CONSUMER INSIGHTS – THE CITRUS AND BEVERAGE MARKET

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Presented to the International Citrus Beverage Conference

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Overview

- Lapsed Consumers
  - Do you win back lapsed consumers by fixing what made them lapse?
    - Angelia Chen, Post-doctoral Associate UF-FRE, FAMRC
- Information overload
  - How does the number and location of labels on beverages influence consumer choices?
    - Xuqi (Ricky) Chen, Assistant Professor, University of Tennessee; Zhifeng Gao, Associate Professor, UF-FRE

Understanding lapsed consumers

Path 1: Active → Lapsed

Step #1 Who become lapsed?

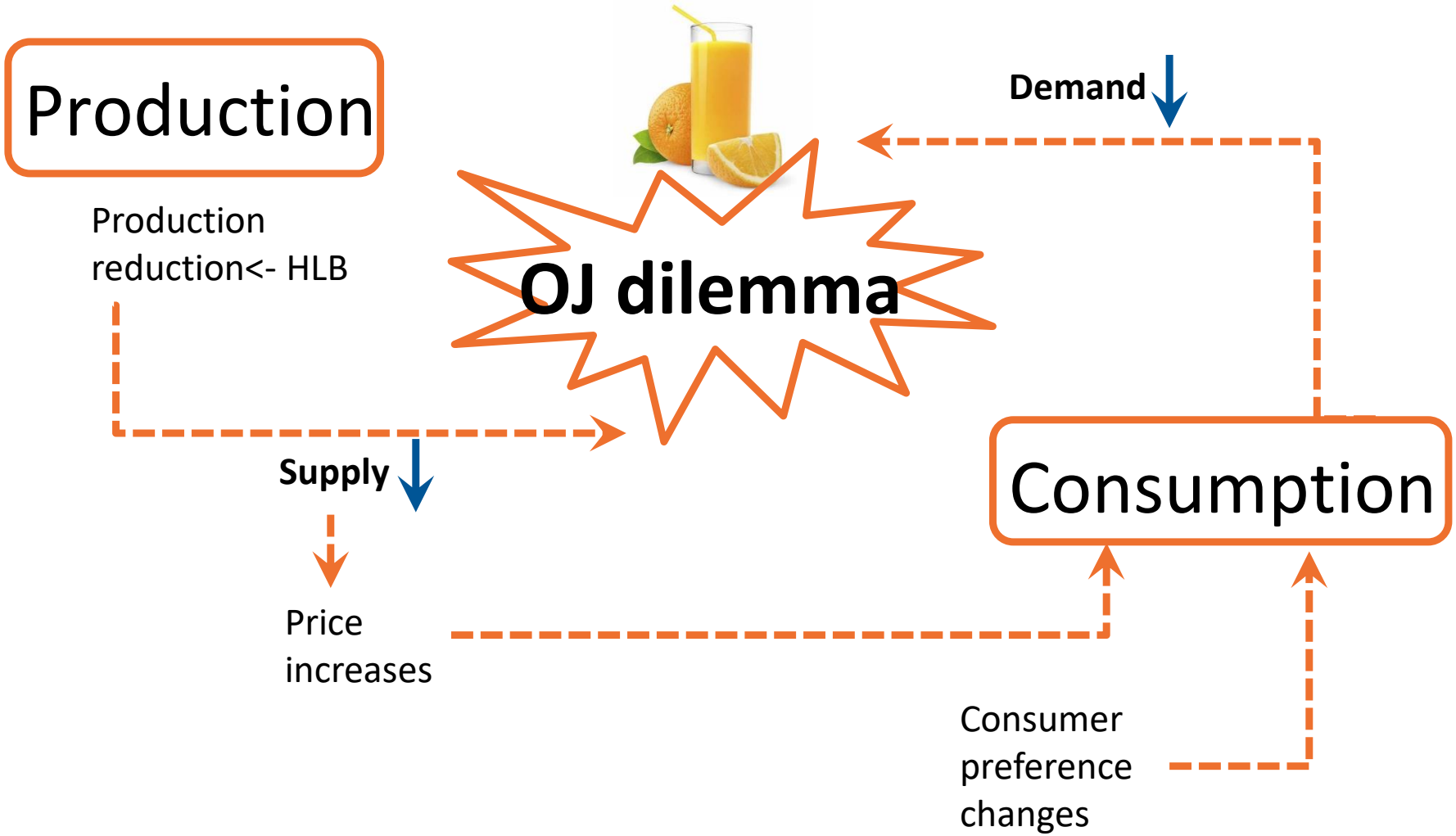
Path 2: Lapsed → Reactivated

Step #2 Who can be won back/reactivated?

Is there is a perfectly symmetric relationship between the two stages?

Orange juice overview

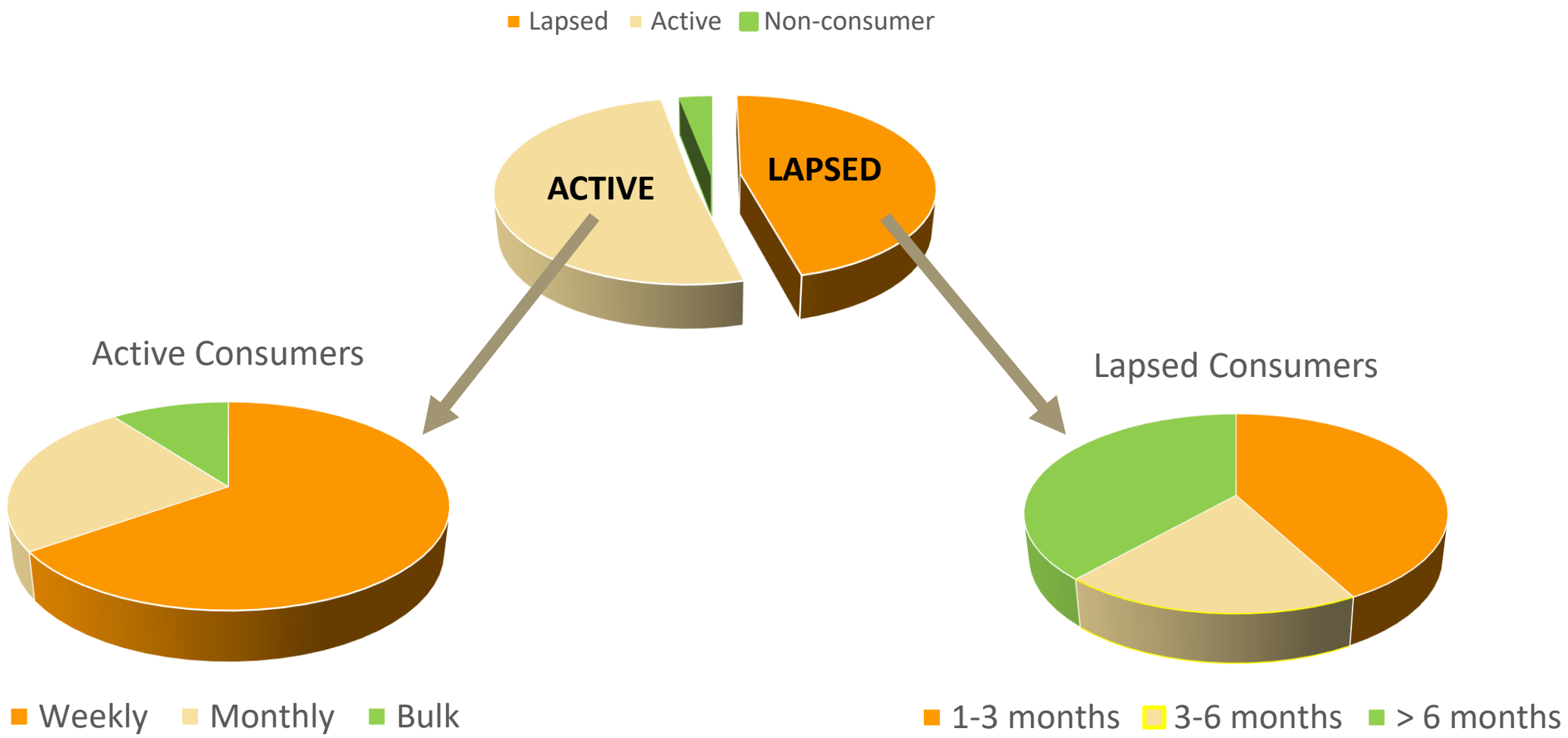
The orange juice industry is experiencing challenges from the supply and demand side.



