Impact of Marketing Channels on Perceptions of Quality of Life and Profitability for Wisconsin's Organic Vegetable Farmers

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Introduction

The organic industry in the United States has experienced continued growth. Sales of organic fruits and vegetables comprise a large share of the total organic market in the US, representing 38% of sales of organic products. Organic fruits and vegetables are sold in a variety of market channels, including direct markets, wholesale markets, restaurant/institutional buyers, and through community supported agriculture (CSA)(Park and Lohr 2006). Besides profitability, quality of life is an important motivator influencing growers' choices of production practices.

This study aims to examine the determinants of farmers' satisfaction with farm profitability and quality of life and the connections with market channel choices for certified organic vegetable producers in Wisconsin.

Methodology

This study used a mail survey to collect information on farmer satisfaction with their quality of life and farm profitability and factors believed to be important covariates. 240 surveys were mailed and 135 surveys were returned, with 97 being active organic vegetable farmers in Wisconsin.

Response to the satisfaction with farm profitability and with the quality of life are ordered from very dissatisfied to very satisfied . Response options for marketing channel participation are one or more of the five choices including (1) farmers' market, (2) wholesale, (3) restaurants/institutions, (4) CSA, and (5) others.

The ordered logit is implemented to examine factors associated with organic farmers' satisfactory level with both the quality of farm life and farm's profitability.

In farmer's satisfactory levels with quality of life equation, farmer's satisfactory levels with farm's profitability is also included as covariates alongside all variables included in the analysis of farmer's satisfaction with farm's profitability.

As farmers can choose multiple marketing channels and the choices may be correlated, we use multivariate probit model to estimate the effects of a set of explanatory variables on different choices of marketing channels.

Estimation Results

Table 1. Marginal Effects of Variables on Farmer's Satisfactory Level w/ Farm Profitability from Ordered Logit Estimation

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very satisfied
rentland	0.157	0.191*	-0.042	-0.210*	-0.096*
size5-12	-0.011	-0.044	-0.009	0.030	0.034
size12-25	0.073	0.136**	0.004	-0.136	-0.077*
size>25	-0.013	-0.066	-0.015	0.044	0.051
farmer's market	0.040	0.142*	0.036	-0.122*	-0.096*
wholesale	0.003	0.012	0.002	-0.008	-0.009
Restaurants/institutions	-0.017	-0.056	-0.009	0.040	0.042
CSA	0.056	0.266*	0.015	-0.226*	-0.111*
other	0.022	0.061	0.004	-0.045	-0.042
bankloan	0.079	0.138*	0.018	-0.146*	-0.089*
debt	0.039**	0.172*	0.107**	-0.135*	-0.183*

*denotes statistically significant at 5% and ** denotes statistically significant at 10% significance level.

Other variables such as gender, years in farming, education, age, if having satisfying hiring and record keeping system, and if having off farm work do not have significant effects.

Table 2. Table 1. Marginal Effects of Variables on Farmer's Satisfactory Level w/ Farm Profitability from Ordered Logit Estimation

	Dissatisfied	Neutral	Satisfied	Vsatisfied
female	-0.1149*	-0.0981*	-0.0787	0.2916*
highedu	-0.0633	-0.0622**	-0.0184	0.1440**
size5-12	-0.0084	-0.0094	-0.0036	0.0214
size12-25	-0.0746*	-0.0857*	-0.1041	0.2644**
size>25	0.0035	0.0038	0.0013	-0.0086
farmer's market	-0.0013	-0.0014	-0.0005	0.0033
wholesale	0.0668**	0.0663**	0.0393	-0.1724**
Rest./institutions	0.1779*	0.1308*	0.0757	-0.3843*
CSA	0.0292	0.0336	0.0105	-0.0733
other	0.0837	0.0678	-0.0078	-0.1437
bankloan	-0.0802*	-0.1007*	-0.1100	0.2909*
debt	0.0601**	0.0736	0.0494	-0.1831
Very satisfied w/ profitability	-0.1547*	-0.1569*	-0.3895*	0.7011*
Satisfied w/ profitability	-0.2814*	-0.1409*	-0.1471*	0.5693*
Neutral w/ profitability	-0.2629*	-0.0880*	-0.0574	0.4083*
Dissatisfied w/ profitability	-0.1351*	-0.0871*	-0.1544*	0.3767*

Other variables such as years in farming, if owning land, age, if having satisfying hiring and record keeping system, and if having off farm work do not have significant effects.

Table 3. Marginal Effects of Variables on Choices of Marketing channels from Multivariate Probit Estimation.

	Farmers market	wholesale	Rest./institutions	CSA	others
female	0.3818	-0.7076*	0.3338	0.6823**	0.2475
high education	0.6567*	0.0159	1.0468*	0.3761	-0.5712
yrfarming	0.0478*	-0.0030	-0.0145	-0.0472*	0.0230
5-12 acres	0.9396*	0.8252**	0.3287	0.5193	-0.7925**
12-25 acres	-0.6732	1.1491	0.4719	-0.0123	-4.3357
>25 acres	-1.2481*	0.4793	-0.9542**	-0.6465	0.1536
rent all land	1.4335**	-0.6280	0.0779	-0.3986	-3.1725
offfarm	0.7582**	0.4320	-0.1040	-0.1236	0.3965

Other variables such as age and if having hired management do not have significant effects.

Conclusions

1. Farmers using farmer's market and CSA were more likely to be dissatisfied with their profitability.
2. Compared to farmers with <5 acres land, those with 12-25 acres of land tended to be more likely to be dissatisfied with farm's profitability.
3. Farmers renting all of their land and using loans from bank to finance their seasonal operating expenses were more likely to be dissatisfied with their farm's profitability.
4. Farmers with 12-25 acres farm were more likely to be very satisfied with quality of life.
5. Farmers who are more satisfied with farm profitability are more likely to be very satisfied with the quality of farm life.

Policy Implications

An effort to assist farmers to increase their profitability in market channels that also provide a higher quality of life would be beneficial.

Reference:

Park, T. and Lohr, L. 2006. Choices of Marketing Outlets by Organic Producers: Accounting for Selectivity Effects," Journal of Agricultural & Food Industrial Organization 4(1): Article 4.

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