

Consumers and Prices

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Consumers' demand

- The demand depends on quality and prices
- One way to understand the demand consists in measuring **Willingness To Pay (WTP)** for characteristics!
- Several methods for measuring WTP
 - One method: Lab experiment

Lab Experiment

- An experiment determine **well-thought preferences** and demand under perfect information (while a field experiment is characterized by imperfect recall, purchasing routines, many things to do)
- Precisions about WTP for various characteristics



Lab Experiment for **Susfans**

- Dijon, November 2015
- 124 participants were coming for a one-hour session
- Recruitment: They are eating meat, even occasionally



Products

- Ground Beef Steaks and Ground Soya Steaks



- Pictures and a few explanations: fresh products

Hypothetical response **in the lab**

- **No product** was given at the end of the experiment (safety of fresh products)
- Control of information in the lab is better than under websurvey!
- A lot of details on characteristics revealed with messages
- **Hypothetical bias for WTP** is a persistent problem in stated preference studies


The multiple price list, first for the beef with a picture, and then for the soy with a picture

Would you be willing to buy the ground beef at ?
For each line check off either yes, no or maybe.

	YES	NO	Maybe
2,20 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,30 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,40 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,50 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,60 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,70 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,80 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2,90 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,10 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,20 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,30 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,40 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,50 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,60 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,70 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3,80 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The multiple price list **WILLINGNESS TO PAY**

Would you be willing to buy the ground beef at ?
For each line check off either yes, no or maybe.

	YES	NO	Maybe	
2,20 Euros	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2,30 Euros	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2,40 Euros	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2,50 Euros	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2,60 Euros	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2,70 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	WTP=2.6
2,80 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
2,90 Euros	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
3 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,10 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,20 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,30 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,40 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,50 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,60 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,70 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
3,80 Euros	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Quantity choice: choices for reaching 5 units

Product

Number of products



+



Basket

= 5

Quantity choice: choices for reaching 5 units

Product

Number of products



4

+



1

Basket

= 5

- The sample consists of 124 people aged between 19 and 74.
- Results for WTP were not interpretable for 4 participants
- 120 participants are considered
- During the experiment, we divided our sample into four groups and randomly assigned participants to one group.
- The two groups receive the same information but in a different order.

Information

Sub-group where the order of the information varies!

Messages

- Environment

- Beef
- Soy

- Health

- Beef
- Soy

Information

Messages

– Environment

- Beef: Pollution and Water Use
- Soy: Benefit for soil and natural source of nitrogen

– Health

- Beef: Excess of meat consumption and risks
- Soy: Fiber can cut cholesterol



First Step Instructions

Round 1: WTP for beef and soy

Quantity choice

Following Rounds:

