

Consumer Choice and Corporate Bankruptcy

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Motivation

- How averse are consumers to bankrupt firms reorganizing in Chapter 11?

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- This question matters for:
 1. Nondistressed firms (capital structure decisions)
 2. Distressed firms (bankruptcy vs a less public alternative)
 3. Regulators (consumer welfare and the efficacy of Chapter 11)

Research Questions

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Our result: Chapter 11 causally reduces consumer willingness to pay by 35%

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 3. Consumers might also view bankruptcy as a negative signal of **past** quality
- **Our result:** future interactions matter and education helps, but only a little
 - Strong concerns over current quality

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 - Randomized experiment!

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- We provide incentives linked to specific choices about a real bankrupt firm: Hertz.
- Next experiment: Hypothetical purchase decisions for cars, retail, and airline tickets

Experimental Design

Parts 1 & Part 2

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Part 2: Randomization of Information

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- **Survival Treatment:** Treatment + “Alamo Rent A Car, Budget, and National Car Rental all filed for bankruptcy in 2001 and 2002. All three are still in business today.”

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- **DIP Treatment:** Treatment + “While in bankruptcy, Hertz obtained a \$1.65 billion loan to ‘support the Company as it moves through its next stage of its Chapter 11 process.’”

Part 3: Price list

Which gift card would you prefer? You have a 1 in 100 chance of actually receiving one of your chosen gift cards. Your gift card will be redeemable at the company of your choice. Exley (2016)

\$50 Hertz	\$ 0 Enterprise
\$50 Hertz	\$ 5 Enterprise

...

\$50 Hertz	\$ 50 Enterprise
\$50 Hertz	\$ 55 Enterprise
\$50 Hertz	\$ 60 Enterprise

...

\$50 Hertz	\$ 95 Enterprise
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⇒ Willingness to pay for Hertz is \$50, because: \$50 Enterprise \prec \$50 Hertz \prec \$55 Enterprise.

Filters

Following our preregistration, we exclude participants with irrational preferences:

\$50 Hertz	\$ 0 Enterprise
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This includes non-monotonic preferences:

\$50 Hertz	\$ 15 Enterprise
\$50 Hertz	\$ 20 Enterprise

Part 4: Measuring bankruptcy awareness

Which of the following stores are currently in Chapter 11 bankruptcy?
(select all that apply)

Enterprise
Budget
Alamo Rent A Car
Hertz
National Car Rental
Advantage Rent A Car
None of these

Instrumental Variables Approach

Control



Aware, WTP = \$20



Unaware, WTP = \$50

Treatment



Aware, WTP = \$20



Aware, WTP = \$20

Control



Aware, WTP = \$20



Unaware, WTP = \$50

Average WTP = \$35

Treatment



Aware, WTP = \$20



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Difference in means (\$15) \neq Causal effect (\$30)

Control



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Treatment



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Aware, WTP = \$20

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$$IV = \frac{\text{Difference in means}}{\text{Fraction control unaware}} = \frac{\$15}{50\%} = \text{Causal effect } (\$30)$$

First stage

- Treatment increases awareness from 26% to 90% (F stat > 630).

	Aware	
	(1)	(2)
Treat	0.646*** (0.026)	0.652*** (0.026)
Controls	N	Y
Observations	829	819
F-Statistic	633.2	645.5
Adj. R ²	0.416	0.419

IV

- Awareness of Hertz's bankruptcy causally **reduces WTP by 35%**.

	WTP		
	(1)	(2)	(3)
Aware	-0.223*** (0.031)	-0.355*** (0.051)	-0.353*** (0.049)
Prior Hertz			0.208*** (0.035)
Prior Enterprise			-0.169*** (0.038)
Estimator	OLS	IV	IV
Controls	N	N	Y
Observations	829	829	819

Why do Consumers Care about Corporate Bankruptcy?

Subtreatments

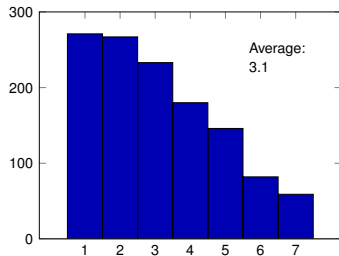
- Learning that **previous similar companies survived** bankruptcy reduces the discrepancy by about one-third.
- Learning that the bankrupt firm secured financing has **no effect**.

