Rider Preferences and Economic Values for Equestrian Trails

Wuyang Hu, Associate Professor, Department of Agricultural Economics, University of Kentucky

Lexington, KY, 40546, Phone: 859.257.7271, Fax: 859.257.7290, Email: wuyang.hu@uky.edu

Marie Pelton, PhD Research Assistant, Department of Agricultural Economics, University of Kentucky

Angelos Pagoulatos, Professor, Department of Agricultural Economics, University of Kentucky

Poster prepared for presentation at the Agricultural & Applied Economics Association's 2012 Annual Meeting, Seattle, Washington, August 12-14, 2012

This research was supported in part by the Kentucky Horse Council and the University of Kentucky.

Rider Preferences and Economic Values for Equestrian Trails

Wuyang Hu, Associate Professor, **Marie Pelton,** PhD Research Assistant, and **Angelos Pagoulatos,** Professor, Department of Agricultural Economics, University of Kentucky

Background

- The U.S. equine industry accounts for $40B and $62B direct and indirect GDP.
- In all states, Kentucky ranks 4th in number of equine-related jobs and 5th in number of horses.
- Among the four components of the equine industry (racing, showing, recreation, and other), recreation generates the largest economic impact in the nation but the least in Kentucky.
- Over 31% of Kentucky's 320,000+ horses are involved in some sort of recreational pastime; the state has over 1,000 miles of horse trails.

Research Question

- How can trail managers improve the usage of trails?
- What characteristics of a tail riders are looking for and how much economic value may be associated with these characteristics.

Data Collection

- Mailed survey in 2009 in Kentucky and 275 responses.
- Choice experiment

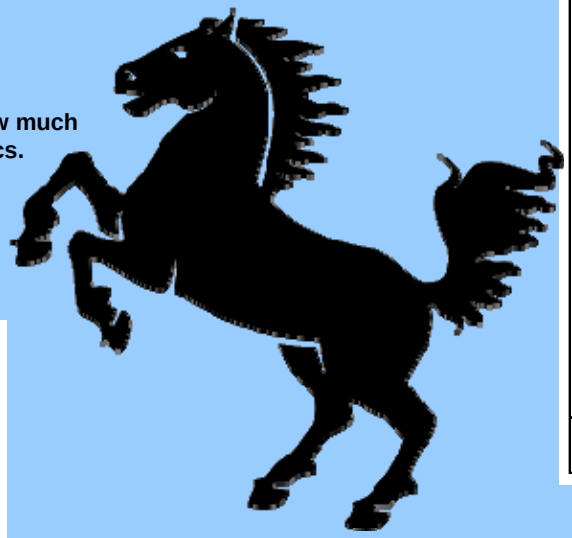

Table 1. Trail Characteristics of Equestrain Riding Day Trips

Variable	Description
Trail Length	Distance in miles of trails
	Levels: 5, 10, 15, 20
Scenic Views	Does the trail have scenic overlooks/views?
	Levels: Yes/No
Open Land	Does the trail have open land?
	Levels: Yes/No
Bathroom/Shower Facilities	Are bathroom and/or shower facilities available on the trail (or at the trail head)?
	Levels: Yes/No
Restricted Use	Are trails restricted to horses only?
	Levels: Yes/No
Distance	Distance in miles from home of rider to trails
	Levels: 10, 20, 40, 60
Entrance fee (Price)	Price in dollars of admission to trail (per vehicle per day)
	Levels: 3, 8, 13, 18

Table 2. Sample Descriptive Statistics

Variable	Average	Std. Dev.	Min	Max
Male (where male = 1 and female = 0)	0.284	0.451	0	1
Age (years)	50.244	10.062	19	75
Household income before tax	77108.1	38036	7500	160000
Education	14.568	2.238	10	19
Married (where currently married = 1, 0 otherwise)	0.818	0.386	0	1
Number of children under 18 in household	0.541	0.94	0	5
Number of day trips per year on average	23.3	27.117	1	200
Number of horses owned last year	6.305	6.447	0	45
On average number of miles ridden per year	253.814	159.284	50	550

Table 3. Estimation Results of Conditional and Mixed Logit Models

	Conditional Logit		Mixed Logit	
	Coeff.	Std. Err.	Coeff.	Std. Err.
Neither Option	-0.499***	0.133	-1.580***	0.328
Trail Length	0.085***	0.008	0.117***	0.021
View	0.741***	0.100	1.479***	0.323
Open Land	0.077	0.095	0.263	0.241
Bathroom/Shower	0.065	0.099	0.091	0.210
Horse Only	0.501***	0.103	0.501*	0.281
Distance	-0.029***	0.002	-0.044***	0.004
Entrance Fee	-0.020***	0.006	-4.447***#	0.642
Standard Deviation Estimates				
Neither Option S.D.			2.869***	0.440
Trail Length S.D.			0.129***	0.021
View S.D.			1.622***	0.249
Open Land S.D.			0.534*	0.304
Bathroom/Shower S.D.			1.217***	0.266
Horse Only S.D.			0.852**	0.349
Distance S.D.			0.019**	0.009
Entrance Fee S.D.#			2.094***	0.374
LR score	202.412		1138.090	
McFadden adj. R^2	0.046		0.143	

*, **, and *** indicate 10%, 5%, and 1% significant respectively.
Mean and standard deviation of the underlying normal distribution.

Table 4. Estimates of Marginal Values

	Marginal Value	Std. Err.
Neither Option	-15.050***	3.130
Trail Length	1.118***	0.203
View	14.097***	3.050
Open Land	2.502	2.261
Bathroom/Shower	0.862	1.994
Horse Only	4.776*	2.657
Distance	-0.417***	0.041

*, **, and *** indicate corresponding coefficient is 10%, 5%, and 1% significant respectively.

For information, contact: Wuyang Hu (wuyang.hu@uky.edu)

Financial assistance was provided in part by the Kentucky Horse Council and the University of Kentucky.

Key Findings

- **One additional mile in trail length generates $1.1 per vehicle per day but not by everybody.**
- **Trails with a view are preferred with $14 more in value but again, not by everybody.**
- **A sizable number of riders do not wish the trail to be limited to horse access only.**
- **Longer travel distance from home to trail is undesirable for almost everyone.**
- **Riders are split in terms of whether open areas and bathrooms should exist on trails.**