Information

WTP for beef and soy

Quantity choice

Last Step. End of the Experiment with exit questionnaire

RESULTS

Average WTP

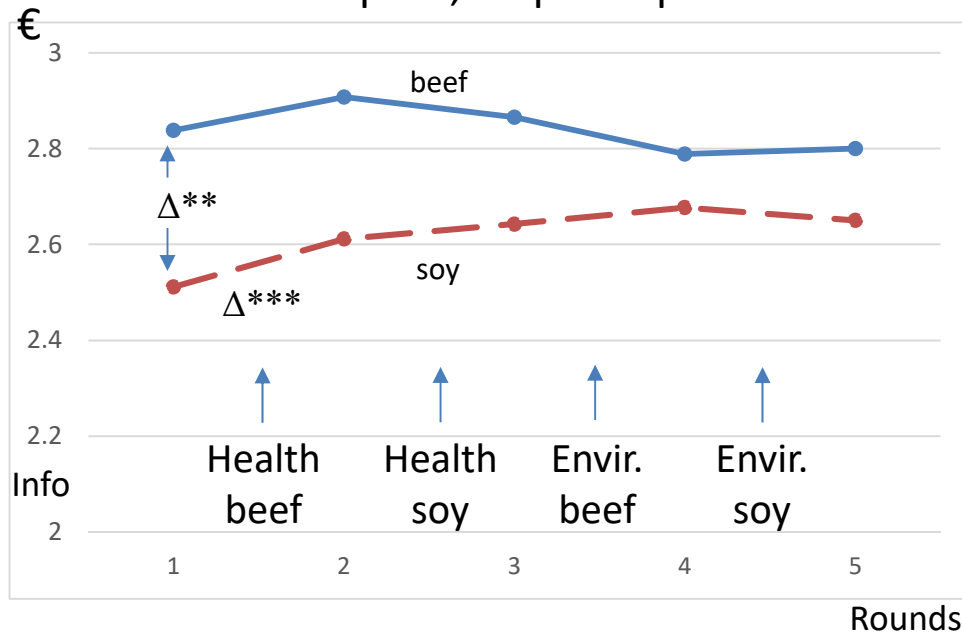
Tests for comparing paired samples

$$WTP_{t-1} / WTP_t$$

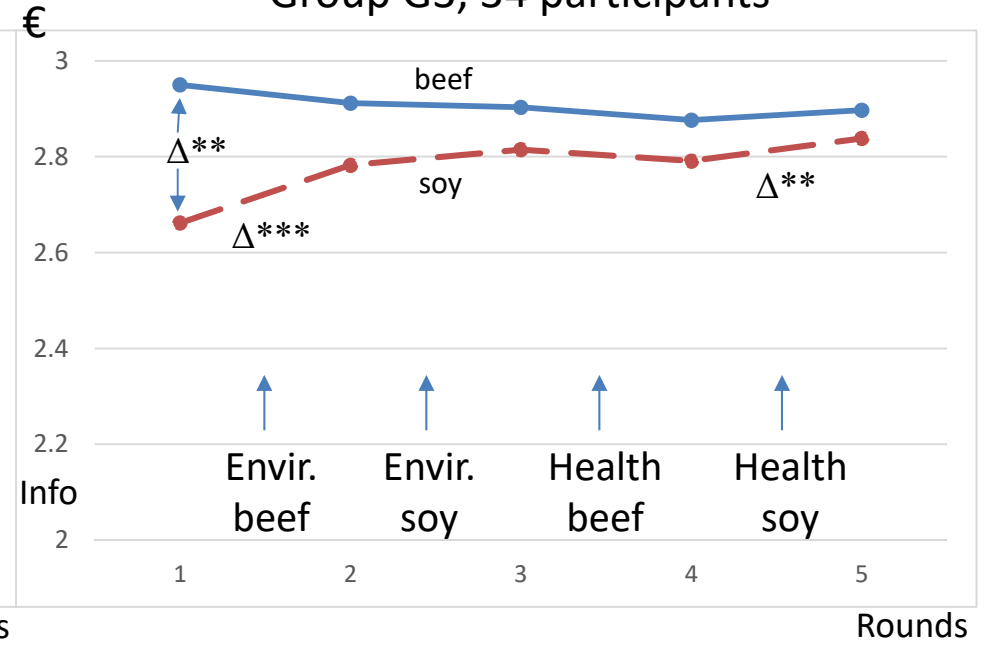
Δ^{***} significant difference at 1%

Δ^{**} significant difference at 5%