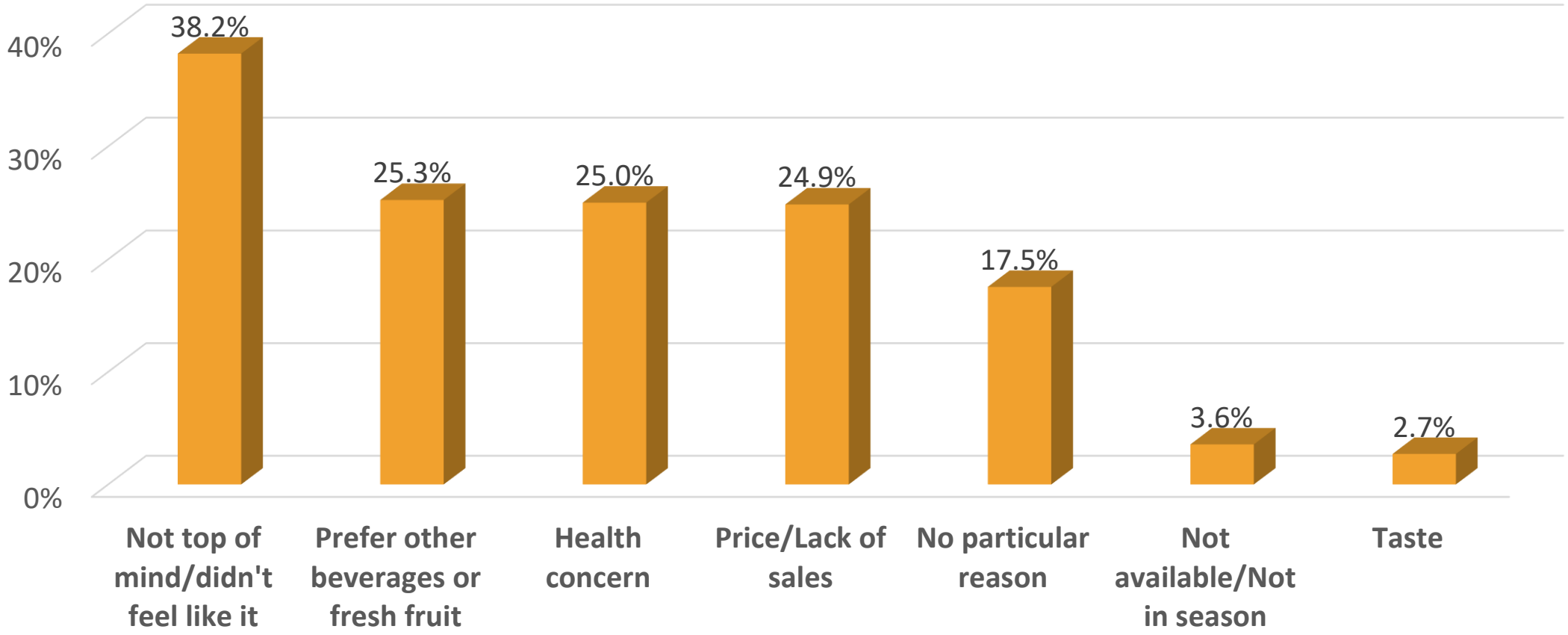
Methodology

- Data
  - Monthly representative consumer tracker of primary grocery shoppers
  - n=11,746, July 2016-2018
- Empirical analysis
  - Factor analysis on attitudinal measurement
  - Logit model on lapsed behavior
  - Tobit model on unconditional willingness to repurchase

Orange juice consumers



Reason for lapse



Potential influencers of lapse/return

Demographics

- Age
- Income
- Gender
- Education
- Household size
- Children age
- Race - ethnicity

General food attitude

- Organic preference
- Seek information
- Health behavior
- Freshness importance
- Vitamins

Price sensitivity

- OJ: If price is a top three factor influencing choices
- General: Response to increase in food prices

What influences lapse and return?

