

How consumers react to partitioned and drip pricing: Evidence from the lab

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Agenda

- Partitioned vs. Drip pricing
- Brief summary of behavioral research on partitioned pricing
- Preliminary results of two drip pricing studies
 - Airline scenario
 - Large unexpected surcharges
 - Decisions on options made after purchase decision
 - Rental car scenario
 - Reasonable surcharges
 - Decisions on options made just before purchase decision



Partitioned vs. Drip pricing

- Base price plus surcharge
- Surcharge characteristics
 - Mandatory vs. optional
 - Stated upfront vs. revealed after initial or final choice
- Primary focus of behavioral academic literature:
 - Mandatory surcharges
 - Definition of partitioned pricing
 - Surcharges revealed up front
 - Experimental rigor



Partitioned pricing

- Can increase firms' profits
- Can decrease consumers' total perceived costs
- Effects depend on:
 - Characteristics of the price
 - How it is presented (\$ vs. %)
 - Numeric magnitude of surcharge
 - What surcharge is for
 - Number of surcharges
 - Presence of total price
 - Characteristics of seller
 - Seller reputation
 - Characteristics of buyer
 - Attitude toward brand
 - Skepticism
 - Need for cognition
 - Experience



Airline drip pricing study

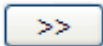
- N=327 members of an online panel
- Participants read a scenario where they had to decide whether to take a flight on Delta or Spirit airlines
 - Were told they would bring a carry on bag and book a seat in advance
 - Delta price includes all mandatory taxes and fees and most optional fees
- Participants assigned at random to four different price conditions for Spirit
 - Base fare excludes (\$182) or includes (\$241.58) mandatory taxes and fees
 - New DOT regulations require inclusion
 - A menu of fees for optional add-ons provided prior to or after airline choice
 - New DOT regulations require for baggage fees only
- Prices and fees mostly taken from websites for trip from New York to Miami over Memorial Day weekend 2012



Travel scenario

Imagine that you have decided to take a weekend beach vacation with some friends. You've all been working really hard and just need to get away for some fun and sun. You finally confirmed the travel dates with everyone and coordinated everyone's schedules, and the group decided to pick a destination that is a plane-ride away. You're now ready to search for a flight for yourself.

Even though you are traveling with a group, **please only consider your own travel plans and preferences as you search for and book your flight.**





Price ranges

o Delta

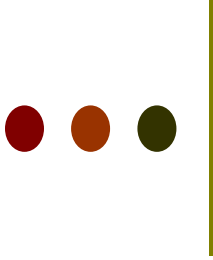


- Base price = \$254
- Plus mandatory fees = \$275.60
 - Advertised price
- Carry on bag = free
- Reserved seat = free
- Premium seat = \$80 each way
- Total range: \$275.60 - \$435.60

o Spirit



- Base price = \$182
 - Advertised price in one condition
- Plus mandatory fees = \$241.58
 - Advertised price in other condition
- Carry on bag = \$30 each way
- Reserved seat = \$18-\$20
- Premium seat (bulkhead)= \$25 each way
- Total range: \$337.58 - \$351.58

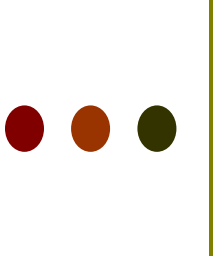


Spirit price excludes mandatory taxes and fees

You go online to search for flights that match your travel dates. You narrow your choices down to the two options shown below. Both flights are departing from your local airport at similar times and both offer direct service to your destination. You are very familiar with Delta Airlines, but less familiar with Spirit Airlines. After doing a bit of research, you learn that Spirit is a low cost carrier that operates in select markets.

Please make your flight selection below:

- Delta Airlines, \$275.60 per person (Including all taxes and fees)
- Spirit Airlines, \$182.00 per person (Additional taxes and fees may apply)



Spirit price includes mandatory taxes and fees

You go online to search for flights that match your travel dates. You narrow your choices down to the two options shown below. Both flights are departing from your local airport at similar times and both offer direct service to your destination. You are very familiar with Delta Airlines, but less familiar with Spirit Airlines. After doing a bit of research, you learn that Spirit is a low cost carrier that operates in select markets.

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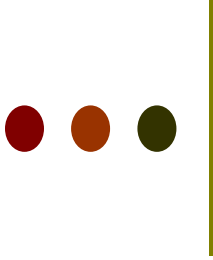
Spirit price excludes mandatory taxes and fees: Menu of optional fees provided

You go online to search for flights that match your travel dates. You narrow your choices down to the two options shown below. Both flights are departing from your local airport at similar times and both offer direct service to your destination. You are very familiar with Delta Airlines, but less familiar with Spirit Airlines. After doing a bit of research, you learn that Spirit is a low cost carrier that operates in select markets.

| | Delta Airlines | Spirit Airlines |
|---------------------------------------|--|---|
| Base Ticket Price | \$275.60 | \$182.00 |
| Baggage Fees (each way) | 1 carry-on in overhead bin - free | 1 carry-on in overhead bin - \$30 |
| | 1 checked bag - \$25 | 1 checked bag - \$28 |
| | 2 checked bags - \$60 | 2 checked bags - \$63 |
| | 3 checked bags - \$185 | 3 checked bags - \$148 |
| | 4 checked bags - \$385 | 4 checked bags - \$233 |
| | 5+ checked bags - \$585 | 5 checked bags - \$318 |
| Passenger Seating (per seat each way) | Airline assigned seating - free | Airline assigned seating - free |
| | Standard aisle seat - free Standard window seat - free Standard middle seat - free | Standard aisle or window Seat - \$18 Standard middle seat - \$20 |
| | Premium seat - \$80 | Bulkhead seat - \$25 |

Which airline will you choose? Please make your selection below:

- Delta Airlines \$275.60 per person (Including all taxes and fees).
- Spirit Airlines \$182.00 per person (Additional taxes and fees may apply).



Spirit price includes mandatory taxes and fees: Menu of optional fees provided

You go online to search for flights that match your travel dates. You narrow your choices down to the two options shown below. Both flights are departing from your local airport at similar times and both offer direct service to your destination. You are very familiar with Delta Airlines, but less familiar with Spirit Airlines. After doing a bit of research, you learn that Spirit is a low cost carrier that operates in select markets.

| | Delta Airlines | Spirit Airlines |
|---|--|---|
| Base Ticket Price (including all taxes) | \$275.60 | \$241.58 |
| Baggage Fees (each way) | 1 carry-on in overhead bin - free | 1 carry-on in overhead bin - \$30 |
| | 1 checked bag - \$25 | 1 checked bag - \$28 |
| | 2 checked bags - \$60 | 2 checked bags - \$63 |
| | 3 checked bags - \$185 | 3 checked bags - \$148 |
| | 4 checked bags - \$385 | 4 checked bags - \$233 |
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| | Standard aisle seat - free Standard window seat - free Standard middle seat - free | Standard aisle or window Seat - \$18 Standard middle seat - \$20 |
| | Premium seat - \$80 | Bulkhead seat - \$25 |

Which airline will you choose? Please make your selection below:

- Delta Airlines \$275.60 per person (Including all taxes and fees).
- Spirit Airlines \$241.58 per person (Including all taxes. Additional fees may apply).

Mandatory fees and total revealed



Thank you for selecting Spirit Airlines for your travel needs!

Purchase Price

| | |
|--|-----------------|
| Flight | \$182.00 |
| Price | \$128.38 |
| Fuel | \$53.62 |
| Government Taxes and Fees and Carrier Fees | \$59.58 |
| Passenger Facility Fee | \$9.00 |
| Passenger Usage Fee (Carrier Fee) | \$33.98 |
| Segment Fee | \$7.60 |
| September 11th Security Fee | \$5.00 |
| Unintended Consequences of DOT Regulations (Carrier Fee) | \$4.00 |
| Total | \$241.58 |

Purchase Price

| | |
|--|-----------------|
| Flight | \$254.00 |
| Government Taxes and Fees and Carrier Fees | \$21.60 |
| Passenger Facility Fee | \$9.00 |
| Passenger Usage Fee (Carrier Fee) | \$0.00 |
| Segment Fee | \$7.60 |
| September 11th Security Fee | \$5.00 |
| Unintended Consequences of DOT Regulations (Carrier Fee) | \$0.00 |
| Total | \$275.60 |



Next select travel options

You decide to complete the rest of the transaction now, since you don't know if you'll remember to do it later.

Since you're only going for a weekend, you and your friends decide not to check any bags, so that you don't waste valuable beach time standing at baggage claim when you arrive. Therefore, you only intend to carry-on a small backpack that can fit under the seat in front of you plus a suitcase that can fit in the overhead bin.

Buy your bags now and save at least \$10 per bag compared to paying at the airport!



**Free of charge - 1 personal item such as a backpack (must fit underneath the seat)
For Purchase - 1 carry-on item (must fit in the overhead bin)
For Purchase - up to 5 checked bags**

[>>](#)



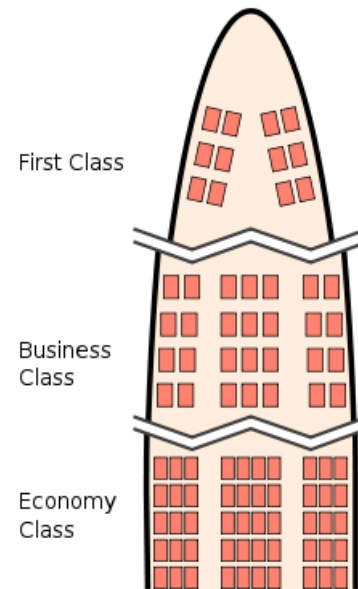
In addition to a personal item that can fit under the seat in front of you, please indicate the number of carry-on and/or checked bags you will bring **from your home to your destination**:

- 1 carry-on bag in overhead (\$30 fee)
- 1 checked bag (\$28 fee)
- 2 checked bags (\$63 fee)
- 3 checked bags (\$148 fee)
- 4 checked bags (\$233 fee)
- 5 checked bags (\$318 fee)

Survey Powered By [Qualtrics](#)



Select your seat!