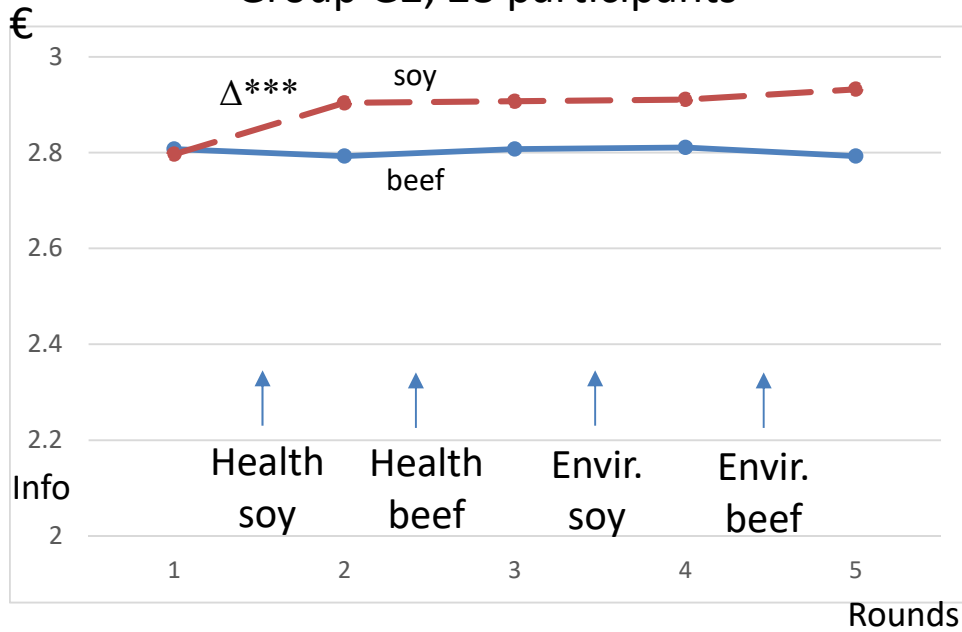
Group G1, 26 participants



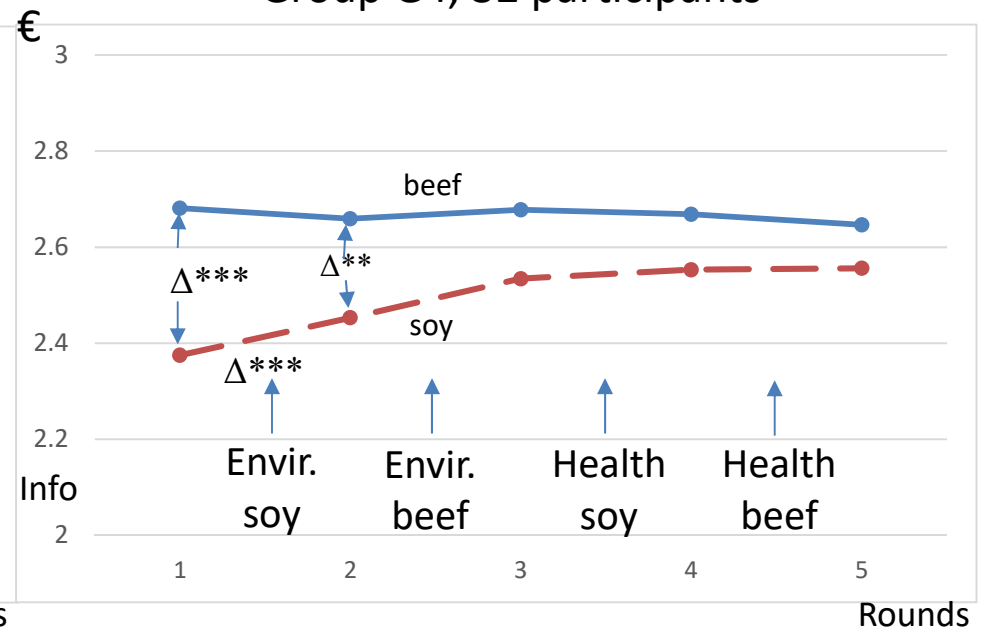
Group G3, 34 participants



Group G2, 28 participants



Group G4, 32 participants



Results

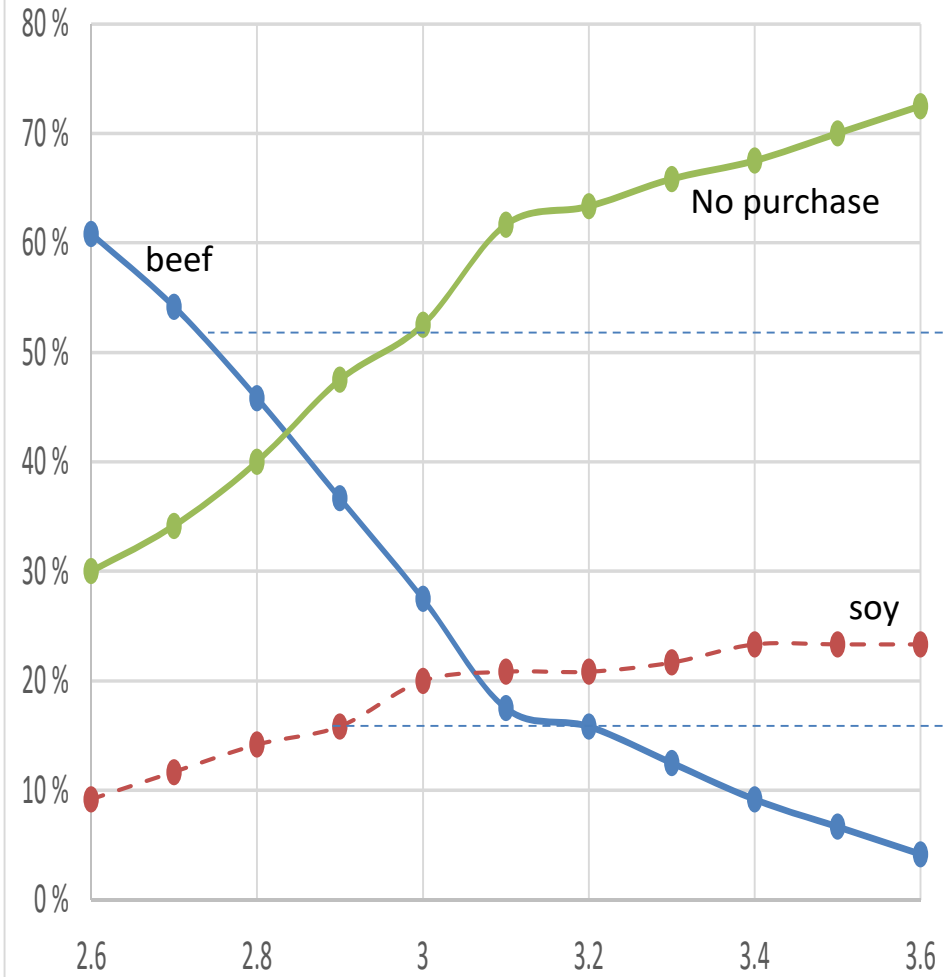
- **1st message has a significant effect on soy only**
 - 1st message whatever the type of message
 - Significant effect but small effect (+5%)
- No effect of messages on WTP for meat
- No major changes

WTP for estimating demand

- WTP may be used for predicting demands
- If the regulator wants to change habits regarding meat consumption, it will not be via “awareness” and information.
- **Role of alternative tools like taxes/subsidies...**
 - Tax on beef
 - Estimated demands for different products ->