Factor	Likelihood to Lapse	Likelihood to Return
Demographics	+ −	Limited Significance
Positive perception of OJ (healthy, natural, quality)	−	+
Negative perception of OJ (sugar, calories)	+	Not Significant
General food attitude	+ −	+
OJ price sensitivity	+	−
General price sensitivity	+	Not Significant
Lapsed duration	N/A	−
Media exposure	N/A	+

Conclusion

Study "who becomes lapsed"

Prevent consumers from lapsing

Study "who are willing to return unconditionally"

Reacquire lapsed consumer

Two asymmetric approaches to vitalize consumer base

Conclusions

Results suggest….

1) act promptly

- The longer a consumer has been lapsed, the less likely they will be to return.

2) realize the importance of stabilizing market price

- Price sensitivity causes barriers to get lapsed consumers back.

3) enhance positive marketing communication by emphasizing OJ's bringing **family enjoyment**, health benefits, high quality, and naturalness.

4) Understand to win back lapsed consumers, study what will win them back, not what caused them to leave

Information Overload? How do consumers handle label information?

Too Much Information

Bialkova et al., 2014

Ineffective Communication

Beckl… …ty?

…t al., 2016

Not Informed or Unhealthy Decisions?

Hynes & Veltsos, 2018

Information Overload? How do consumers handle label information?

Too Much Information

Bialkova et al., 2014

Effective Communication

Informed or Healthy Decisions?

Hynes & Veltsos, 2018

Label usage comparison

NFP is low in usage percentage (20-49%) (Drichoutis et al., 2006; Graham et al., 2015)

Nutrition Facts

10 servings per container
Serving size 1 oz (28g)

Amount per serving
Calories 160

	% Daily Value*
Total Fat 10g	13%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 170mg	7%
Total Carbohydrate 15g	5%
Dietary Fiber 1g	4%
Total Sugars 0g	
Includes 0g Added Sugars	0%
Protein 2g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0.36mg	2%
Potassium 376mg	8%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet 2,000 calories a day is used for general nutrition advice.