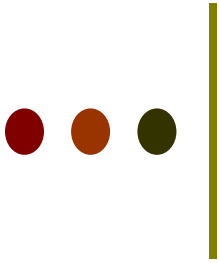
Pre-select your seat now in order to ensure that you get the seat that is best for you and that you sit with your traveling partners.

>>



Please select the type of seat you would like on your flight from your home to your destination:

- Standard Aisle seat or Window Seat (\$18 fee)
- Standard Middle Seat (\$20 fee)
- Bulkhead Seat (\$25 fee)



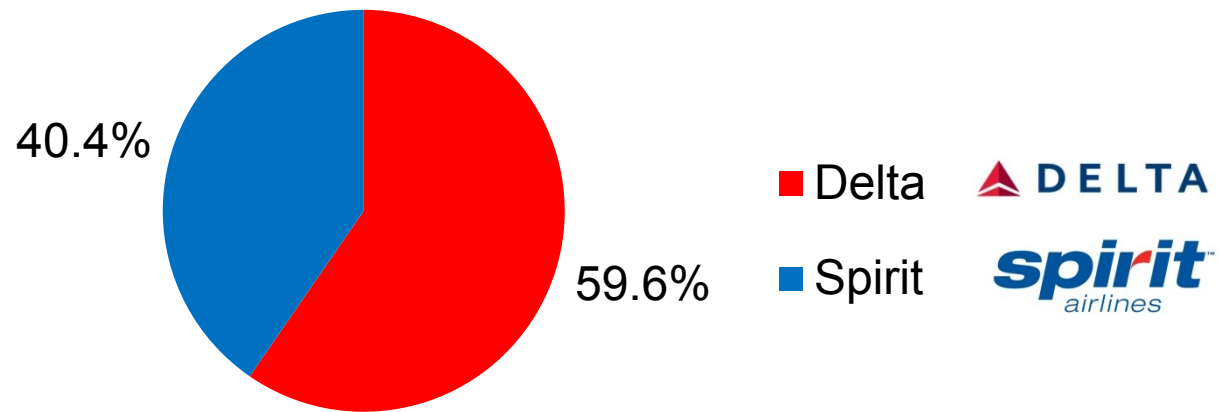
Thank you for flying Spirit Airlines! Your total charges are shown below:

| | |
|--|-----------------|
| Base Fare | \$182.00 |
| Government Taxes and Fees and Carrier Fees | \$59.58 |
| Outbound baggage fee | \$30.00 |
| Inbound baggage fee | \$30.00 |
| Outbound seat selection fee | \$25.00 |
| Inbound seat selection fee | \$25.00 |
| Total Price | \$351.58 |

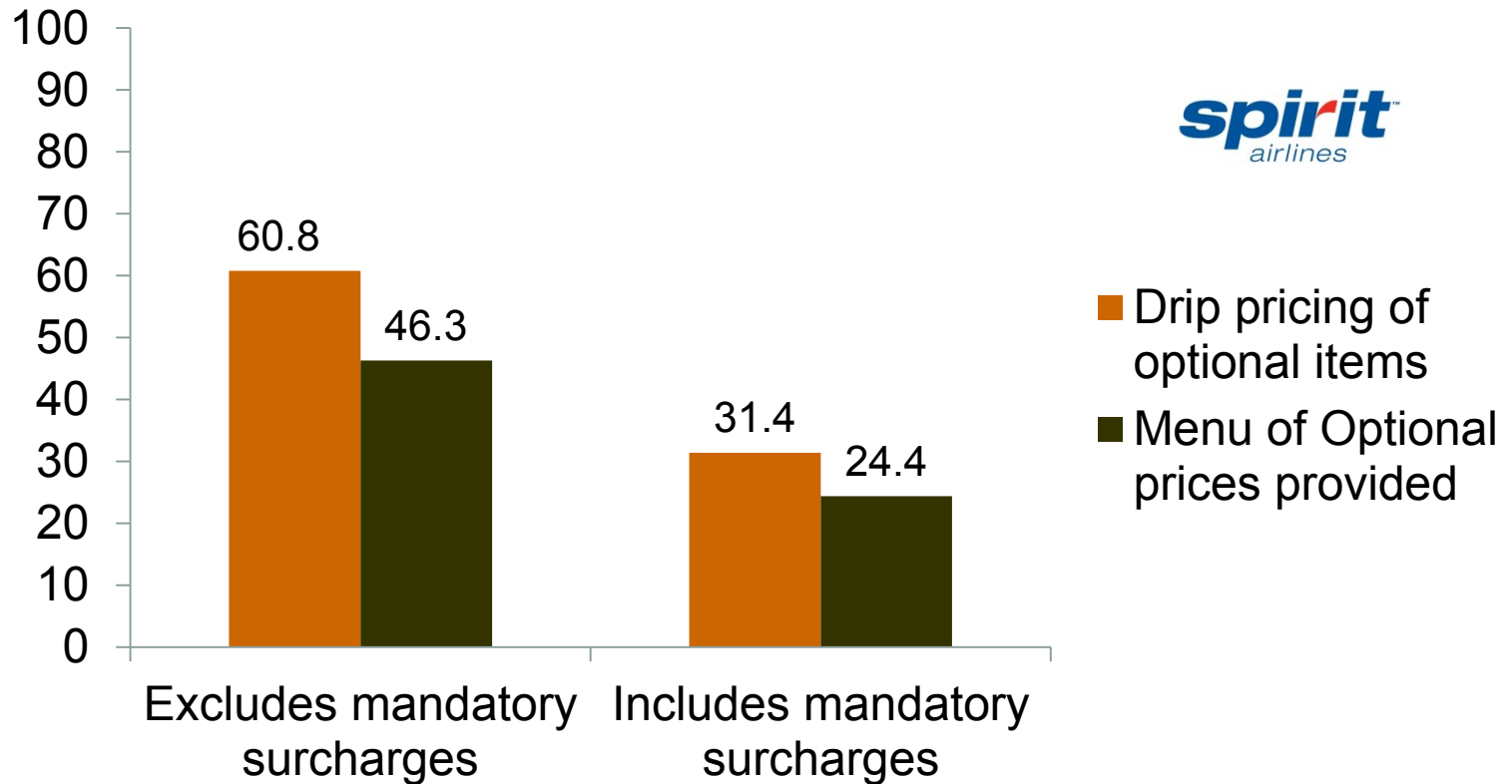


Airline choice

Overall (n=327)



