

Economic Impact of Prerace Training Rides for Blood, Sweat and Gears

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Abstract

Blood, Sweat and Gears is road biking race in Watauga County. An online survey was conducted after the 2011 to 2016 races, where participants were sent email invitations. Of the riders who completed the surveys, 218 also participated in training rides prior to the race. On average, those who did training rides took 1.5 trips. Using regression analysis I find that, as expected, the number of trips decreases with the number of miles that participants had to travel for their training rides. Consumer surplus per rider was also calculated using linear and semi-log models.

Methods

- The travel cost method (TCM) is used to estimate the value of non-market goods. This method uses travel distance and cost to estimate the price to consumers to partake in pre-race training rides.
- Participants of Blood, Swear and Gears were asked to complete a post ride survey, where they stated how many, if any training rides they took.
- $TC = (\text{cost per mile} * \text{distance}) + (1/3) * (\text{income}/2080) * \text{distance}/\text{mph}$
- Training rides are the dependent variable and theory predicts that as travel cost increases, the number of training rides will decrease.
- Semi-log and linear regression models are used to calculate consumer surplus

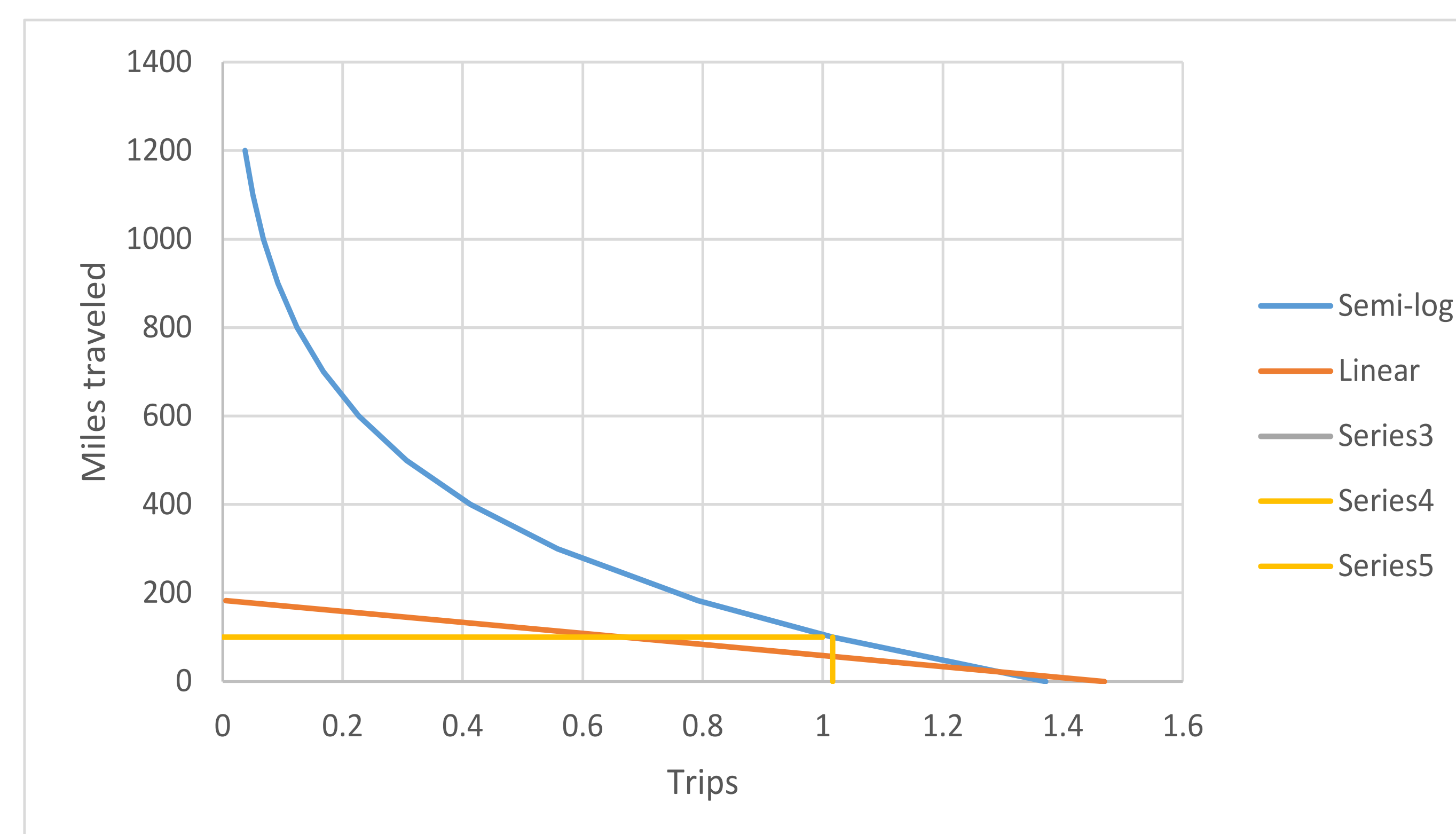
Survey Data

- Between years 2011-2016 data was collected using the online survey tool SurveyMonkey.
- The total number of respondents in the sample was around 2,500.
- Of these, only about 10% of respondents took training rides prior to the race. (n=218)