Round #1
before the revelation of messages

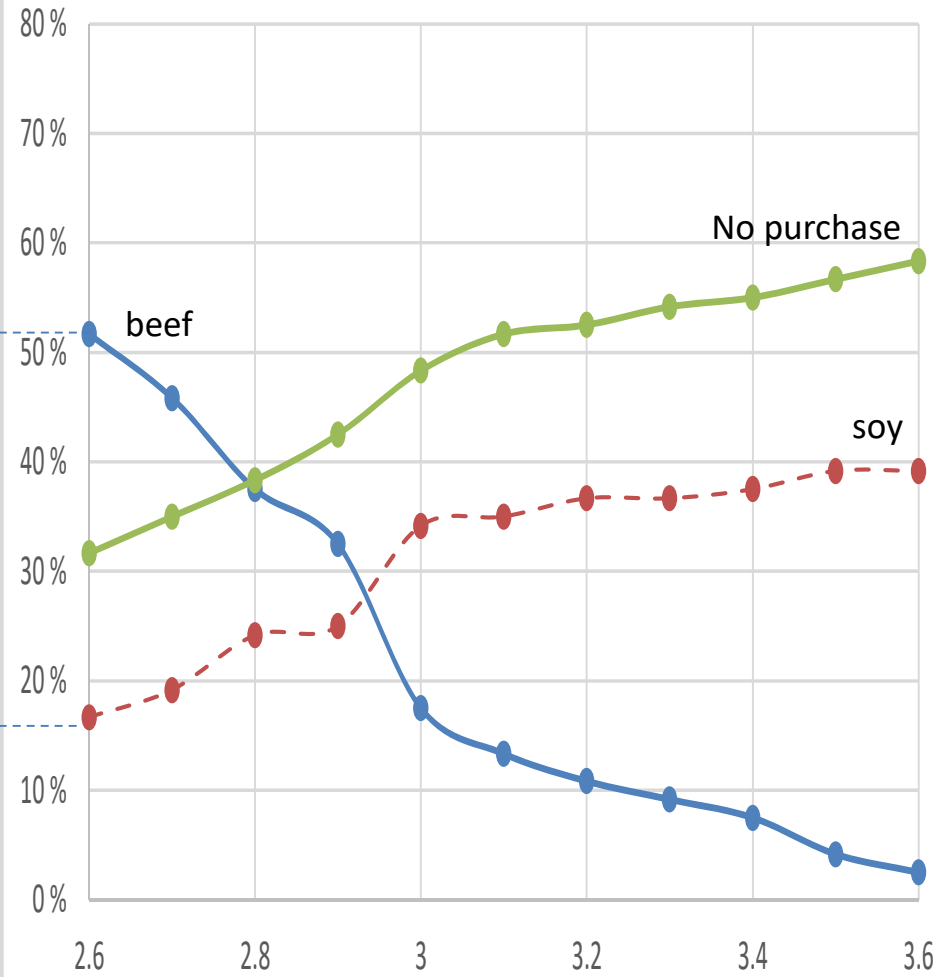
Market share



Price of beef

Round #5
after the revelation of messages

Market share



Price of beef

RESULTS

Average Quantity

Tests for comparing paired samples

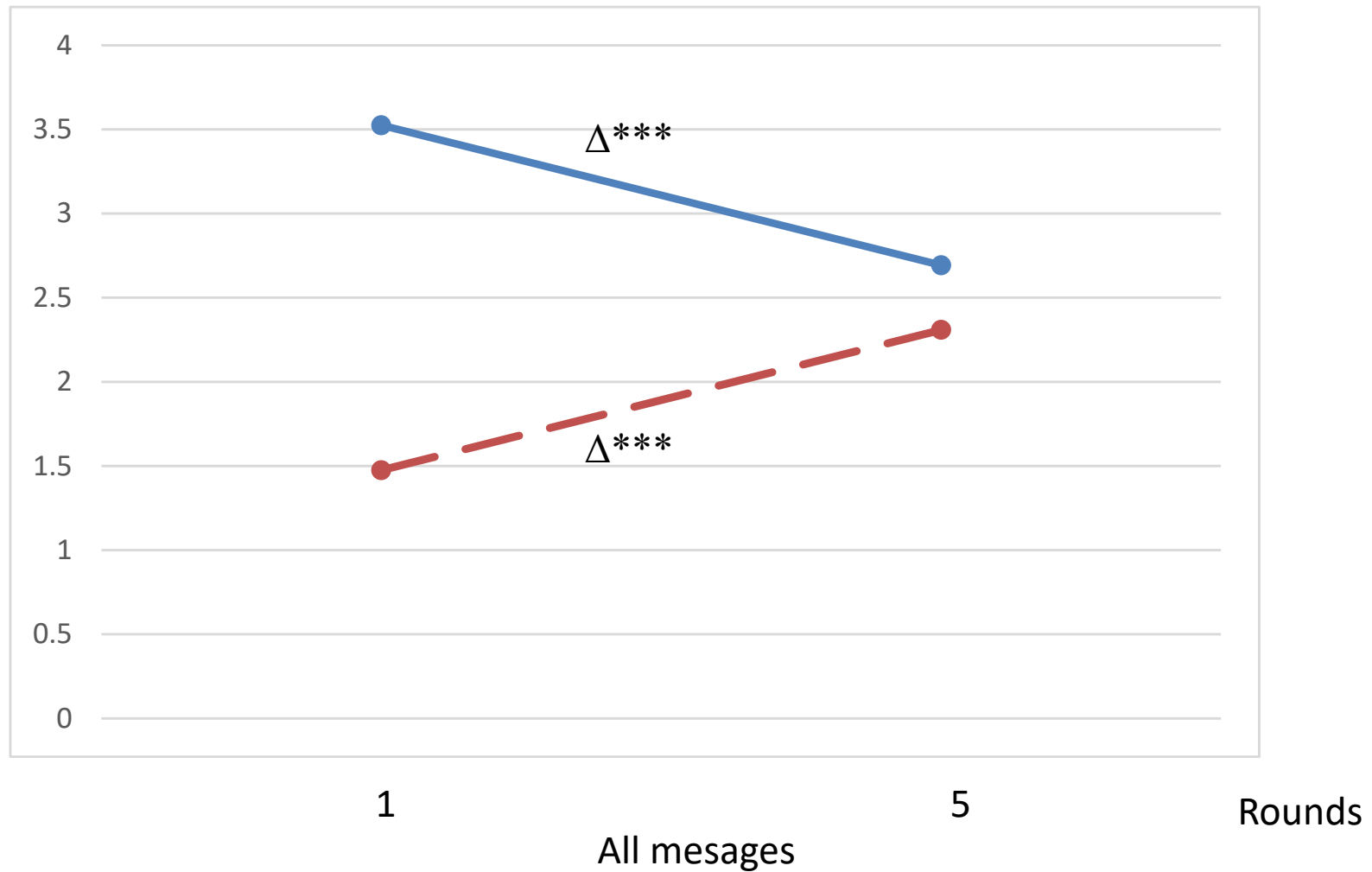
Q_1 / Q_5

Δ^{***} significant difference at 1%

Δ^{**} significant difference at 5%