Percent choosing Spirit by Spirit pricing frame

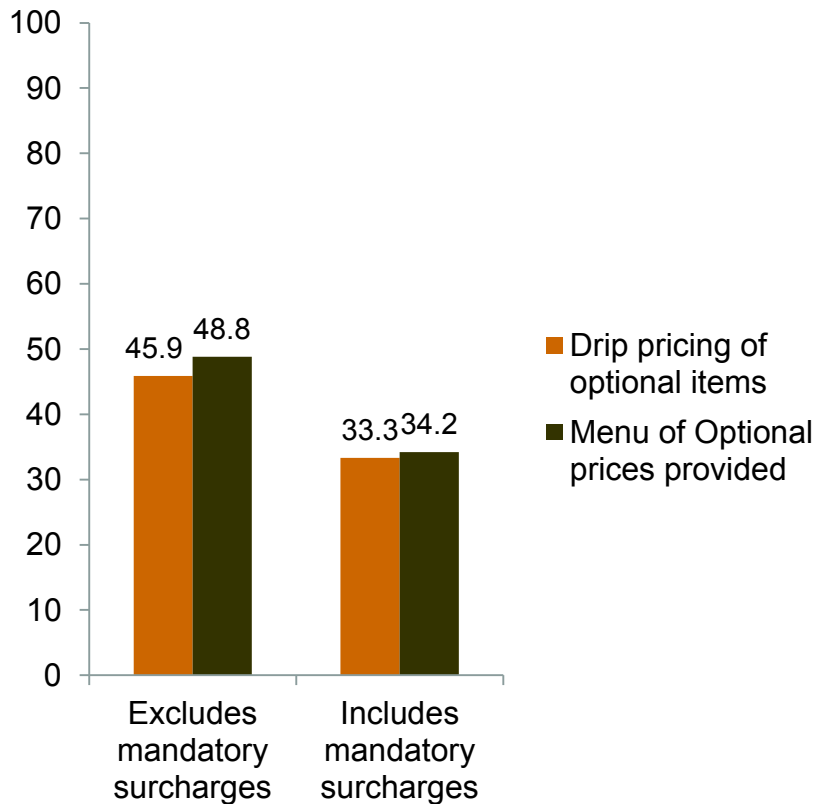


Partition $F(1,323)=23.91$; $p<.0001$
Drip $F(1,312) = 4.22$; $p=.04$

Percent choosing Spirit by travel experience

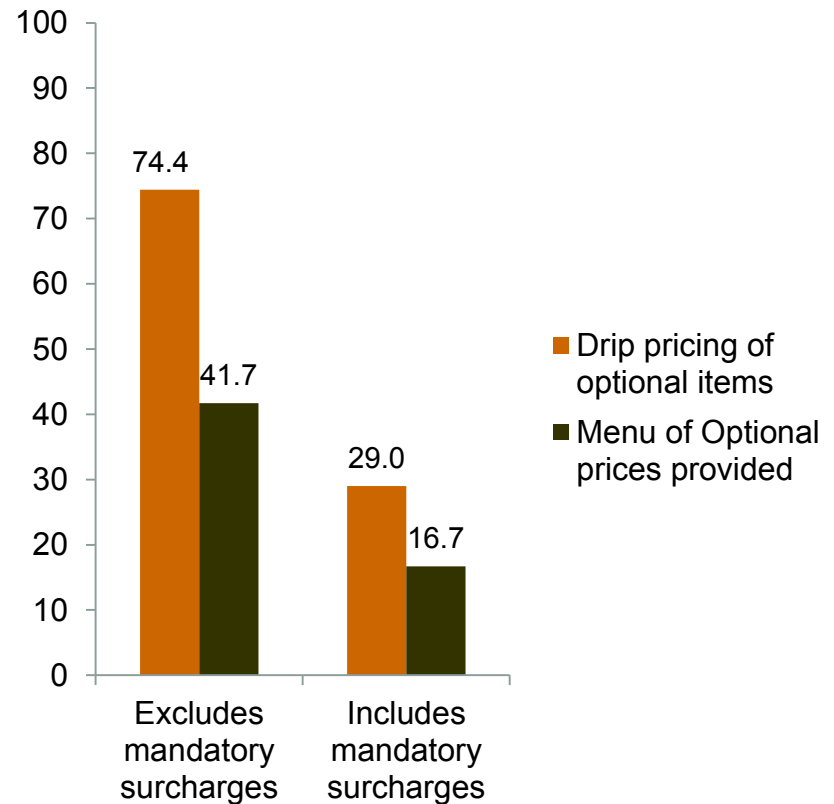


Flew at least 1 flight in past 12 months



Partition $F(1,168)=3.24$; $p=.07$

Did not fly in past 12 months

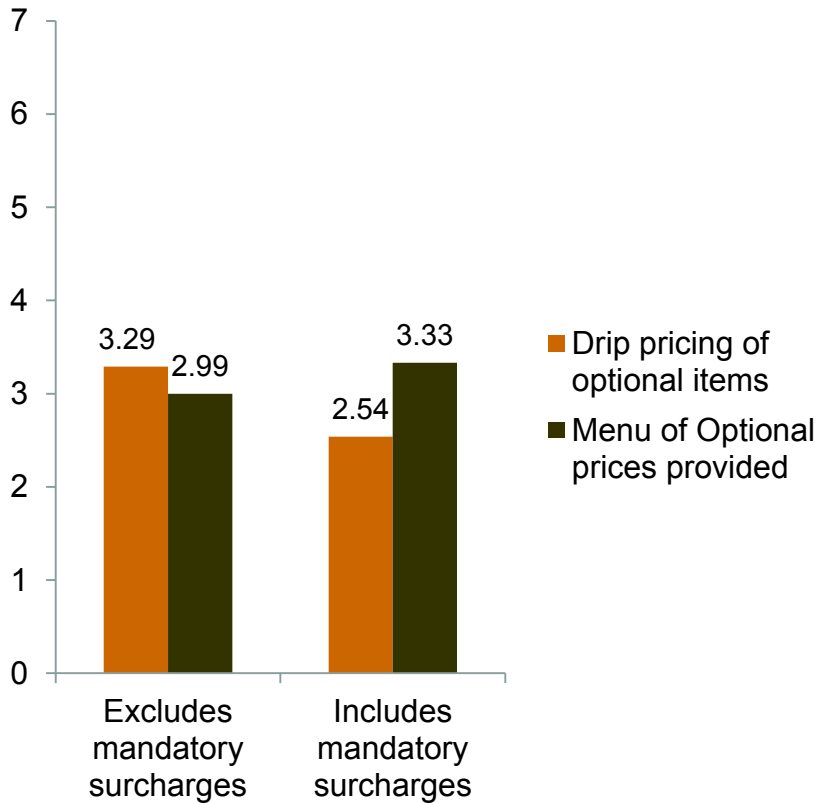


Partition $F(1,144)=22.90$; $p<.0001$
 Drip $F(1,144) = 9.40$; $p=.003$

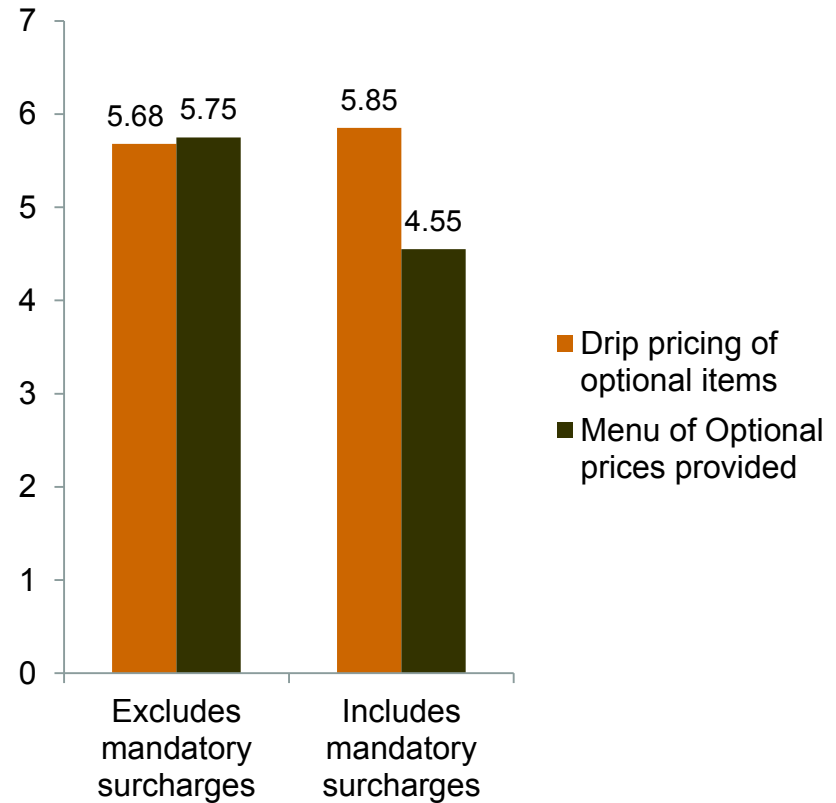
Perception that price is deceptive

7=Strongly agree
1=Strongly disagree

Delta



Spirit



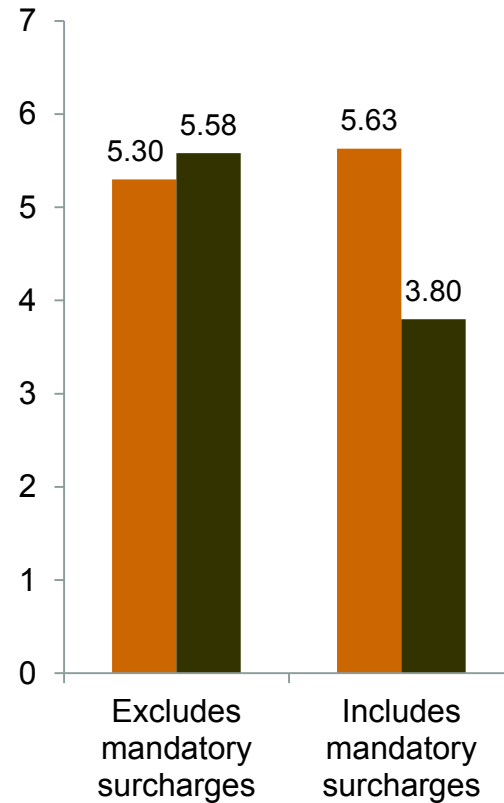
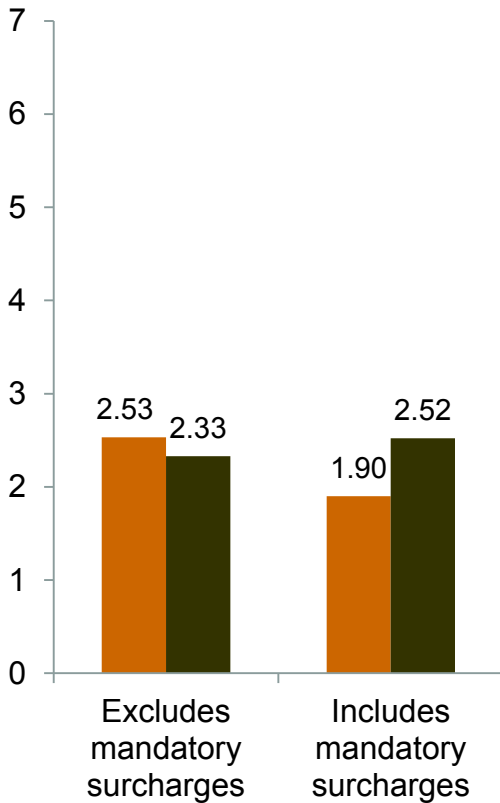
Partition $F(1,316)=2.98$; $p=.09$
Airline $F(1,316) = 138.0$; $p<.0001$
Airline x Drip $F(1,316)=4.27$; $p<.04$
Airline x Partition x Drip $F(1,316)=8.96$; $p=.003$

Regret choice

7=Strongly agree
1=Strongly disagree

Delta

Spirit

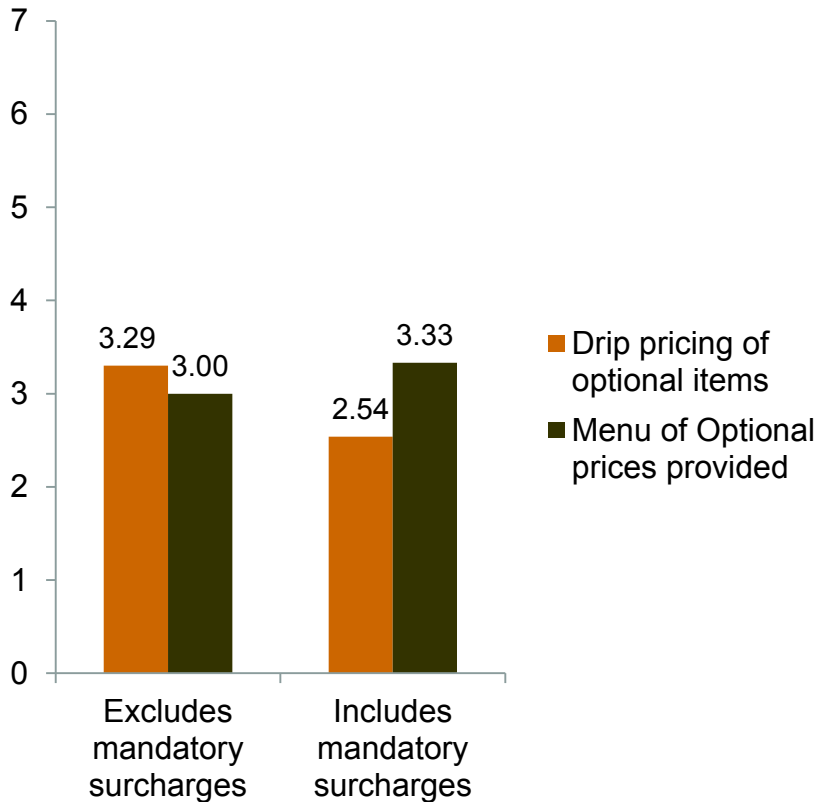


Partition $F(1,313)=6.02$; $p=.01$
Airline $F(1,313)=204.2$; $p<.0001$
Airline x Drip $F(1,313)=6.51$; $p=.01$
Airline x Partition x Drip $F(1,313)=14.53$; $p=.0002$

