, as well as on intensity of innovative marketing practices (see Table 3). We argue that more use of innovative marketing practices *at* a farmers' market enhances the likelihood that a vendor will expand *beyond* the farmers' market. Enterprise variables for this model include dummy variables for each of the following: 1) full-time farmer vendor, 2) part-time farmer/gardener vendor, and 3) food business vendor. These different vendor types represent overall orientations to the farmers' market as a place of business and hold different possibilities for diversification beyond the farmers' market. The dichotomous dependent variable is based on the vendor's report (yes or not yes) that selling at the farmers' market has increased their sales in other outlets. We employ a stepwise backward conditional logistic regression method (Menard 1995) to illuminate as many relationships as possible. We present both the full model and the final model, which represents the most efficient model, after removing one variable at a time.

The results provide some support for our hypothesis that innovation in the form of expansion of sales to other venues is more likely for vendors reporting social learning at the farmers' market. A control variable, percent of total enterprise sales at the surveyed farmers' market, was significant ($p < .05$), as expected. We know that vendors vary in their dependence on any one farmers' market (see Table 1); vendors who relied *less* on the surveyed farmers' market as an outlet were somewhat more likely to report that selling at the surveyed farmers' market had increased sales in other venues. *Having* other outlets is necessary if sales elsewhere are to increase.

Vendors who identified themselves as food businesses were signifi-

Table 3. Logistic Regression of Variables Associated with the Farmers' Market Experience Increasing Sales in Other Outlets (Odds Ratios in Parentheses)

	Full Model	Reduced Model
Context		
California market	.3170 (1.3730)	—
Host community >50,000 population	−.2343 (.7911)	—
20 or more total vendor participants in market	−.0962 (.9083)	
Individual characteristics		
Vendor age	−.0002 (.9998)	—
Female vendor	−.1161 (.8904)	—
Vendor level formal education	−.0576 (.9441)	—
Enterprise characteristics		
Full-time farmer vendor	−.2170 (.8049)	—
Part-time farmer/gardener vendor	−.2265 (.7973)	—
Food business vendor	.9775** (2.5386)	1.0604*** (2.8875)
Percent of total enterprise sales at surveyed farmers' market	−.0068* (.9932)	−.0079** (.9922)
1998 gross sales at all farmers markers	−.0044 (.9956)	—
Intensity of innovative practices	.3666*** (1.4428)	.3454*** (1.4126)
Social learning at the farmers' market		
Through engagement with customers	.3696** (1.4472)	.3749** (1.4548)
Through engagement with vendors	.3299** (1.3908)	.3410** (1.4064)
Constant	−3.1691***	−3.6175
−2 Log-likelihood	485.461	488.062
Pseudo R^2	.206	.200

* $p < .10$; ** $p < .05$; *** $p < .001$.

cantly more likely to report that their farmers' market participation had led to expanded sales in other venues ($p < .001$). This may be due to the amenability of selling prepared food products (e.g., baked goods, jams, salsas, hot snacks, and cold foods) to restaurants, delis, caterers, groceries, or specialty shops. Food business vendors find that farmers' markets can increase their visibility with diverse prospective buyers. In

addition, individual food business vendors can approach a variety of markets, while individual fresh vegetable and fruit sellers may have fewer alternative market venues beyond CSAs and possibly some institutional markets (i.e., schools, nursing homes, hospitals). To develop and maintain non-farmers' market sales outlets, most fresh vegetable and fruit sellers also face greater challenges of seasonal product flow than do food business vendors.

As expected, vendors with greater intensity of innovative marketing practices were much more likely to report increased sales in other venues ($p < .001$), suggesting that transition to more innovative practices within the farmers' market enhances market development in other settings. Working on one's product line and making contact with prospective customers in new ways at one market provides training and builds confidence to sell in other venues beyond the farmers' market. Thus, a fuller repertoire of innovative marketing practices in the farmers' market prepares vendors to expand and be commercially successful in other market venues.

Finally, both social learning variables were also significant, although more modestly ($p < .05$). Vendors who reported more social learning through engagement with farmers' market customers and with farmers' market vendors were more likely to report innovation in the form of increased sales in other venues. Successfully diversifying one's markets—making new sales in other venues—is an important measure of innovation, as well as business incubation. Information from customers about the strengths and weaknesses of products and reactions to how products are processed, packaged, or delivered can be deployed by vendors as they "fledge," and try out new markets. But diversifying one's markets also builds on social learning through engagement with other vendors in the farmers' market. In contrast to adopting specific innovative marketing practices in "this farmers' market," diversifying to other markets, whether or not they are also farmers' markets, explicitly represents a form of business expansion. Here, learning from other vendors matters. Other vendors can provide emotional support for this step of enterprise development, as well as pragmatic tips and advice on how to approach and retain new clients. Thus, vendors who are perhaps gentle (or not-so-gentle) competitors within the immediate sphere of the farmers' market become allies, supporters, or coaches for launching efforts elsewhere.

