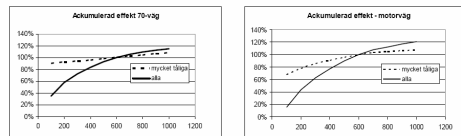


Valuation of Noise

Case study of SP for Noise

Willingness to pay for noise...



Figur 1. Betalningsvilja per månad (som andel av betalningsvilja vid avståndet 600 m) för ett givet hus beroende på avstånd från 70 km/h väg respektive motorväg.

SP project

- What's the problem?
- Population?
- Variables?
- Levels?
- Design?
- Method?
- Analysis?
- Response rates?
- Pilot
- Survey
- Coding
- Errors?
- Analysis
- Non-responses
- Imputation
- Conclusions
- Report

What's the problem?

- Marginal willingness to pay
- Or average willingness to pay

- For noise.... What is noise?

Population and sampling

- Population: households in Stockholm county
- Sampling from people recently bought a house in several different areas
- They have recently thought about trade-offs when buying a house

- Important: familiarity with trade-offs

Variables

- Noise is extremely multi-dimensional

- Here: distance from roads, 70 km/h two lanes, 70 km/h four lanes, high-way. 15000 average vehicle per day, 6 % heavy traffic

- Noise reduction measures also multi-dimensional

Method

- Respondents had to go to a particular location
- There see seven short films
- Listen to three-five different sound tapes
- (Should have been simultaneously, but...)
- Respond to 8 SP questions

SP questions

- | | | |
|---------------|-----------|-------------|
| Avskärning | • Nät | • Grön vall |
| Avstånd | • 200 m | • 1300 m |
| Månadskostnad | • 9000 kr | • 12000 kr |

- Jag hade köpt
- Inget

Pilot and levels

- First pilot, too many chose left alternative
- Probably due to short distance to road in the right hand alternative (50-150 m)
- Second pilot, longer distances...
- ... and higher prices on expensive alternatives

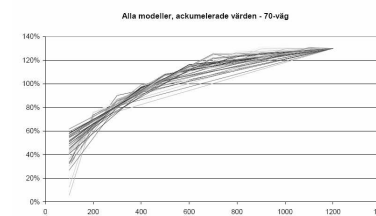
Main survey

- 888 responses in total from Stockholm
- Response rate almost 50%
- Non-responses, testing correlation with known covariates, such as sex, distance to road, income etc

Model specification

- 1 Linear model
- 2 Piece-wise linear model
- 3. Two thresholds that were empirically tested -> 49 models (model selection!)

Estimation results



Figur 15 Kumulativ effekt 70-väg - samtliga styckvis lösta modeller.

"Bortfallsundersökning"

- Make 50-100 individuals respond to simple questions, by phone
- Test correlation between this group and responders

SP for valuation

- SP is good if you find a good money vehicle
- And responders are familiar with the situation
- So, make them familiar with the situation, and find good trade-offs
- On the other hand....