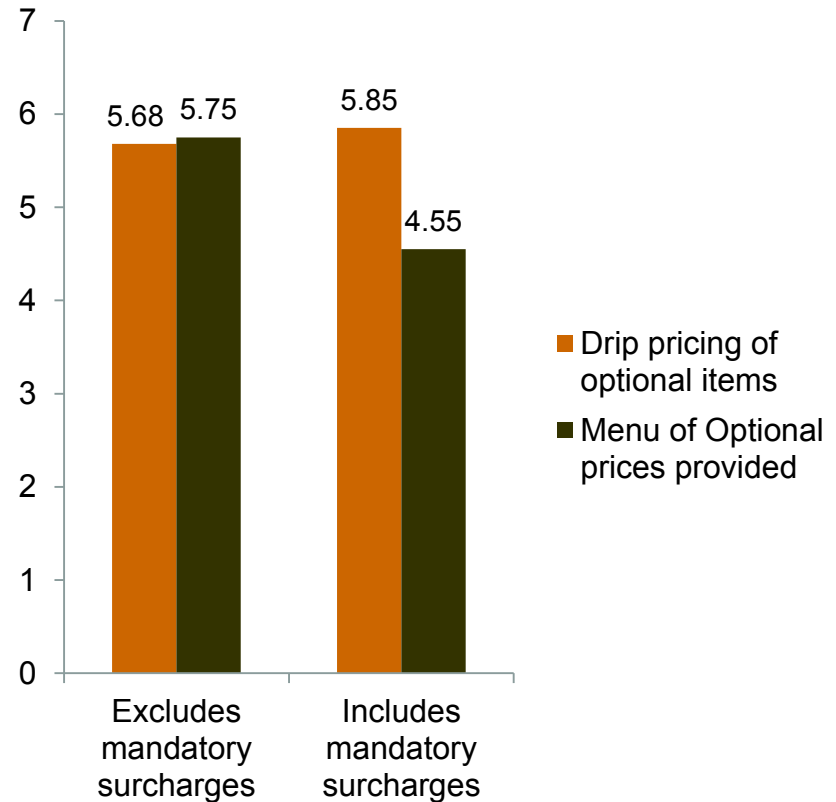
Wish I bought the other ticket

7=Strongly agree
1=Strongly disagree

Delta



Spirit

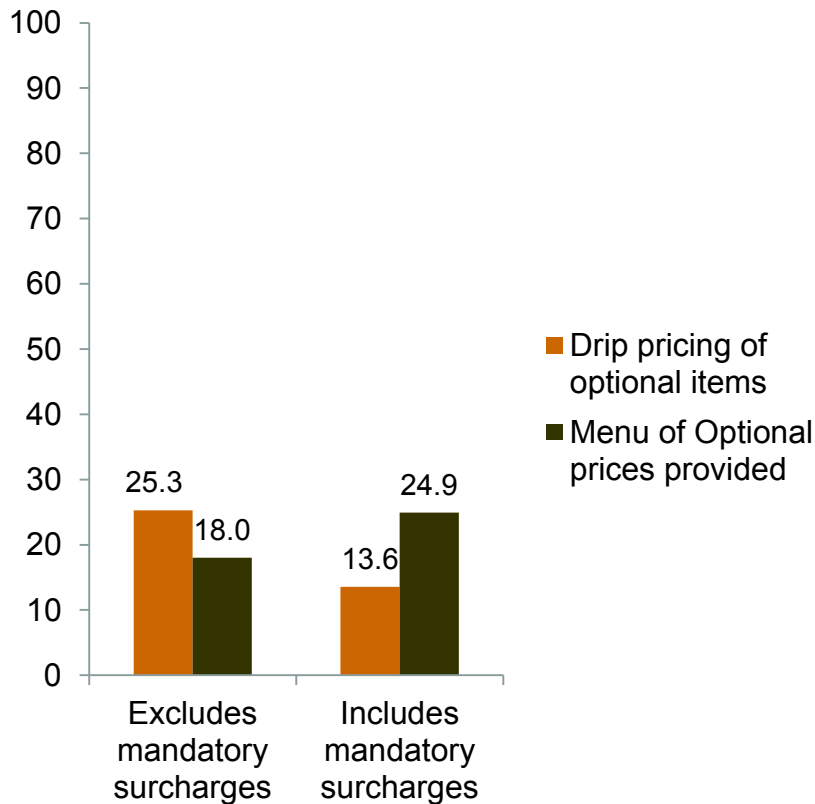


Partition $F(1,316)=10.91$; $p=.001$
Drip $F(1,316)=5.09$; $p=.02$
Airline $F(1,316)=196.5$; $p<.0001$
Airline x Partition x Drip $F(1,316)=17.39$; $p<.0001$

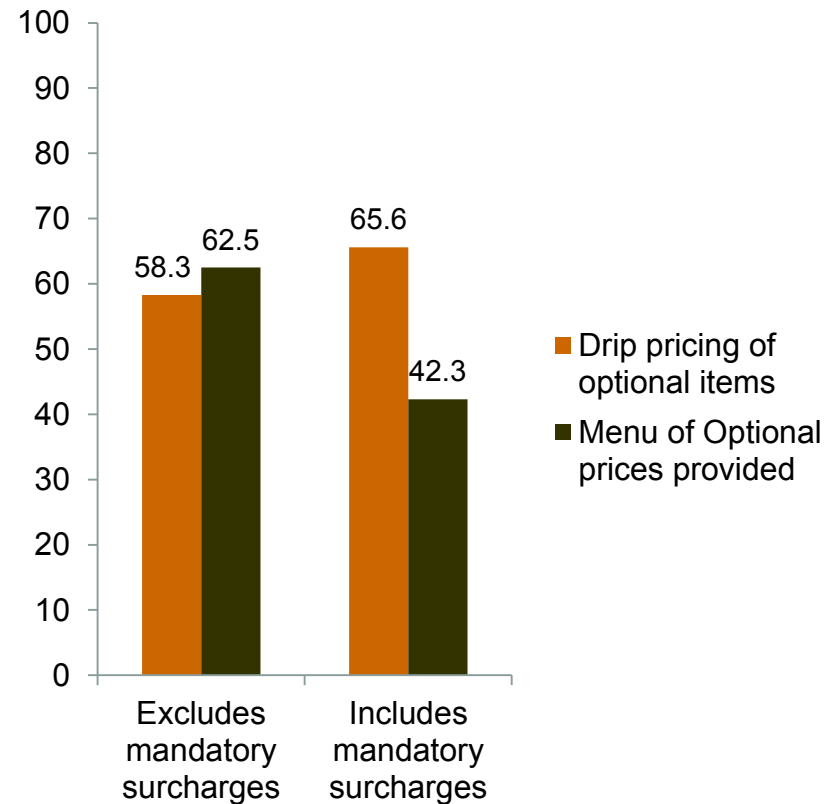
Feel upset about the total price

100= Very much
0 = Not at all

Delta



Spirit



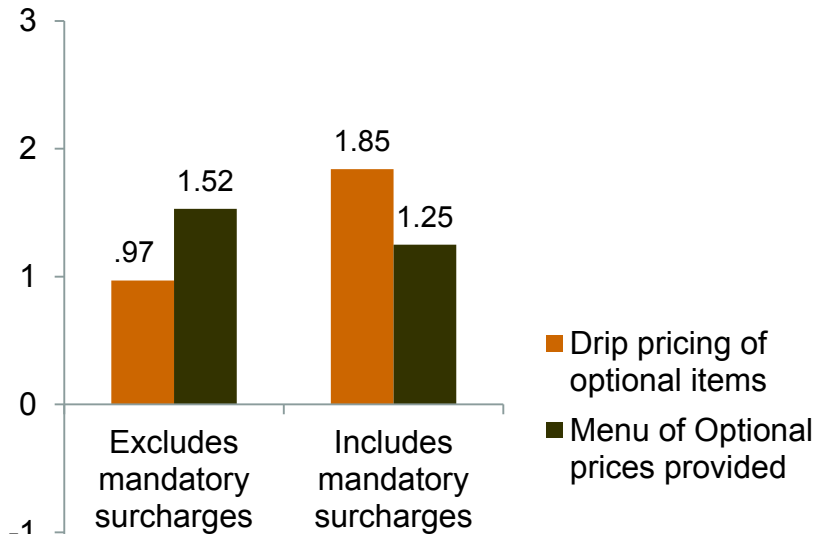
Airline $F(1,319)=129.80$; $p<.0001$
Airline x Drip $F(1,319)=3.24$; $p=.07$
Airline x Partition x Drip $F(1,319)=12.79$; $p=.0004$



