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## Consumer Preferences for Oysters

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# Consumer Preferences for Oysters

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## Motivation

Nutrient pollution in water bodies poses significant environmental threats with consequences for human and animal life. Example: algal blooms impacting ecosystems and recreational use.



## Background

- Oysters filter phytoplankton from water.
- Oysters Filter up to 50 gallons every day.
- Oysters are both private and public good.
- Previous research as shown that coupling private and public good can results in price premiums.

## Central Questions

Are Consumers willing to pay more for oysters from waters with higher nutrient levels? And if so, how large are the price premiums and under what conditions are they achieved?

## Method

- Dichotomous choice experiments.
- Participants received \$10.
- Participants made 8 real purchasing decisions at random prices (mean \$1.50 standard deviation \$0.50).

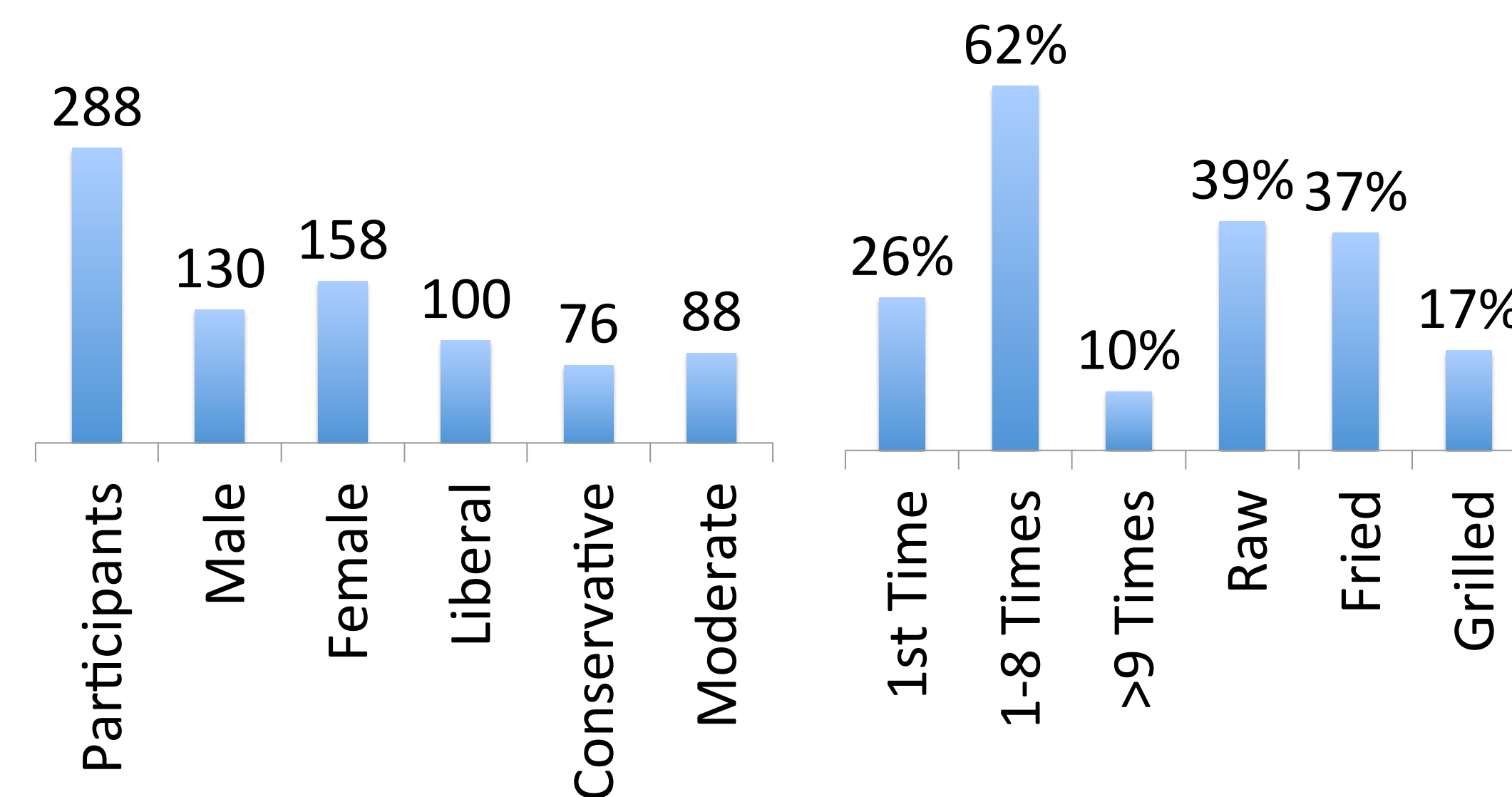
## Treatments:

- (t1) No information treatment (baseline)
- (t2) NOAA scale on water nutrient level
- (t3) NOAA scale and additional nutrient information

## Oyster Options:

- Option 1: ■ low nutrient waters
- Option 2: ■ moderate nutrient waters
- Option 3: ■ high nutrient waters
- Option 4: ■ unknown nutrient waters

## Results – Participant Description



## Key Findings

Yes - Decision	Coefficient	St. Error
Price	-1.6548***	0.1184
Low Nutrients (n1)	0.2810	0.2869
Moderate Nutrients (n2)	1.3714***	0.2653
High Nutrients (n3)	1.4139***	0.2669
Unknown Nutrients (n4)	(omitted)	
NOAA Scale Treatment (t1)	0.0518	0.3841
NOAA Scale + Treatment (t2)	0.1692	0.3716
No Information Treatment (t3)	(omitted)	
t1xn1	0.7584*	0.4454
t1xn2	0.1009	0.4265
t1xn3	-0.1614	0.4281
t2xn1	1.3473***	0.4306
t2xn2	0.5461	0.4106
t2xn3	-0.0887	0.4172
Constant	-0.0081	0.2729

Notes: random effects logit regression – N=2320 – Significance: \*\*\*=1%, \*=10% – Four primary results

## Summary of Key Findings

1. If oysters are from unknown nutrient waters, providing participants with information (t1, t2) does not have an effect.
2. Oysters from moderate and high nutrient waters are significantly more likely to be selected under no information treatment (t3).
3. Providing NOAA scale, makes participants more likely to choose low nutrient oysters.
4. Providing NOAA scale and additional information, makes participants more likely to choose low nutrient oysters.

## WTP estimates by treatment

Yes - Decision	T1 N = 624	T2 N = 640	T3 N = 624
Price	-1.1450*** (0.1693)	-1.08684*** (0.1652)	-1.4766*** (0.1541)
n1	0.8040*** (0.3048)	1.351173*** (0.2881)	0.3184 (0.2677)
n2	1.1561*** (0.2977)	1.5958*** (0.2868)	1.2411*** (0.2451)
n3	1.0024*** (0.3002)	1.0816*** (0.2936)	1.2904*** (0.2455)
n4	(omitted)	(omitted)	(omitted)
Male	0.4610*** (0.1942)	0.3726** (0.1844)	0.2637* (0.1624)
Constant	-0.4163 (0.3287)	-0.4249 (0.3243)	-0.062 (0.2786)

Notes: Logit regression – Significance: 1%\*\*\*, 5%\*\*\*, 10%\*

## Price Premiums by Treatment

