

Jason F. Shogren et al. (1994)
Resolving Differences in Willingness to Pay
and Willingness to Accept

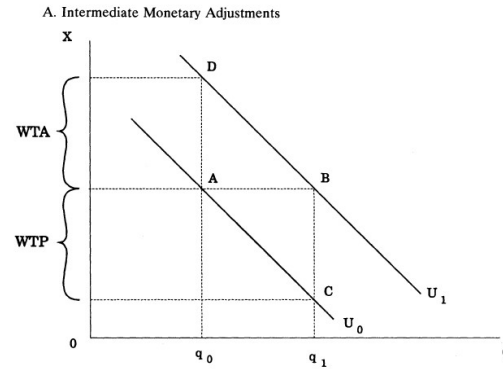
American Economic Review 84/1, 255-270

Shogren et al. (1994)

- Evidence from field and lab experiments for troubling divergence between WTA and WTP that seems not consistent with theory.
- Hanemann (1991): divergence can range , depending on the degree of substitution between goods and given a positive income elasticity.
- → with imperfect substitutes, a value divergence will exist and will

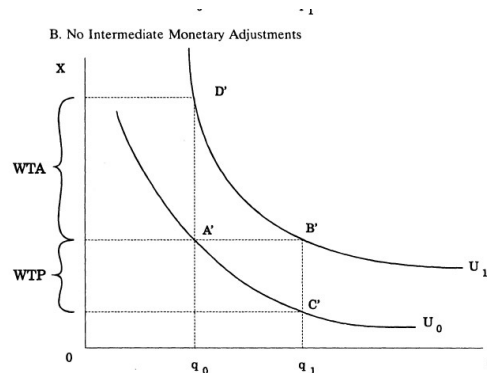
Shogren et al. (1994)

- Randall and Stoll (1980):
intermediate monetary adjustments create perfect substitution between the two goods.



Shogren et al. (1994)

- Hanemann considers markets that are incomplete or goods that are lumpy or indivisible →



Shogren et al. (1994)

PROPOSITION 1 (Convergence Proposition): Given positive income elasticity and repeated market participation, the WTP and WTA measures of value will

but will not

In addition, the value measures for the market good

Shogren et al. (1994)

TABLE 1—SUMMARY OF EXPERIMENTAL DESIGN

Procedure	Experiment	
	Willingness to pay (WTP)	Willingness to accept (WTA)
Initial conditions		
Auctioned good		
Value measure		
Initial conditions		
Auctioned good		
Value measure		

Shogren et al. (1994)

- Notes:
- Real money at stake, and sandwiches had to be eaten in the lab!
- All sessions conducted in the Iowa State University meat-testing laboratory
- Only one trial of each stage binding.
- Between-subjects comparison.
- Between 12 and 15 subjects in each session

Shogren et al. (1994)

- Results for the first stage:

TABLE 2—COMPARISON OF MEAN WTP AND WTA IN CANDY-BAR EXPERIMENT

Value measure	Mean (\$)				
	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
WTP	0.40 (0.36)	0.38 (0.20)	0.40 (0.23)	0.40 (0.19)	0.39 (0.20)
WTA	0.51 (0.35)	0.44 (0.34)	0.39 (0.35)	0.37 (0.36)	0.37 (0.35)

Shogren et al. (1994)

TABLE 4—COMPARISON OF WTP AND WTA FOR FIVE PATHOGENS WITH ELIMINATION

Pathogen (probability of illness)	Value measure	$H_0: WTP = WTA$ $H_1: WTP < WTA$								
		Inexperienced (1st trial)			Naive (trials 7–10)			Informed (trials 17–20)		
		Mean (\$)	<i>t</i>	<i>U</i>	Mean (\$)	<i>t</i>	<i>U</i>	Mean (\$)	<i>t</i>	<i>U</i>
<i>Campylobacter</i> (1/125,143)	WTP	0.53 (0.31)	-3.87**	100**	0.71 (0.36)	-1.58*	150	0.88 (0.32)	-1.61*	177
	WTA	4.63 (3.65)			1.50 (1.70)			2.29 (3.02)		
<i>Salmonella</i> (1/137,000)	WTP	0.55 (0.38)	-1.02	96**	0.44 (0.20)	-4.00**	91**	0.56 (0.22)	-1.91**	114**
	WTA	1.572 (5.537)			1.49 (0.92)			1.23 (1.25)		
<i>Staphylococcus aureus</i> (1/173,694)	WTP	1.02 (0.26)	-2.63**	100	0.97 (0.21)	-0.99	143*	0.91 (0.23)	-1.19	127.5
	WTA	4.08 (4.19)			3.12 (7.81)			3.33 (7.37)		
<i>Trichinella spiralis</i> (1/2,628,000)	WTP	0.44 (0.31)	-4.03**	78**	0.69 (0.44)	-2.32**	110*	0.82 (0.51)	-2.26**	128.5
	WTA	7.08 (5.93)			4.43 (5.79)			5.42 (7.33)		
<i>Clostridium perfringens</i> (1/26,280,000)	WTP	0.57 (0.49)	-3.47**	78**	0.60 (0.38)	-3.67**	76.5**	0.43 (0.32)	-4.11**	66**
	WTA	19.4 (19.51)			1.83 (1.14)			2.00 (1.34)		

Shogren et al. (1994)

- Result: for the nonmarket good with imperfect substitutes, WTP and WTA measures are
- even after
- With
- Reviewer: what about endowment effect?
- Kahneman et al. (1990): "... endowment effects will almost certainly occur when owners are faced with an opportunity to sell an item purchased for use that is not easily replace-able" (p. 1344).

Shogren et al. (1994)

- Kahneman et al.'s work suggests that perhaps an endowment effect can exist for a good with available substitutes if the subjects have less information on its value and cost.
- Not observed for (low-priced) candy bars, maybe there is a threshold effect?
- → Iowa State coffee mugs in additional experimental sessions.
- Three additional treatments: WTP session (to go from plastic mug (\$1.60) to coffee mug (\$5)), and
- two WTA sessions, one with and one without transaction costs.

Shogren et al. (1994)

- PROPOSITION 2 (Endowment Proposition): If the endowment effect exists, then the willingness to accept compensation will exceed the willingness to pay for the market good (Iowa State coffee mug) with or without zero transactions costs.
- Null hypothesis of equality of WTA and WTP cannot be rejected.

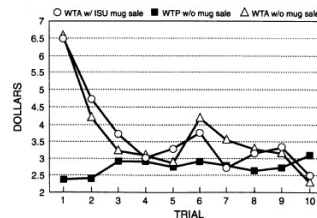


FIGURE 8. WTP AND WTA COMPARISON:
ISU MUGS (AVERAGE VALUES)