The Influence of Local Selling Decisions on Organic Farm Incomes

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Introduction

Organic farmers must decide how much of their output to sell locally (within 100 miles of the farm). This decision is based on factors both observable (farm acreage, crop choice, farmer demographics) and unobservable (familiarity with marketing channels, entrepreneurial skill). The level of commitment to local selling has significant influence on earned income. This poster estimates the earnings gap between a producer choosing a high level of local selling (more than 75 percent of output locally) and producers with a more regional or national focus, allowing for selectivity effects. We focus on the earnings that accrue to farmers, not prices to consumers or marketing costs.

Economic Model

In the organic sector, observed marketing choices reflect a choice by producers, who SELECT a marketing channel (i.e., selling directly to consumers vs. wholesale/retail) and area that suits their skill levels. Our econometric model handles the sample selection problem: the local selling decision is observed as a discrete, ordered choice (ordered probit model). Survey data from the Organic Farming Research Foundation (on the marketing choices of organic farmers and income earned by producers selling across local, regional, and national markets) confirm the appropriateness of our model. Two important parameters are as follows:

- LOCATION. Sales are considered ***local*** if made within 100 miles of the primary farm, ***regional*** if 100-500 miles from the farm, and ***national*** if more than 500 miles away.

- VOLUME. A producer is regarded as an intense local seller if more than 75% of output is marketed locally. Lesser levels of local commitment are 25-75% of output, and less than 25%. National organic producers market all their output more than 500 miles away

Estimation Results

Farmers who sell the highest **proportion of their output in local markets** attain the lowest income levels. Nearly 2 out of 5 organic producers sell less than 25% of their output locally, and their incomes average $195,000. Over half of organic farmers sell more than 75% locally, and their incomes average $90,000.

Organic farmers with a high commitment to local marketing are **intense users of the Internet** compared to the general farm population.

- Nearly 4 out of 5 farmers in this category (over 75% of output sold locally) have Internet access.
- Over half of these farmers use the Internet for reading or searching for farm news, looking for organic production information, communicating with other farmers, or checking the weather.

The importance of accounting for **selectivity bias** is confirmed. The significant selection effect indicates that unobservable variables influence both the decision to use local outlets and the income earned by organic producers.

- Producers who are planning to sell more in local outlets should expect their earnings to decline. In disregarding selectivity, the predicted decline in earnings is **OVERSTATED** by at least 5.5%.

- The expected earnings decline for the producer with limited local sales (under 25% of output) is **UNDERSTATED** by 7.31% when the selectivity effects are neglected.

Producer-specific earnings gaps (from the choice to market locally) can be calculated by incorporating demographic and farm characteristics of the producer. Farmers with smaller acreage and more experienced producers tend to market the largest shares of their output in local markets

- The earnings decline for female organic farmers is overstated by 4.29% when selectivity bias is disregarded, whereas the earnings decline is overstated by 5.95% for male farmers.
- Experience in marketing organic products has a positive impact on organic farm incomes, even after accounting for selectivity effects.

Conclusions and Further Research

Our results provide information for organic farmers to assess expected farm earnings if they commit to various levels of local sales. We focus on the earnings that accrue to farmers as a key factor that has been neglected in discussions promoting local sales by farmers. The econometric results confirm that the selectivity model is appropriate for the analysis of the local selling decision.

- An organic producer committed to local sales tends to achieve lower earned income than other producers. Estimates of organic earnings that control for selectivity reveal that producers who choose to sell the bulk of their product to local markets should expect decreased earnings compared with an identical producer committing less than 25% of output to local markets.
- Selectivity effects work to reduce the expected drop in earnings when producers sell to local markets by approximately 5.5%.

Our model can be used to predict changes in the earnings of producers who considering

committing more sales to local markets. Extension agents, crop consultants, and marketing analysts can adapt this information to maximize the use of all market outlets for a given farmer.

Additional research could identify the channel management techniques used by organic producers who have committed to maximize their returns from local sales. Alternative types of contracting arrangements and the relative emphasis on price competition or service provision across each channel are additional elements that should be investigated to assist organic farmers in monitoring channel performance and adjusting their marketing strategies.

Summary of Main Variables from Model

Variable Descriptions and Summary Statistics B Output Sold Through Local Outlets

		Mean and Standard Deviation for Share Sold Locally		
Variable	Description	<25%	25% to 75%	>75%
INC	Total gross organic farming income, in thousands of U.S. dollars (US$)	195.73 (682.42)	216.40 (907.91)	90.30 (443.87)
ACRES	Acreage farmed organically	307.89 (918.65)	225.69 (405.21)	97.05 (424.00)
LABYRRD	Year round labor: managers, full-time employee, part time employees	6.74 (24.25)	8.81 (44.0)	4.32 (22.31)
LABSEAS	Seasonal labor: full-time employees and part time employees	4.33 (11.86)	4.54 (6.56)	3.27 (6.44)
FAMFARM	Farm is a corporation or cooperative, %	94.7	92.6	90.2
Number of Observations		320	68	429

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