NFP

- located on the back
- relatively hard to comprehend

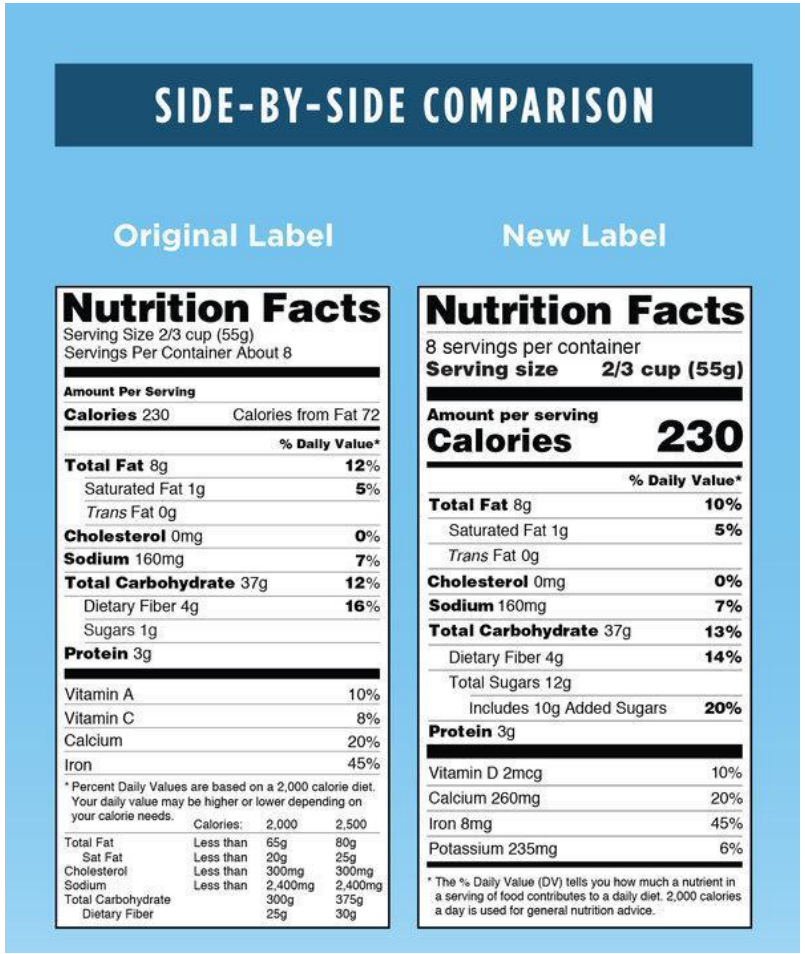
FOP Labels

- easy to access
- easier to understand
- quality indicator

FOP labels are better received and understood by consumers (Maubach et al., 2009; Edge et al., 2014)

Will new NFP help?

- Proposed revised Nutrition Facts panel (NFP) in 2014, full adoption by 2018
- Studies show no significant difference in attention to the labels (Graham and Roberto, 2016; Grebitus et al., 2017)
- Why not so effective?
- Other label information can be a distraction (Carroll et al., 2018)



2018 Study

- Addressed whether or not search behavior is impacted by front of package labels
- Also whether searching for nutrition information would impact choice

Methods

- Online survey, nationally representative sample (n=820)
- Choice experiment used with chips, cereal, and salad kit
  - Participants selected between two products that varied in information:
  - Could include front of package organic or transitional organic label (or none)
  - Could include GMO-Free label (or not)
  - Could include Facts up Front (or not)
  - Did include prices (always)
  - Varied nutritional information to 3 levels for each product

Nutrition Facts

Serving size	3.5 oz (100g)
Amount per serving	
Calories	**90**
	% Daily Value*
Total Fat 6g	**8%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 10mg	**3%**
Sodium 330mg	**14%**
Total Carbohydrate 8g	**3%**
Dietary Fiber 2g	**7%**
Total Sugars 2g	
Includes 2g Added Sugars	**4%**
Protein 2g	
Vitamin D 0mcg	0%
Calcium 52mg	4%
Iron 1.44mg	8%
Potassium 0mg	0%
Vitamin A 1080mcg	120%
Vitamin C 5.4mg	6%
Vitamin K 108mcg	90%
Folate	25%

*The % nutrient diet 2,(nutrition much a a daily general

PER 1 CUP SERVING

90 CALORIES | 1 g SAT FAT 5% DV | 330 mg SODIUM 14% DV | 2 g SUGARS

Nutrition Facts

Serving size	3.5 oz (100g)
Amount per serving	
Calories	**150**
	% Daily Value*
Total Fat 12g	**16%**
Saturated Fat 2g	**10%**
Trans Fat 0g	
Cholesterol 10mg	**3%**
Sodium 390mg	**17%**
Total Carbohydrate 8g	**3%**
Dietary Fiber 2g	**7%**
Total Sugars 2g	
Includes 2g Added Sugars	**4%**
Protein 3g	
Vitamin D 0mcg	0%
Calcium 91mg	7%
Iron 1.44mg	8%
Potassium 0mg	0%
Vitamin A 1080mcg	120%
Vitamin C 5.4mg	6%
Vitamin K 108mcg	90%
Folate	25%

