

MEASURING LEVELS OF LOYALTY FOR LARGE U.S. AGRICULTURAL PRODUCERS

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MOTIVATION & GOALS

Measuring customer loyalty

- It's difficult
- Depth of loyalty
- Econometric methods

Objective

- Identify and measure levels of loyalty
- Input supply brands
- Analyze factors of the buying process



SURVEY DESIGN

Survey Methods Measuring Loyalty

- Previous LCP surveys
- The Loyalty Ladder**
- Das Narayandas, 2005
- Successively higher levels of loyalty



*Figure adapted from Narayandas' Loyalty Ladder (2005).

DATA & METHODS

2013 Large Commercial Producer Survey (LCP)

- >\$100,000 gross farm sales
- Major commodity groups
- Seed, Crop Protection, Fertilizer, & Capital Equipment Brands
- Buying behaviors

2,348 useable responses

- Dillman, 1991
- Input Brand Loyalty Analysis: 2,079 responses

Probit Analysis

- Marginal effects
- Interpretation

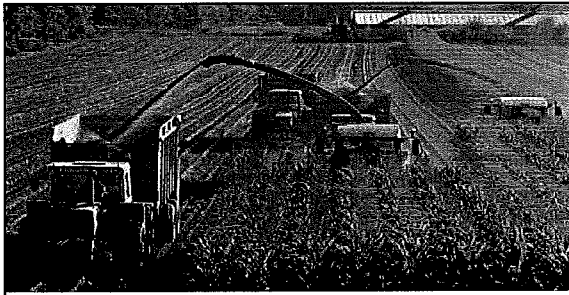


EXPLANATORY VARIABLES

Variable Name	Description
Custom Hiring Activities	
Fertilizer	Amount of custom fertilizer application services hired
Crop Protection	Amount of custom crop protection application services hired
Seeding	Amount of custom seeding application services hired
Harvesting	Amount of custom harvesting application services hired
Demographic Variables	
Total Acres	Acreage scaled to 100 acres
Education	Years of education
Sales	Sales scaled to \$1,000
Age	Age of survey respondent

EXPLANATORY VARIABLES

Variable Name	Description
Role of Respondent:	Primary decision maker used as dummy base
Spouse	The spouse completed the survey
Other Family	A family member other than the spouse or primary decision maker completed the survey
Non-Family	A non-family member completed the survey
Location:	Northeast census region used as dummy base
South	Loyalty of Southern farmers to brands
Midwest	Loyalty of Midwestern farmers to brands
West	Loyalty of Western farmers to brands



RESULTS & DISCUSSION | Input Brand Loyalty

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CUSTOM SERVICES AND CAPITAL EQUIPMENT BRANDS

	Continued Business	Endorsement	Use One Brand Exclusively	5% savings	10% savings	Product Development/ Collaboration	Investment	Claims/Loyalty
Fertilizer	0.100** (0.044)		0.107** (0.047)					0.112** (0.047)
Crop Protection	-0.091** (0.046)		-0.126** (0.050)		-0.093* (0.050)	-0.135*** (0.050)	-0.102** (0.049)	-0.110** (0.050)
Harvesting					-0.134* (0.069)	-0.129* (0.069)		-0.153*** (0.067)

Statistical significance at the 10%, 5%, and 1% level denoted by *, **, and ***, respectively.

**Impacts to equipment companies

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SPOUSES

	Continued Business	Endorsement	Use One Brand Exclusively	5% Savings	10% Savings	Product Development/ Collaboration	Investment	Claims/Loyalty
Seed	0.092*** (0.036)	0.150*** (0.043)	-0.105** (0.050)	-0.165*** (0.050)	-0.137** (0.054)			0.148*** (0.052)
Crop Protection	0.204*** (0.043)	0.308*** (0.048)		-0.098* (0.055)				0.281*** (0.057)
Fertilizer	0.254*** (0.040)	0.350*** (0.048)	-0.176*** (0.058)			0.134** (0.055)	0.085* (0.049)	0.299*** (0.055)
Capital Equipment	0.128*** (0.045)	0.203*** (0.047)	-0.163*** (0.056)	-0.149*** (0.054)				0.138*** (0.053)

Statistical significance at the 10%, 5%, and 1% level denoted by *, **, and ***, respectively.

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LOCATION

	Continued Business	Endorsement	Use One Brand Exclusively	5% savings	10% savings	Product Development/ Collaboration	Investment	Claims/Loyalty
Crop Protection								
South							0.222** (0.104)	0.402** (0.172)
Midwest								0.256*** (0.092)
West							0.238** (0.102)	0.341** (0.171)
Fertilizer								
South							0.294*** (0.111)	0.206* (0.119)
Midwest			0.182* (0.093)		0.151* (0.089)		0.241*** (0.092)	0.140* (0.079)
West							0.273** (0.111)	0.210* (0.112)

Statistical significance at the 10%, 5%, and 1% level denoted by *, **, and ***, respectively.

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CONCLUSIONS

Loyalty is tricky!

- Variable results

Custom Services

- Capital equipment brands

Spouses

- Loyal, then not

Location

- Crop protection & fertilizer brands

Future Research

- Incremental cost-benefit analysis



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QUESTIONS?

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