Descriptive Statistics of Data

	N	Minimum	Maximum	Mean	Std. Deviation
Visits	218	1.00	10.00	1.5000	1.48495
Distance	218	3.00	800.00	190.5642	192.28916
Income	218	20.00	250.00	157.1330	68.20005
LowerTC	218	.36	96.64	22.9654	23.18121
UpperTC	218	1.44	384.64	91.5686	92.40525
Valid N (listwise)	218				

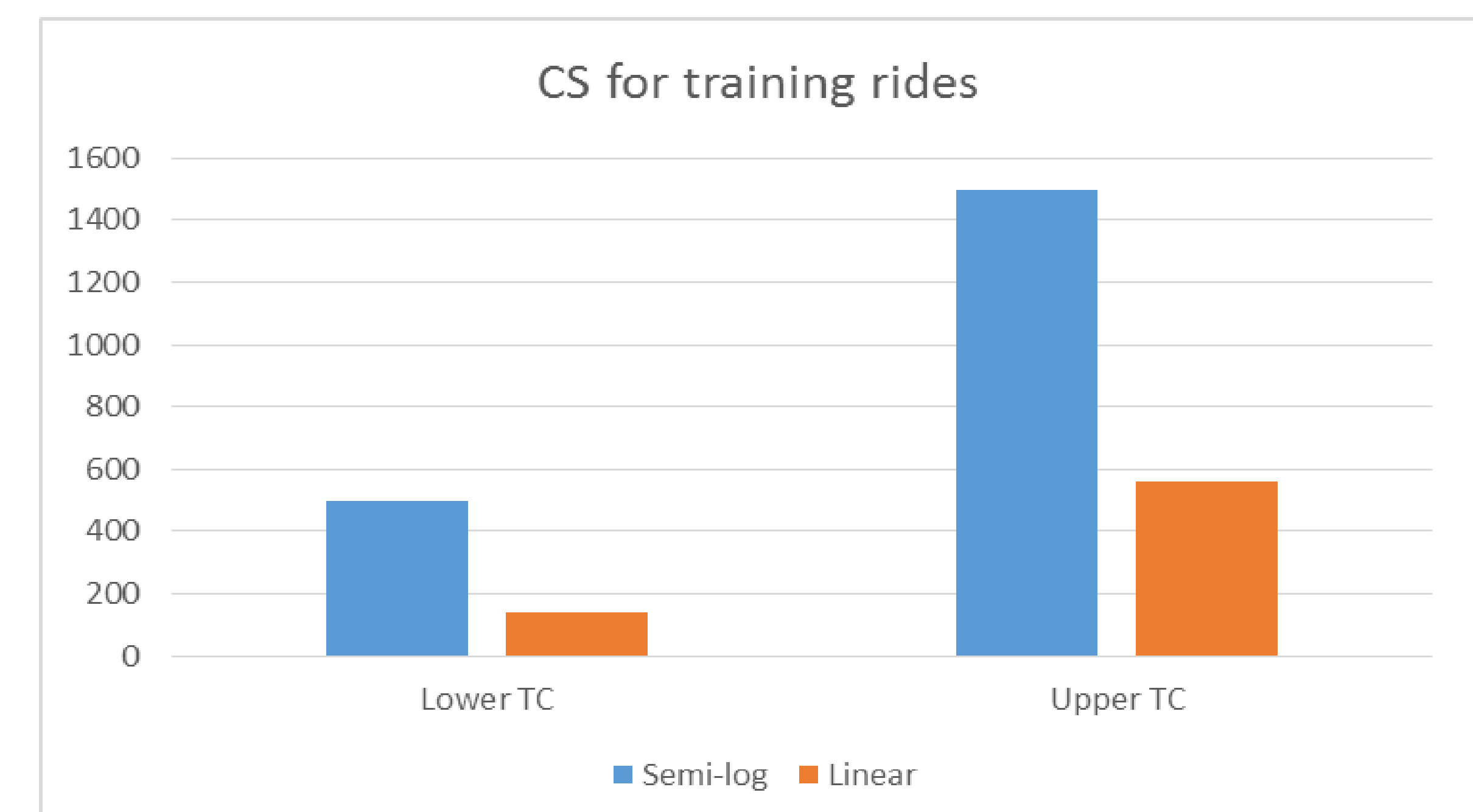
Demand Curves for Training Rides



Consumer Surplus

- $CS = - 1/ ((1+\lambda) * \beta) * Q^{(1+\lambda)}$
- Where:
 - β is the coefficient on travel cost
 - $\lambda = 0$ for semi-log and $\lambda = 1$ for linear

CS per Person from Training Rides



Conclusions

- Theory proves correct, as the number of training rides does decrease as travel costs increase.
- CS per person ranged from \$500-\$1500 using the semi-log model and \$140-\$560 using the linear model.