*The % nutrient diet 2,(nutrition much a a daily general

PER 1 CUP SERVING

150 CALORIES | 2 g SAT FAT 10% DV | 390 mg SODIUM 17% DV | 2 g SUGARS

Nutrition Facts

Serving size	3.5 oz (100g)
Amount per serving	
Calories	**210**
	% Daily Value*
Total Fat 18g	**24%**
Saturated Fat 3g	**15%**
Trans Fat 0g	
Cholesterol 10mg	**3%**
Sodium 440mg	**20%**
Total Carbohydrate 8g	**3%**
Dietary Fiber 2g	**7%**
Total Sugars 2g	
Includes 2g Added Sugars	**4%**
Protein 5g	
Vitamin D 0mcg	0%
Calcium 130mg	10%
Iron 1.44mg	8%
Potassium 0mg	0%
Vitamin A 1080mcg	120%
Vitamin C 5.4mg	6%
Vitamin K 108mcg	90%
Folate	25%

*The % nutrient diet 2,(nutrition much a a daily general

PER 1 CUP SERVING

210 CALORIES | 3 g SAT FAT 15% DV | 440 mg SODIUM 20% DV | 2 g SUGARS

Choice Experiment Example

Chips

Which option would you **choose**?

Nutrition Facts	
10 servings per container	
Serving size	**1 oz (28g)**
Amount per serving	
Calories	**120**
	% Daily Value*
Total Fat 2g	**3%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 135mg	**6%**
Total Carbohydrate 15g	**5%**
Dietary Fiber 2g	**7%**
Total Sugars 2g	
Includes 0g Added Sugars	**0%**
Protein 2g	
Vitamin D 0mcg	0%
Calcium 0mg	0%
Iron 0.36mg	2%
Potassium 376mg	8%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet 2,000 calories a day is used for general nutrition advice.

$4.89

Nutrition Facts	
10 servings per container	
Serving size	**1 oz (28g)**
Amount per serving	
Calories	**160**
	% Daily Value*
Total Fat 10g	**13%**
Saturated Fat 1.5g	**8%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 170mg	**7%**
Total Carbohydrate 15g	**5%**
Dietary Fiber 1g	**4%**
Total Sugars 0g	
Includes 0g Added Sugars	**0%**
Protein 2g	
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$2.49

Neither

Choice Experiment Example

Chips

Which option would you **choose**?