Conclusions and Implications

The social vitality and commercial success of enterprises now selling at retail farmers' markets concerns advocates of "civic agriculture," rural

development practitioners, and scholars of rural economy and society. Using data from farmers' market vendors in California, Iowa, and New York, we have moved beyond solely individualist or regional-structural accounts by exploring a social embeddedness perspective. In this perspective, farmers' markets are social institutions facilitating the social learning that in turn can lead to innovation. But although social learning by vendors (and especially social learning through engagement with customers) contributed to the forms of innovation examined in this study, it does not offer a complete explanation for innovative processes. Individual and enterprise characteristics were also important, suggesting that vendor innovation at farmers' markets is neither a simple nor straightforward process.

The relatively modest levels of marketing innovation reported by vendors raise several issues important for thinking about innovation and civic agriculture. First, some vendors may have experienced little exposure to ideas and information about marketing and business development either at a farmers' market or elsewhere. Were they to have such information, they might implement more of these practices and attempt to expand their businesses. Bringing into the analysis additional market-level factors, such as specific formal and informal practices at markets (e.g., business training or workshops; market rules and organization; paid vs. unpaid market manager; scheduled social events), could clarify how the farmers' market context either constrains or encourages vendor innovation.

Second, some vendors may know about various innovative practices and wish to employ them to improve their commercial prospects, but face personal or enterprise barriers in doing so. Planning and implementing more customer-responsive marketing initiatives can be time-consuming and potentially challenging for farmers' market vendors, many of whom have substantial outside work and family commitments. "Sideline" enterprises are undertaken in diverse circumstances, and can lead to economic practices that appear less than "rational" when viewed only through the lens of commercial enterprise success (Hinrichs 1998). Policies and programs to support and encourage farmers' market enterprises require careful and realistic consideration of the distinctive assets and constraints facing these efforts, as is true in micro-enterprise development more generally (Servon 1999).

Finally, some vendors may know about more innovative practices and explicitly reject them, due to personal disinclination or general lack of interest in "marketing" (Hu 2002). Normative overtones resonate through many accounts now promoting more entrepreneurial models for small agricultural and rural enterprises. But farmers' market enterprises are diverse. Some traditional farmers plainly prefer driving

a tractor to chatting with customers (Hu 2002). Other vendors sell at the farmers' market more as a recreational sideline, where making money and developing a business are subordinated to enjoying the market as social event. Although "minor" income from small, informal enterprises *can* be of critical importance for rural families and households (Gillespie et al. 1994; Hinrichs 1998), some vendors may nonetheless view all or part of the "entrepreneurial mandate" as outside their goals and interests.

The conceptualization of innovation developed here includes newness and distinctiveness in production. Just as "new economy" firms may develop, bring to market and even patent their high technology products, some farmers' market enterprises may produce and sell new specialty crops or unusual value-added products. However, innovation in this study equally emphasizes new approaches to exchange and distribution. Direct marketing by small food and agricultural enterprises represents a marked departure in practice and spirit from conventional commodity marketing by structuring closer relations between producer and end-consumer. In the literature examining the "new economy," innovation is recognized as key to the competitiveness of firms and regions, which in turn spurs economic growth (Pratt 1997; Wolfe and Gertler 2002). Yet within the different framework of civic agriculture, competitiveness and economic growth may represent unrealistic emphases (Lyson 2001), as well as overly narrow goals for innovation by vendors at farmers' markets. Innovation needs to be analyzed, valued, and promoted as a *socio*-economic process where development and equity outcomes are considered in tandem (Menon 2001).

The concept of social learning developed in this study also deserves further attention. It accords with the tinkering and micro-adjustment that has long characterized farming and acknowledges the growing importance of reflexivity in small business practice and development. While social learning is not new (businesses, after all, have always studied and learned from their competitors), it holds renewed significance for enterprises making their way in uncertain economies no longer predicated on standardized, mass production and marketing (Storper 1997; Wolfe and Gertler 2002). Social learning across the supply chain can encourage innovation, as suggested by the significance of social learning through engagement with customers in this study. Beyond helping small agricultural and food enterprises to distinguish themselves from mass market producers, social learning between producers and consumers also makes environmental and ethical performance of businesses more visible, and can thereby help to improve both. However, social learning within functional categories

(i.e., vendor to vendor) may sometimes involve more ambivalent social relations and hence have less pronounced effects on innovation. Closer study of *what* knowledge is developed through different learning interactions, and of *how* it is deployed by actors of different means and resources would clarify the usefulness of social learning in understanding economic change and development.

Based on our research in California, Iowa, and New York, we conclude that farmers' markets can serve as mediating social institutions that promote social learning and innovation by vendors. Yet given the possibility, the promise is not yet widely fulfilled. This does not mean that all farmers' markets can or should develop to be more commercial. Rather, a broad, flexible understanding of innovation that takes account of both economic and non-economic interests of vendors and other parties to farmers' markets would be most consistent with a civic agriculture framework. Municipalities, farmers' market organizers, and community supporters, such as "Friends of the Market" groups, can plan, design, and reorganize farmers' markets to create physical spaces and social climates where opportunities for mutually valued social learning are encouraged. Such changes must move beyond cynical pursuit of personal relationships in the effort to "get ahead." They can build economies in small but not insignificant ways, while also preparing us to work reflexively and more collaboratively on the wider challenges of our time.

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