All participants

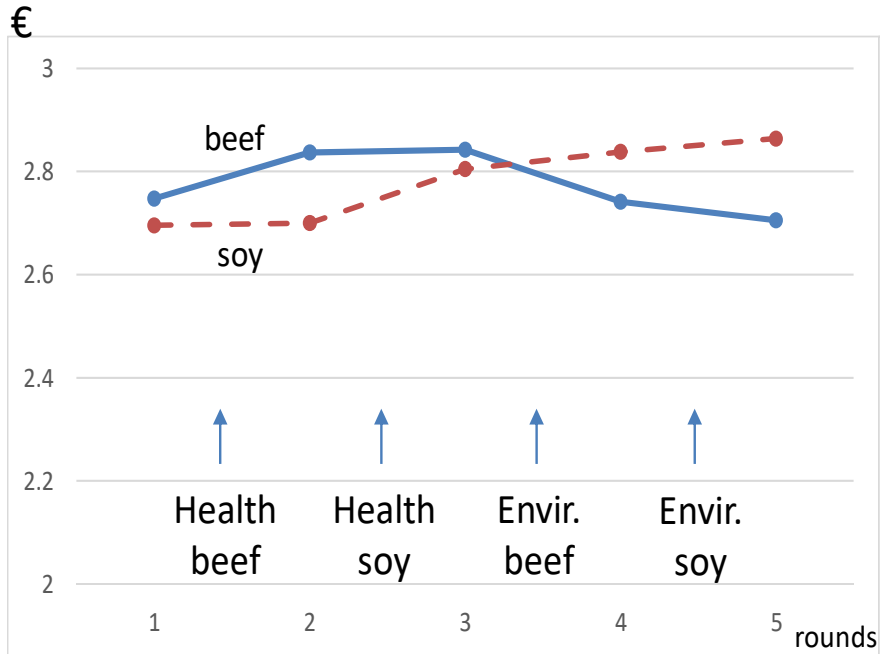
Quantity



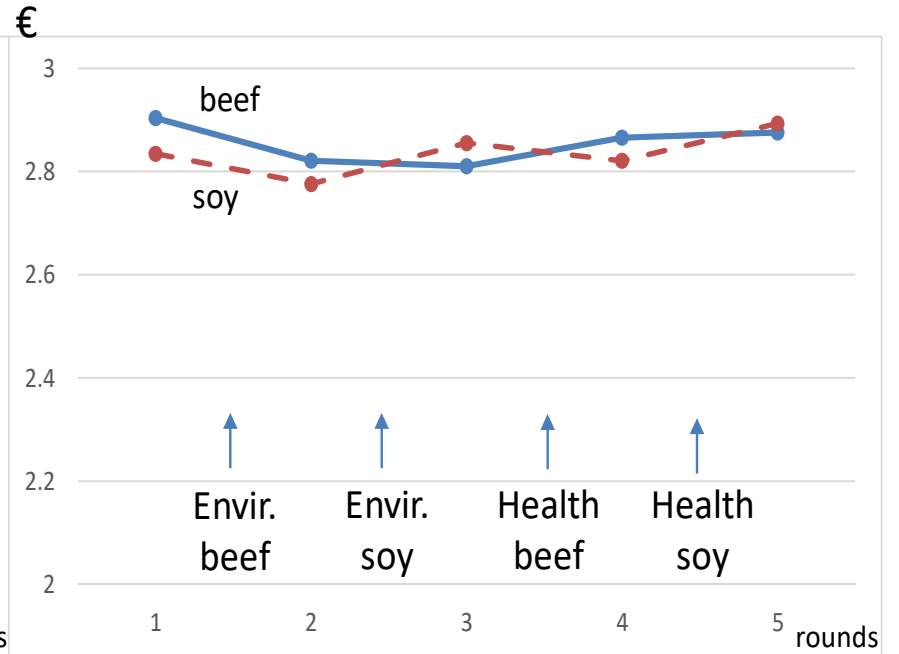
ITALY

November 2016

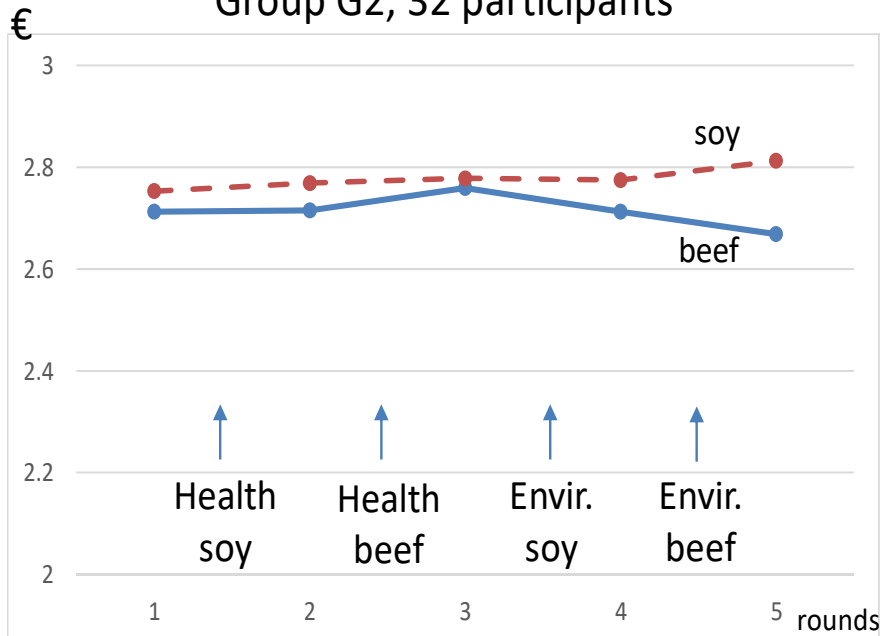
Group G1, 30 participants



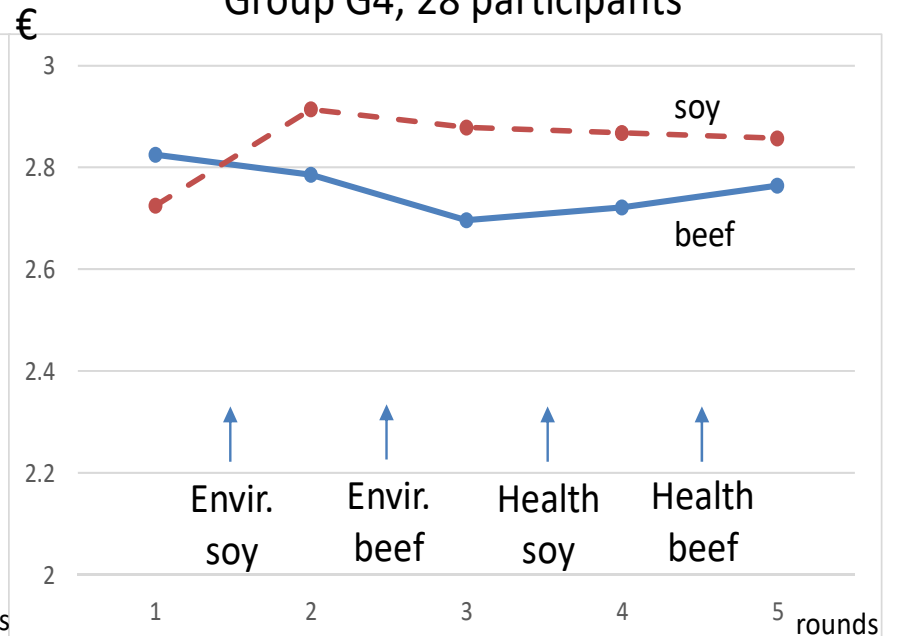
Group G3, 29 participants



Group G2, 32 participants



Group G4, 28 participants



Conclusion

- Limited impact of information on preferences
 - Strong preference for meat
 - Information saturation
 - If the regulator wants to change habits regarding meat consumption, it will not be via “awareness” and information. Role of alternative tools like taxes/subsidies...
- Limited WTP for characteristics related to sustainability
 - confirmed by other contributions!