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10 servings per container	
Serving size	**1 oz (28g)**
Amount per serving	
Calories	**120**
	% Daily Value*
Total Fat 2g	**3%**
Saturated Fat 0g	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 135mg	**6%**
Total Carbohydrate 15g	**5%**
Dietary Fiber 2g	**7%**
Total Sugars 2g	
Includes 0g Added Sugars	**0%**
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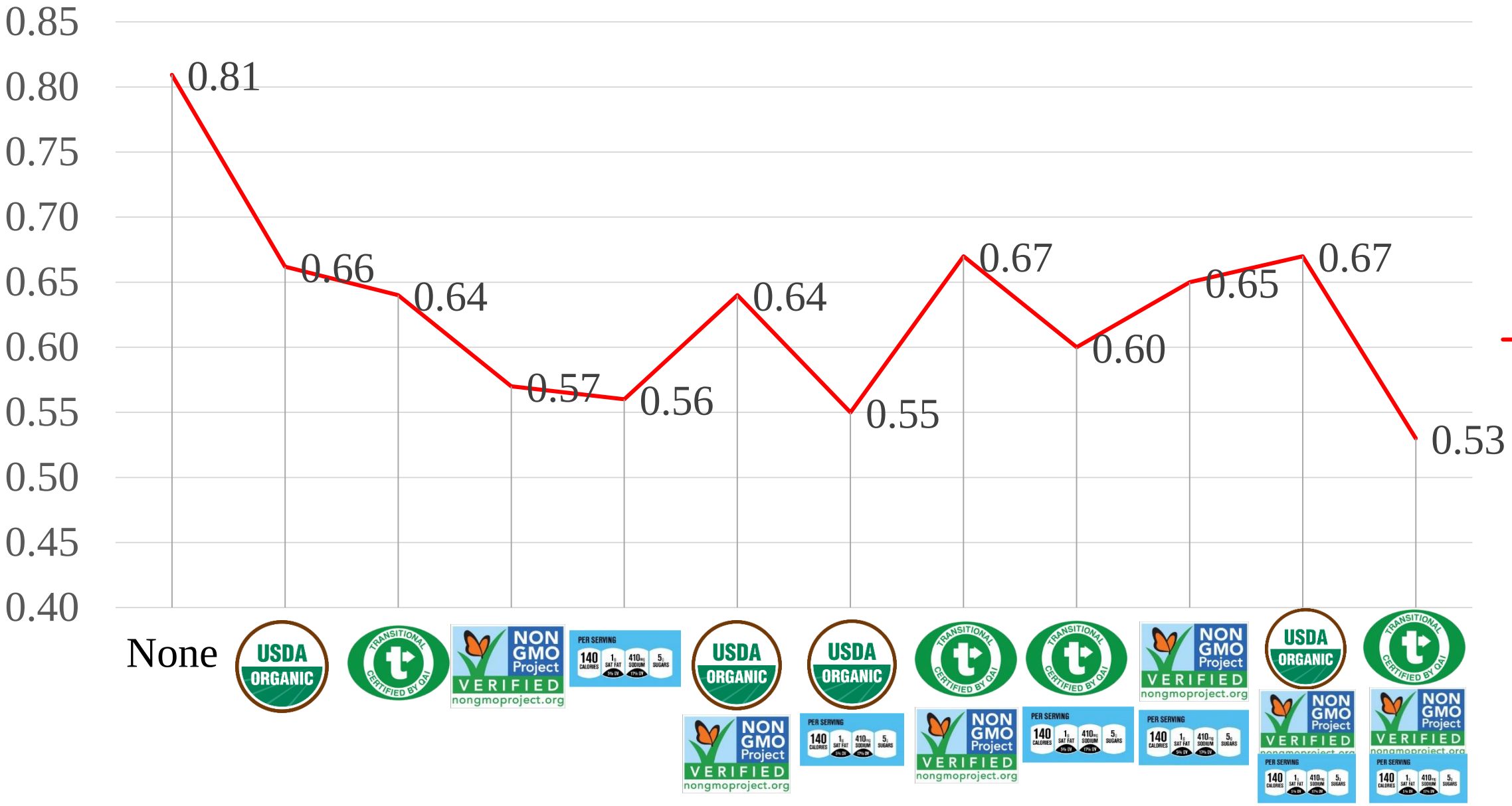
$2.49