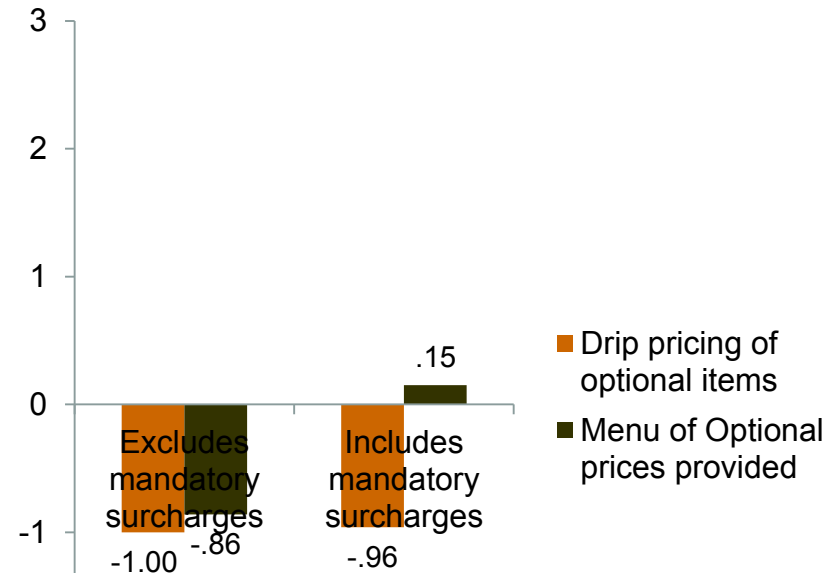
Total price fairness perception

3 = Extremely fair
-3 = Extremely unfair

Delta



Spirit

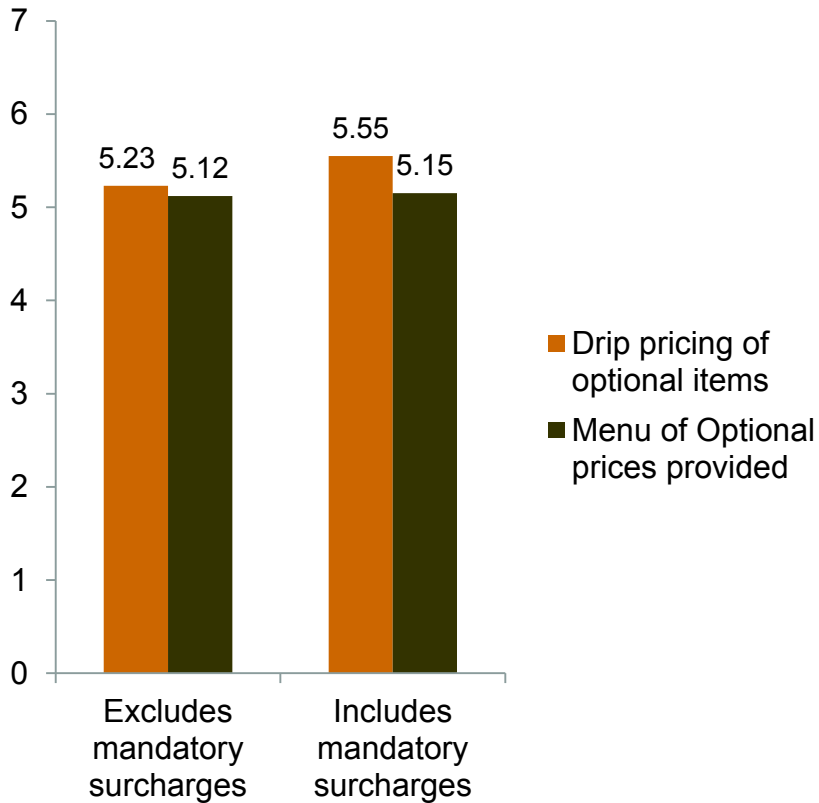


Partition $F(1,316)=5.32$; $p=.02$
Drip $F(1,316)=2.85$; $p=.09$
Airline $F(1,316)=133.35$; $p<.0001$
Airline x Drip $F(1,316)=3.29$; $p=.07$
Airline x Partition x Drip $F(1,319)=8.88$; $p=.003$

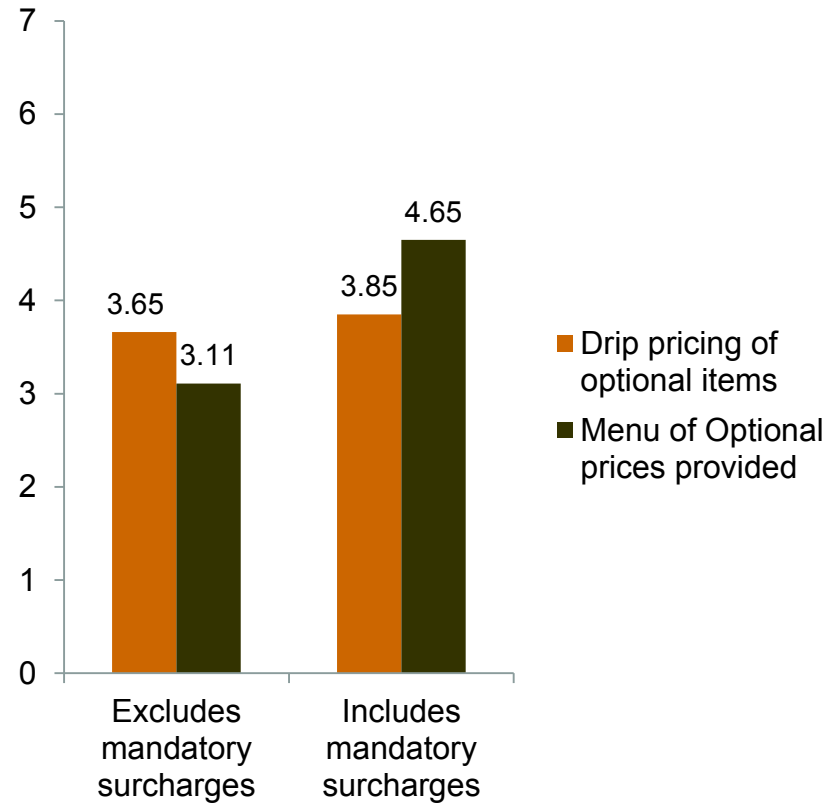
Fly this airline again

7=Strongly agree
1=Strongly disagree

Delta

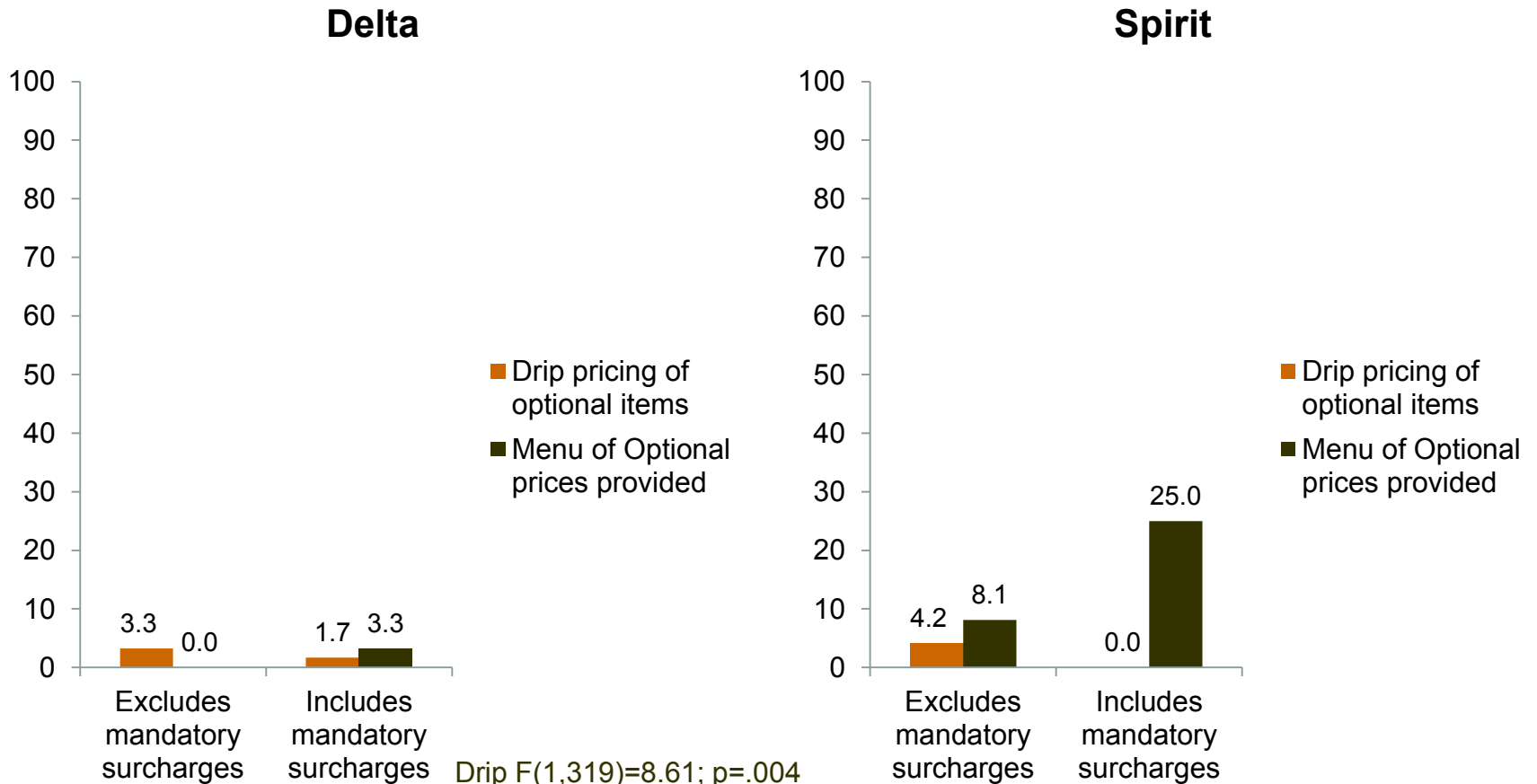


Spirit



Partition $F(1,314)=7.09$; $p=.008$
Airline $F(1,314)=54.06$; $p<.0001$
Airline x Partition $F(1,314)=3.05$; $p=.08$
Airline x Partition x Drip $F(1,314)=4.36$; $p=.04$

Percent buying premium seat



Drip $F(1,319)=8.61$; $p=.004$
 Airline $F(1,319)=9.84$; $p=.002$
 Partition x Drip $F(1,319)=7.73$; $p=.006$
 Airline x Drip $F(1,319)=10.88$; $p=.001$
 Airline x Partition x Drip $F(1,319)=3.08$; $p=.08$



Summary

- In hypothetical scenario, consumers were more likely to buy with drip and with partitioned pricing
 - Disclosure of fees reduces buying intentions
 - Effect only for inexperienced consumers
- Not disclosing all fees viewed to be deceptive
- When the firm discloses all mandatory and optional fees
 - Consumers are more likely to buy again
 - Consumers are more likely to buy optional add-ons
- Limitation
 - Surcharges while real for Spirit are egregious
 - Will the results generalize to other surcharges?
 - Choice scenario where both options had surcharges
 - Will results generalize to purchase incidence?