	WTP	
Treat	-0.229*** (0.033)	-0.227*** (0.032)
Survival treatment	0.071* (0.042)	0.079* (0.041)
DIP treatment	0.050 (0.046)	0.051 (0.045)
Demographics Control	N	Y
Observations	1238	1218

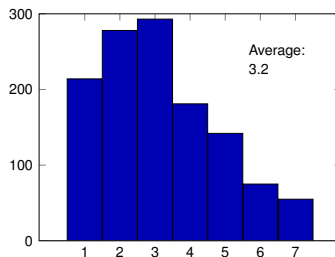
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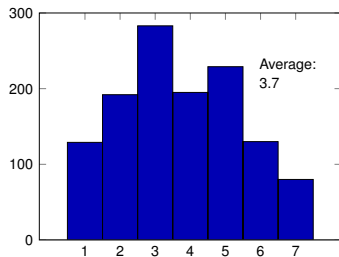
Fraud



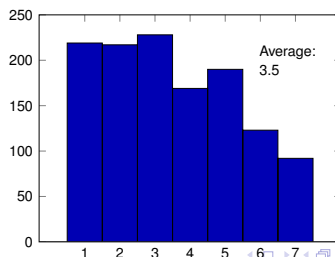
Inferiorproduct



Overpriced

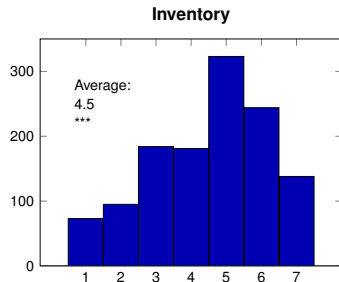
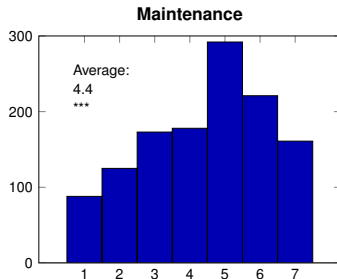
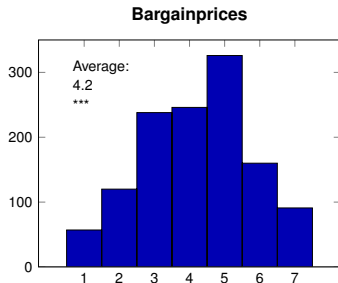


Ceasetooperate



Mechanisms

On a scale of 1 (not at all) to 7 (a great deal) how much do you agree with the following statements?



Model

- **Goal of Model:** What if consumers were unaware of Hertz's financial distress?

Model

- Consumer i rents a car from Hertz if her associated utility u_i is positive:

$$u_i = \delta + \alpha \frac{\text{Price}_{Hertz}}{\text{Price}_{Enterprise}} + \beta \mathbf{1} \left(\text{Aware of Bankruptcy} \right)_i + \epsilon_i \quad (1)$$

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- We model Consumer i 's awareness of Hertz's bankruptcy as

$$\mathbf{1}(\text{ Aware of Bankruptcy })_i = \mathbf{1} \left(\mu + \xi \text{Treated}_i + \nu_i > 0 \right) \quad (2)$$

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- Solution: Exogenous treatment identifies β , the remaining effect of awareness is ρ

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- Hertz' bankruptcy reduced consumer welfare by 20%.
 - Some consumers would have preferred Hertz (absent bankruptcy).
 - Some consumers stuck with Hertz and derived less surplus.
- If consumers were better informed about Chapter 11 bankruptcy:
 - Hertz' market share impact would have been 13% smaller
 - Consumer welfare reduction would have been 10% smaller

Next Experiment

- Maintain incentive compatibility by asking hypothetical questions and entering participants in lottery that matches their preferences

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Your desired flight costs \$300 on Airline A. How much would you be willing to pay for an equivalent flight on Airline B?

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Treatment 4 : Substitutability Only Airline B has a nonstop flight.

Next Experiment - Mechanism Questions

On a scale from 1 to 7, how much did each of the following concerns affect your willingness to pay for the bankrupt airline B's flight?

- I worry that a bankrupt airline will cease to operate before I fly
- I do not want to build reward points with a bankrupt airline
- I worry that planes will not be maintained well at a bankrupt airline
- Companies go bankrupt because their product is low quality
- I worry about my safety when flying with a bankrupt airline
- I worry that bankrupt airlines will have more delays and cancellations

Next Experiment

Repeat for:

- Retail
- Automobiles

Conclusion

- Chapter 11 bankruptcy reduces consumer willingness to pay by 35%
- Educating consumers about bankruptcy survival can reduce this effect by a third
- Consumers care about a bankrupt firm's current operations, not just its future
- Our model suggests that bankruptcy strongly reduces a firm's market share

Thank you!