Neither

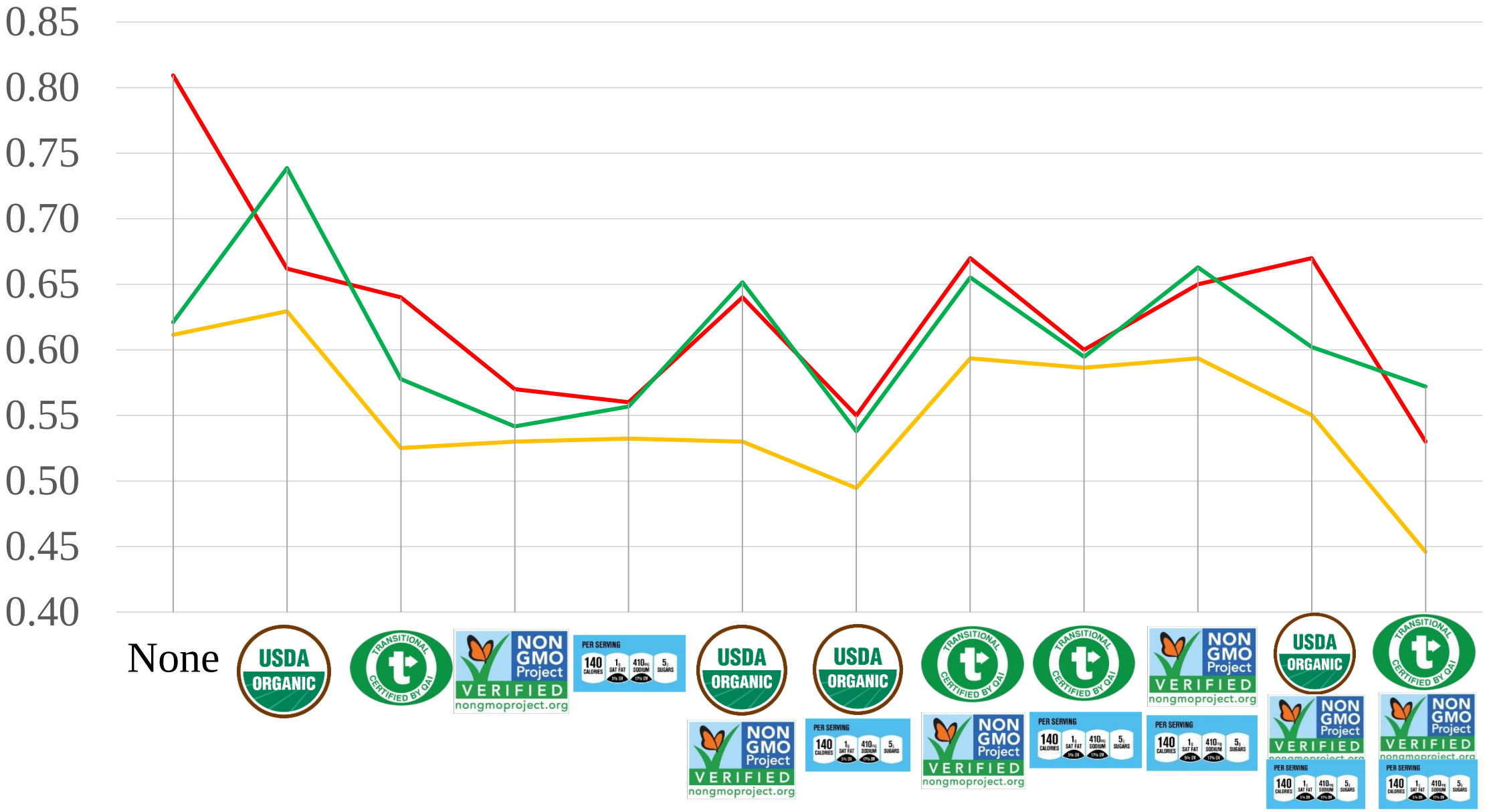
Key Variables

- **Click count** to check the information on the back (whether search for more nutrition information from the NFP) (0, 1, 2, 3…)
- **Final purchase decision** made based upon each choice task (alternative A, B, or choose neither)

Average Click Count for Labels (Chips)



Average Click Count for Labels



Information Search Results

Factor	Chips	Cereal	Salad
# of labels	↓ ↓	↓ ↓	↓
USDA ORGANIC	↑	↑ ↑	↑
TRANSITIONAL CERTIFIED BY OAI	↑ ↑	↑ ↑	↑
NON GMO Project VERIFIED nongmoproject.org	↑	↑ ↑	↑
PER SERVING 140 CALORIES 1g SAT FAT 410mg SODIUM 5g SUGARS	↑	↑	↓
Nutrition info + PER SERVING 140 CALORIES 1g SAT FAT 410mg SODIUM 5g SUGARS		↑	↑
$	↑ ↓	↑ ↓	

= Likelihood to look at NFP

= # of clicks (# of times looking)

Purchase Decision Results

Label	Likelihood to Purchase
 	↑
 	No impact
Nutrition Info + 	↑ (Cereal and Salad only)
Click for info 	↑
Click for info + Nutrition Info	↑
Price 	↓

Conclusions

❖Front labels **affect** information searching for food nutrition

1. Number of label **inhibits** search for food nutrition information
2. Individual labels **may contribute** to more searching
3. Label effect on information searching **can be different** for different food products (chips vs salad)

❖More searching of nutrition **contributes to** a healthier food choice

Thank you