Rental car drip pricing study

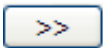
- N=316 members of an online panel
- Participants read a scenario where they had to decide whether to rent a car for three days or take a free shuttle to a hotel
 - Enterprise
- Rental car price conditions
 - Daily rate excludes (\$17) or includes (\$27.67) all mandatory taxes and fees
 - A menu of fees for optional add-ons was provided up front or after choice



Travel scenario

Imagine that you have decided to take a weekend beach vacation with some friends. You've all been working really hard and just need to get away for some fun and sun. You finally confirmed the travel dates with everyone and coordinated everyone's schedules, and the group decided to pick a destination that is a plane-ride away. You're now ready to search for a flight for yourself.

Even though you are traveling with a group, **please only consider your own travel plans and preferences as you search for and book your flight.**





Example of daily rate, mandatory fees included condition

After you book your flight, you decide to check out the ground transportation options.

One option is to use the hotel shuttle service. The hotel that you are staying at offers free shuttle service to and from the airport. However, the shuttle only operates on the hour during certain times of the day. The main advantage to the shuttle is that it's free. On the other hand, the schedule is limited, and therefore you may have to travel at inconvenient times in order to take advantage of the shuttle. Additionally, if you and your friends decide to venture beyond the hotel during your stay, you'll have to take a taxi, which can be costly and unreliable.

The other option is to rent a car at the airport and drive to the hotel (the hotel offers free onsite parking). While researching car rental companies, you come across an ad for Enterprise Rent-A-Car in your destination city that says "Daily rate is \$27.67, including all mandatory taxes and fees," and you would need to rent a car for 3 days. Enterprise is located right across from baggage claim at your destination's airport.

The advantage of renting a car is that it offers you ultimate flexibility--you can travel when it's most convenient for you and you can come and go from the hotel anytime you please. The disadvantage is that it is an additional expense.

You decide to research the Enterprise offer a little further, based on your travel dates, and you find out the following:



Rental car daily rate presentation

Based on the previous information, which form of ground transportation will you select?

- Hotel shuttle service (free)
- Car rental (\$17.00 per day plus taxes and fees)

Based on the previous information, which form of ground transportation will you select?

- Hotel shuttle service (free)
- Car rental (\$27.67 per day, all mandatory taxes and fees included.)

Fees disclosed up front



Summary of Estimated Charges

| | |
|---|---------|
| Basic daily rate of \$17.00 @ 3 days | \$51.00 |
| Concession fee @ 9.89% | \$5.04 |
| Rental car facility charge @ \$4.60 per day | \$13.80 |
| Destination surcharge @ \$2.00 per day | \$6.00 |
| Tire/Battery fee @ \$.02 per day | \$0.06 |
| Vehicle license fee | \$1.85 |
| Sales Tax | \$5.25 |
| Total for 3 days (including mandatory fees and taxes) | \$83.00 |
| Optional Services | |
| Optional GPS System \$10 per day @ 3 days | \$30.00 |
| Optional Damage Waiver Protection \$15 per day @ 3 days | \$45.00 |
| Optional Pre-paid Gas \$3 per gallon @ 12 gallons | \$36.00 |



Next select travel options

Would you like your car to come equipped with a GPS system? The fee for a GPS system is \$10.00 per day (\$30.00 total).

- I would like a GPS system
- I would NOT like a GPS system

>>

Would you like to purchase Damage Waiver Protection for your rental? The fee for Damage Waiver protection is \$15.00 per day (\$45.00 total).

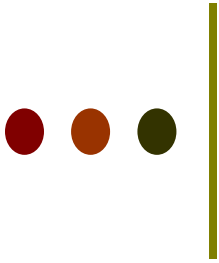
- I would like Damage Waiver protection
- I would NOT like Damage Waiver protection

>>

Would you like to pre-purchase a tank of gas for your return? The fee for pre-purchasing a tank of gas is \$3.00 per gallon (\$36.00). If the car is not full upon return, then you will be charged \$5.00 per gallon.

- I would like to pre-purchase gas
- I would NOT like to pre-purchase gas

>>



Thank you for choosing Enterprise for your car rental needs!

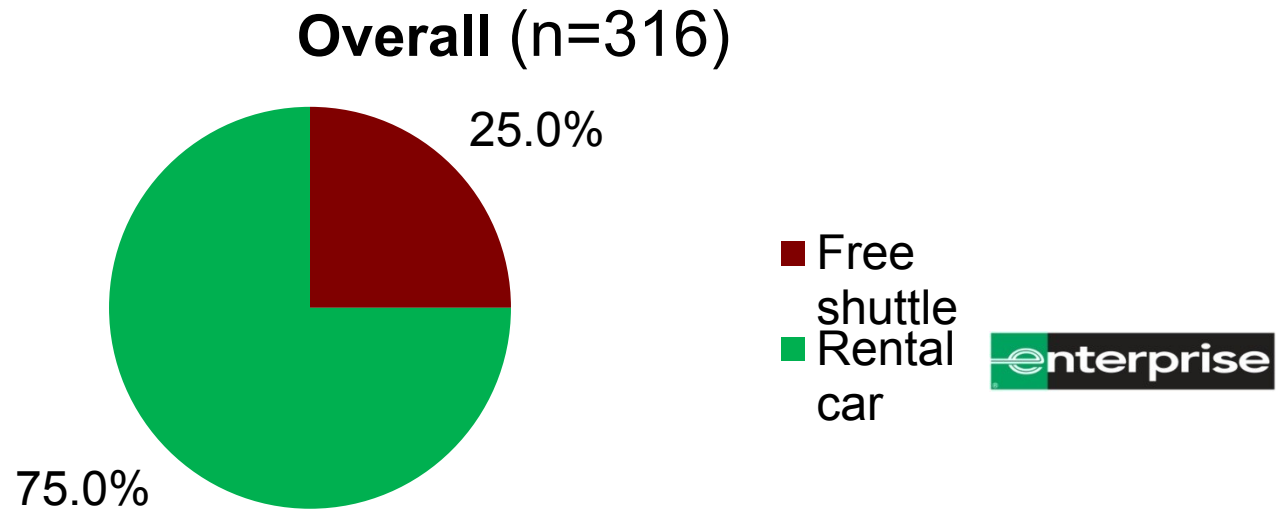


Summary of Charges

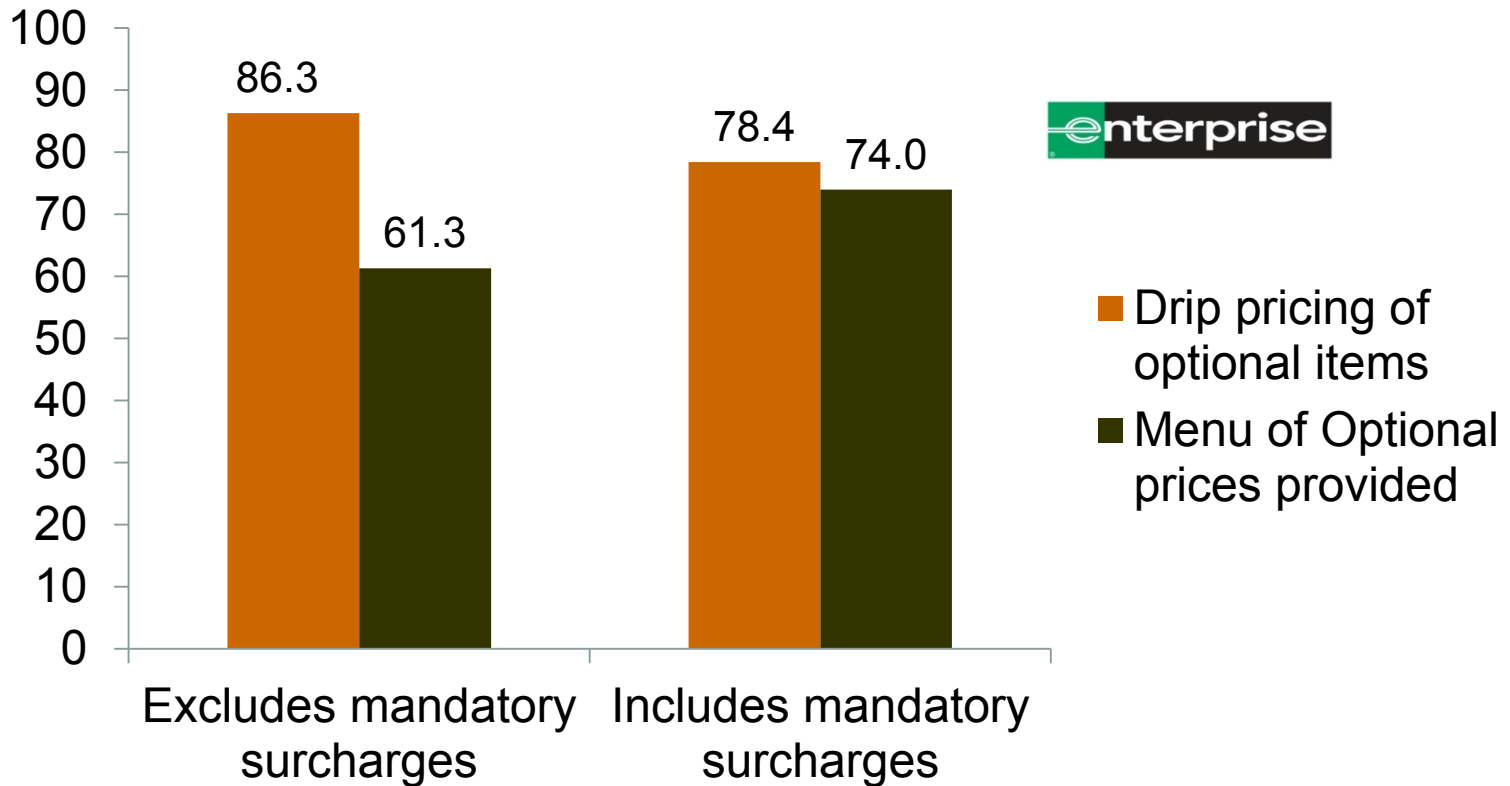
| | |
|--|-----------------|
| Basic daily rate of \$17.00 @ 3 days | \$51.00 |
| Concession fee @ 9.89% | \$5.04 |
| Rental car facility charge @ \$4.60 per day | \$13.80 |
| Destination surcharge @ \$2.00 per day | \$6.00 |
| Tire/Battery fee @ \$.02 per day | \$.06 |
| Vehicle license fee | \$1.85 |
| Sales Tax | \$5.25 |
| GPS System \$10 per day @ 3 days | \$30.00 |
| Damage Waiver Protection \$15 per day @ 3 days | \$45.00 |
| Pre-paid Gas \$3 per gallon @ 12 gallons | \$36.00 |
| Total for 3 days | \$194.00 |



Rental car choice



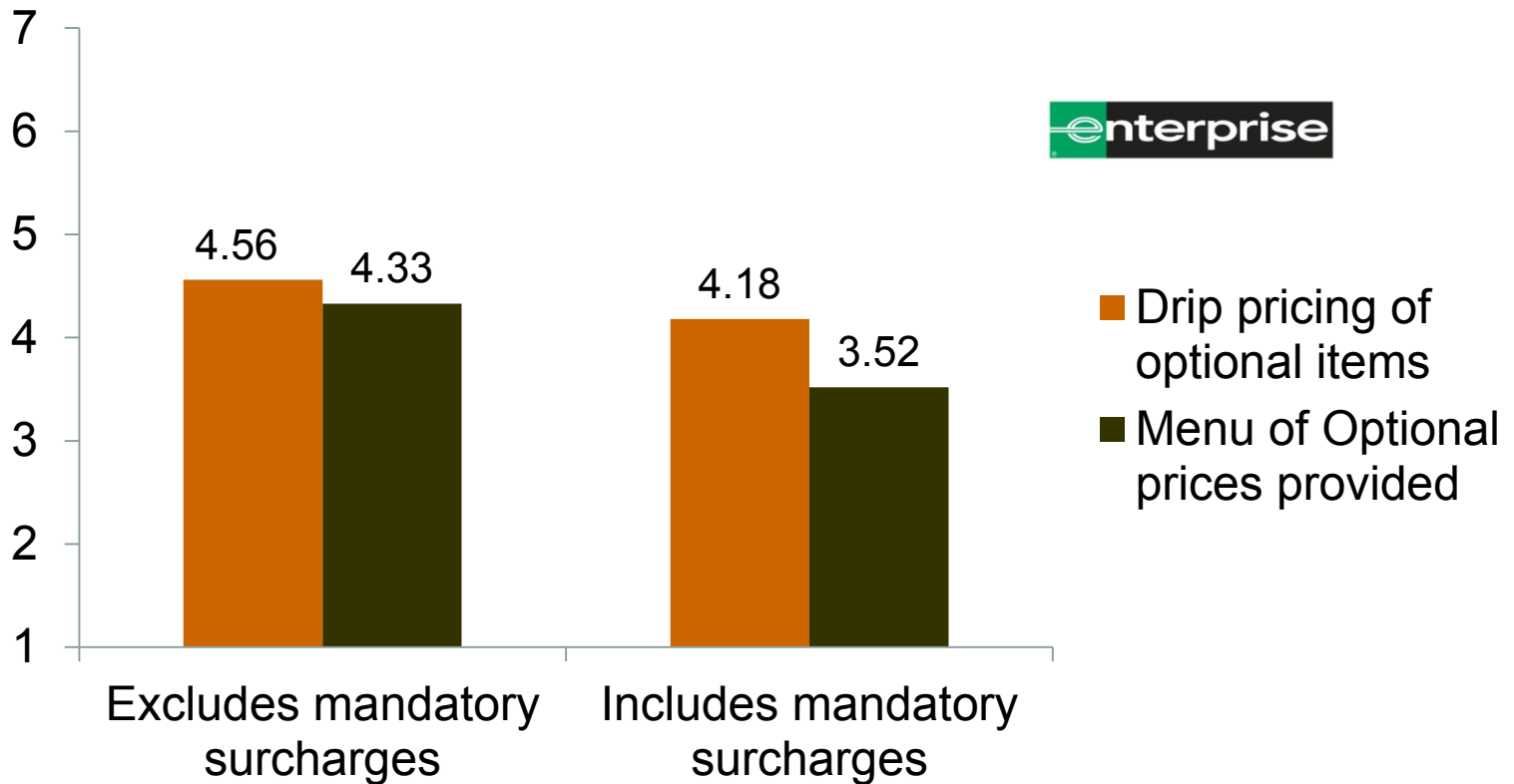
Percent choosing rental car by pricing frame



No significant change with experience

Drip $F(1,312) = 9.44; p=.002$
Interaction $F(1, 312) = 4.59; p=.03$

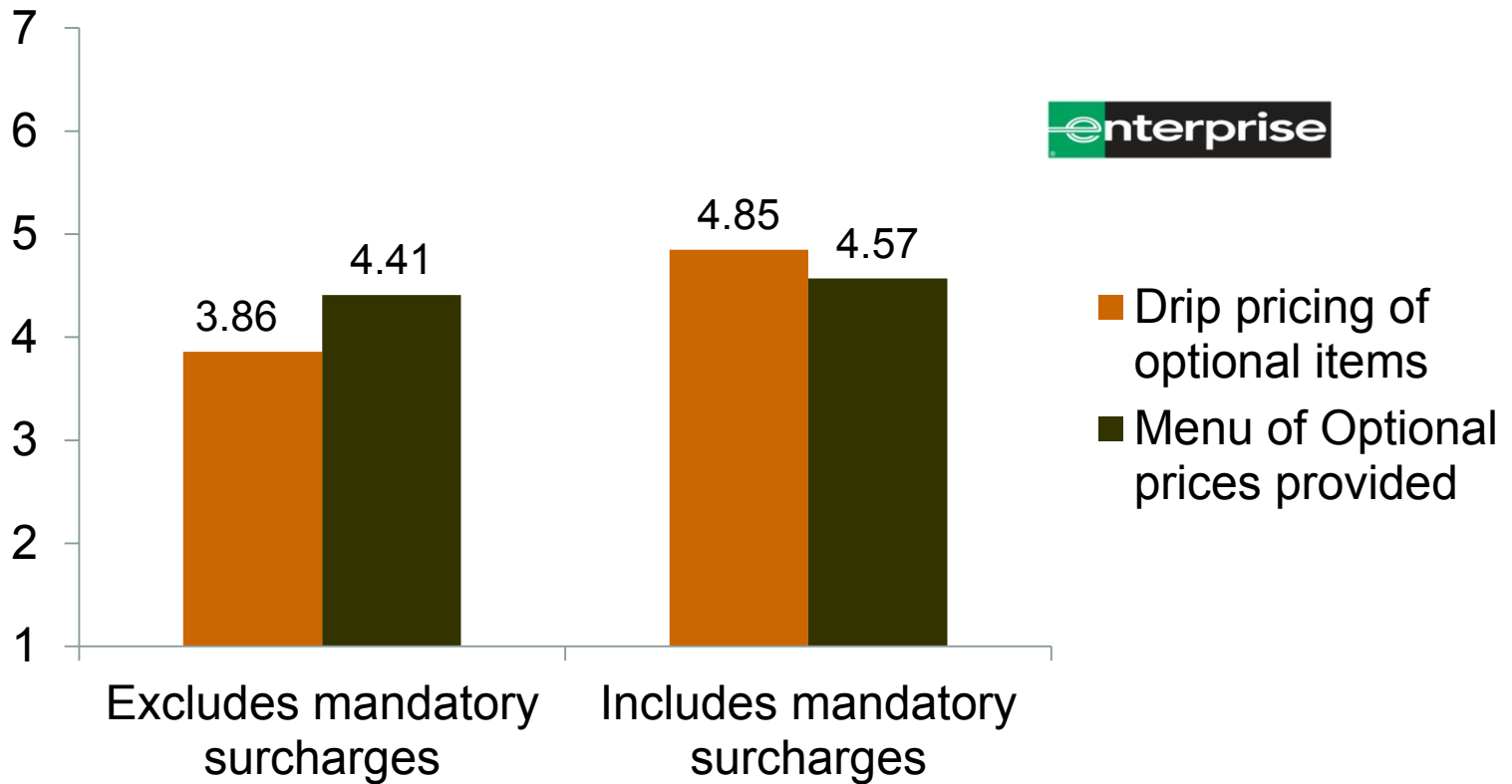
Perception that price is unfair (combined measures of deceptive and fairness)



Partition $F(1,312) = 13.63$; $p=.0003$
Drip $F(1,312) = 7.68$; $p=.006$
Interaction $F(1, 312) = 1.87$; $p=.17$

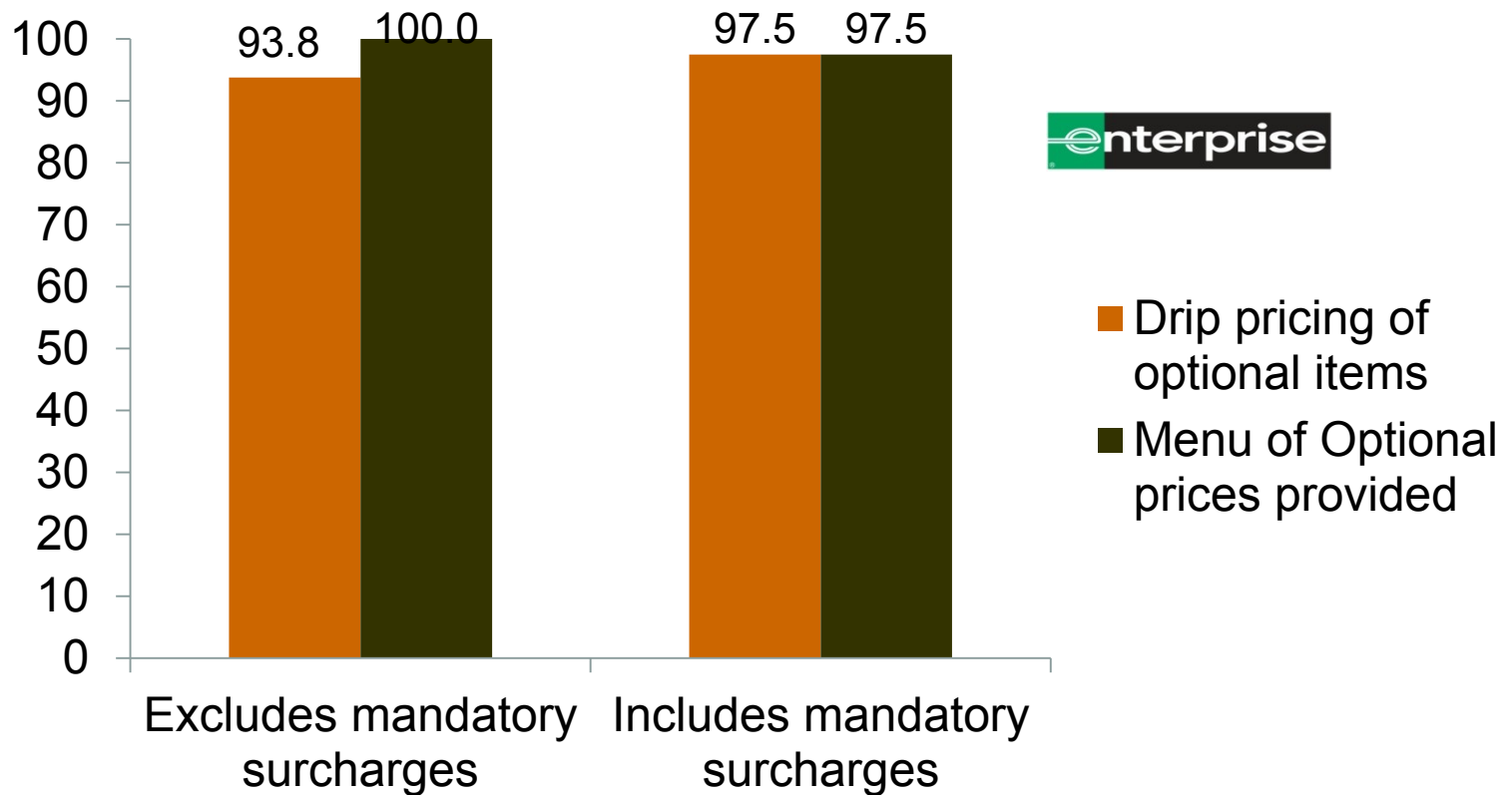


Willingness to rent again



Partition $F(1,274) = 7.91$; $p=.005$
Interaction $F(1, 274) = 4.14$; $p=.04$

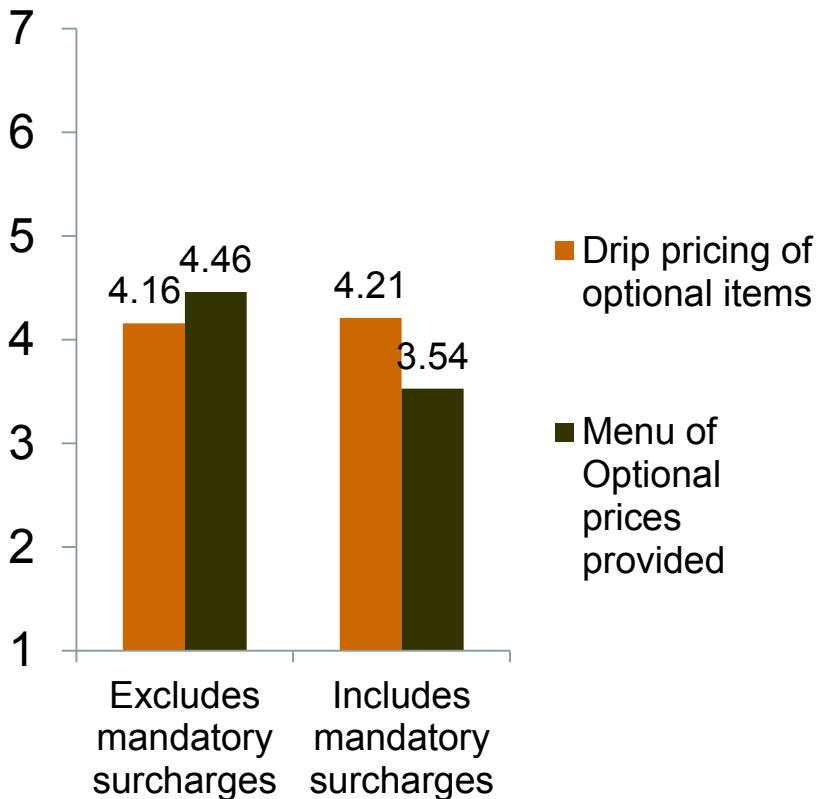
Percent adding any option



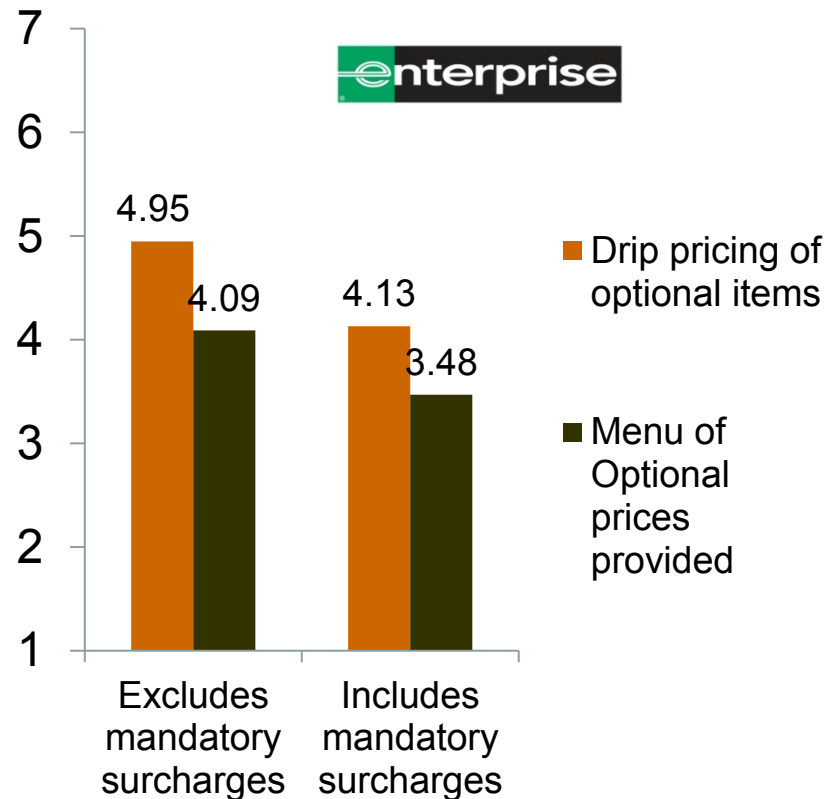
Drip $F(1,312) = 2.74$; $p=.099$
Interaction $F(1, 312) = 2.86$; $p=.092$

Perception that price is unfair by familiarity with Enterprise

High familiarity with Enterprise



Low familiarity with Enterprise



Partition $F(1,306) = 5.56; p=.02$

Drip $F(1,306) = 5.63; p=.02$

Interaction Partition x Drip x Familiarity $F(1, 306) = 3.85; p=.05$



Summary

- In hypothetical scenario, consumers were more likely to buy with drip pricing
 - Disclosure of mandatory fees reduces buying intentions
 - No effect of experience
- Partitioned pricing and drip pricing viewed to be deceptive
 - Pattern depends on experience with brand
- When the firm discloses mandatory and optional fees, consumer are more likely to:
 - Rent from the firm again
 - Buy optional add-ons
- Limitations
 - Hypothetical scenarios
 - Scenario did not allow consumers to change their mind after seeing optional fees



Next steps

- Decisions with real consequences for research participants
- Further explore role of experience and learning
- Examine what happens when final purchase decision is made only after all drip prices have been revealed
- Examine possible psychological underpinnings
 - Escalating commitment
 - Mere ownership
 - Status-quo bias
 - Categorization of fees as part of or separate from base product